

SYSTEM DESIGN

Health Application Study:
Caloric Budgeting

FOOD**BUDGET**

OVERVIEW

- Track caloric daily intake
- Budget daily caloric intake based on weight, height, gender and goal
- Goals based on weight loss and maintenance
- Aim is to generate healthy eating habits among users: portioning, balance of eating less, eating well and balancing poor “cheat” foods with healthy

FOODBUDGET

CREATE BUDGET

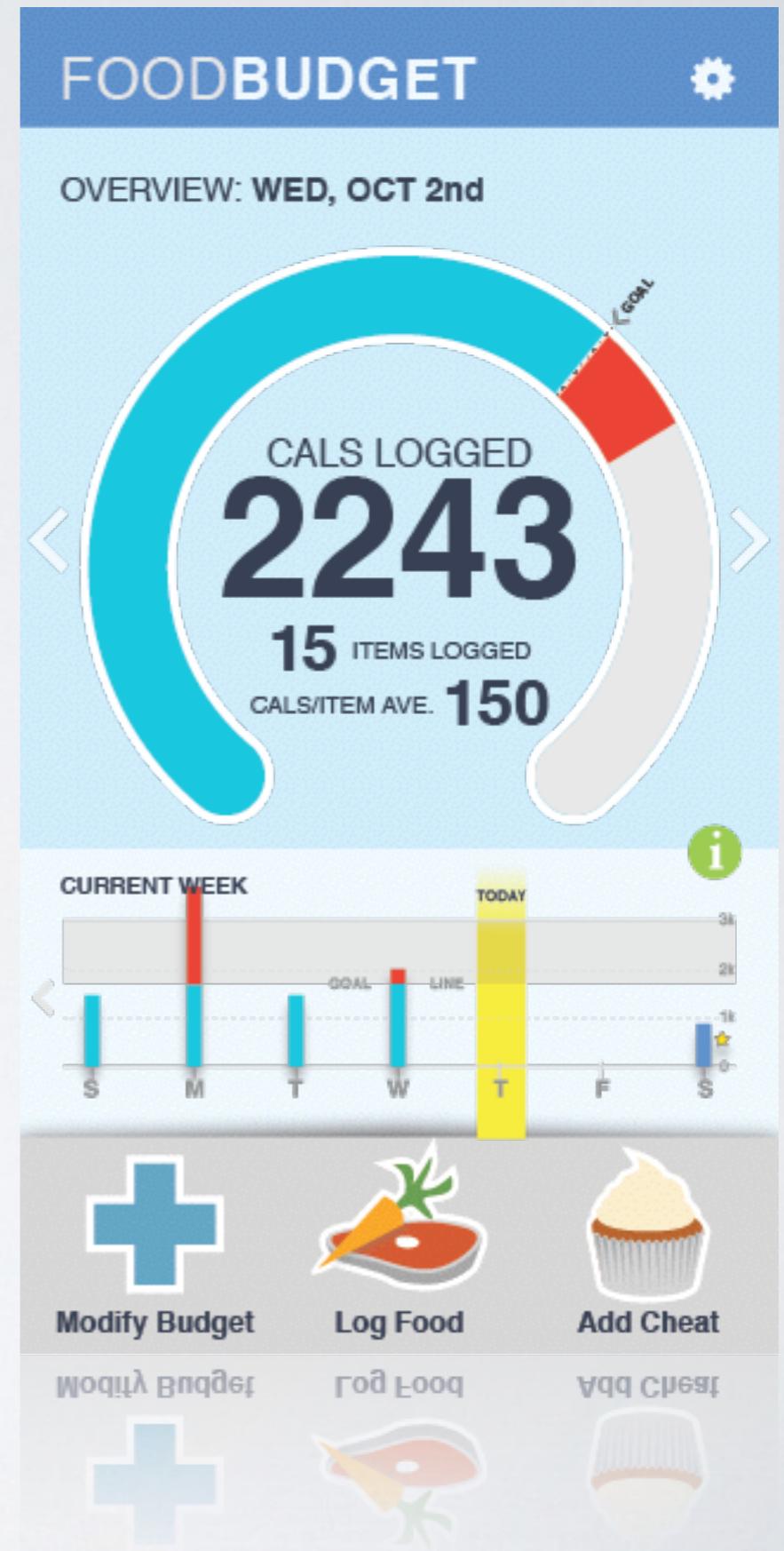
Select a budget based on:

WEIGHT LOSS (*14,000 cals/week*) >

MAINTENANCE (*16,000 cals/week*) >

KEY FEATURES

- Create an account
- Create a food budget based on calories (and potentially other nutritional information)
 - Application can suggest a caloric budget based on stats (height, weight, age)
 - Application can suggest a caloric food based on personal goals (weight loss, healthier eating, etc.)
- Allows for a budget for special meals or treats (ice cream, weekend steak dinner, etc.)
- Log/Capture meals, snacks and beverage consumption
 - Suggest alternatives for next time when logging when cal count is high
 - Affirm the user when logging when cal count is low
- Add Reward meals to budget from or towards
- Push alerts (email, text, notification) per user choice when budget is close to max
- Track eating patterns / Ability to review past budgets



PERSONAS



Fred J.

Male / 47 / Married / 2 children /
Chicago, IL / Homeowner / BS, MBA

Key Attributes:

- Comfortable with computers
- Desire to try a healthier lifestyle
- At the beginning of his health goals



Susan T.

Female / 21 / Single / No children /
Ames, IA / Renter / Student

Key Attributes:

- Familiar with web browsing/interaction on websites
- Desire to eat healthier



Daniel P.

Male / 33 / Single / No children /
Cincinnati, OH / Homeowner / MS

Key Attributes:

- Needs to moderate diet
- Moderately technical



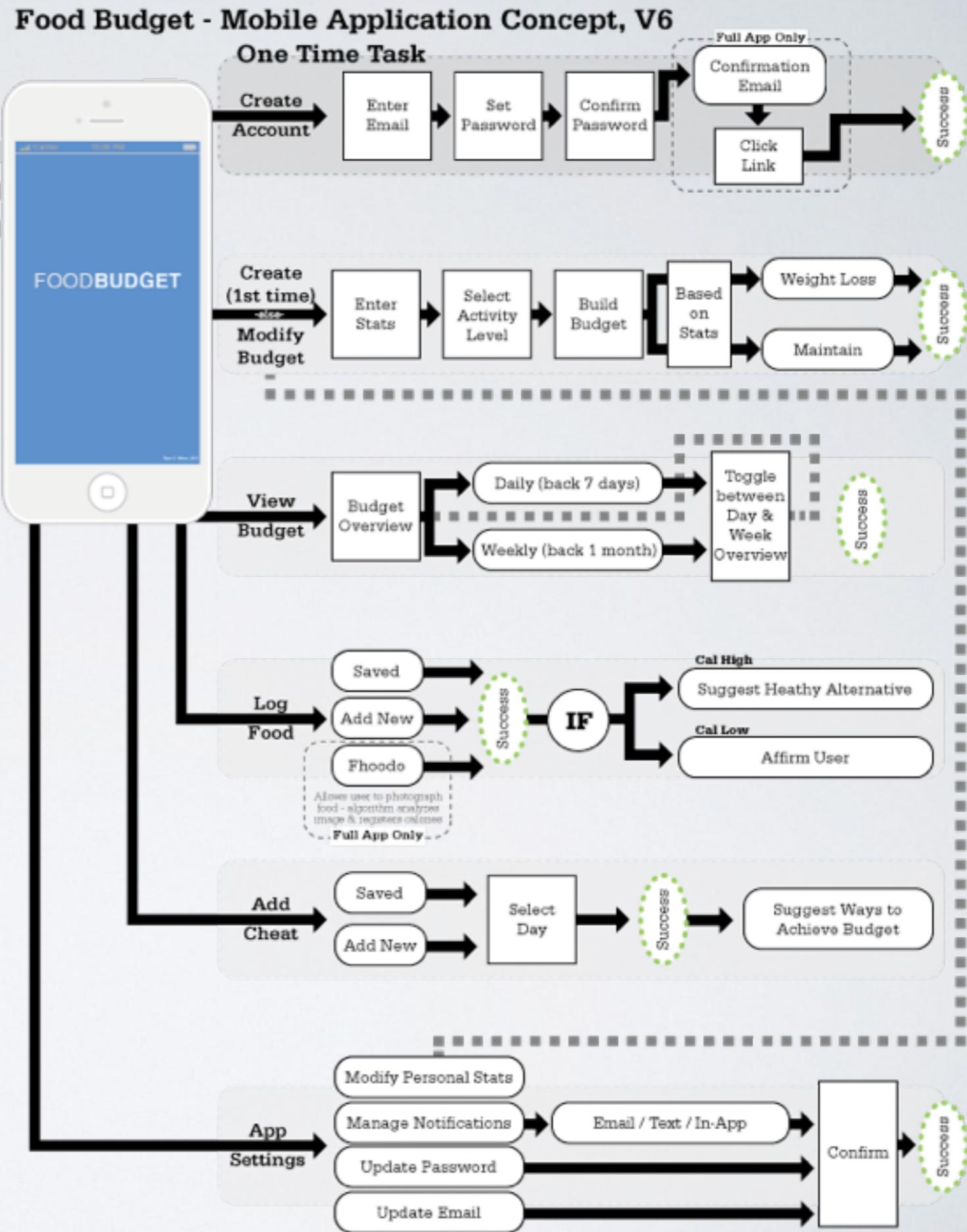
Vanessa D.

Female / 48 / Divorced / 3 children /
Philadelphia, PA / Homeowner / HS

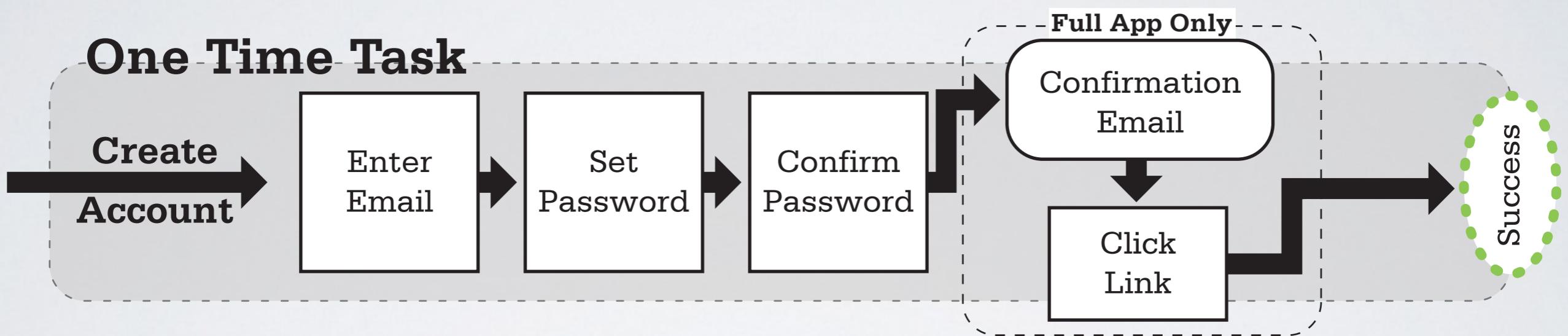
Key Attributes:

- Non technical
- Wants to be healthier, but doesn't know how to go about it
- Desire to make a change at this point in her life

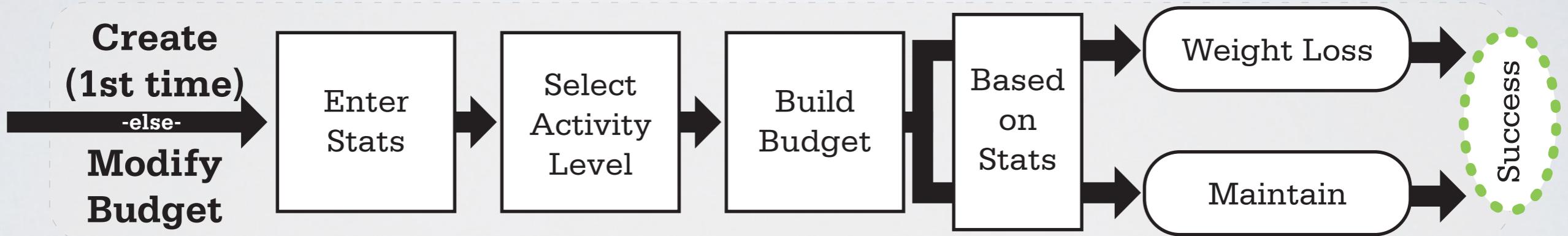
INFORMATION ARCHITECTURE



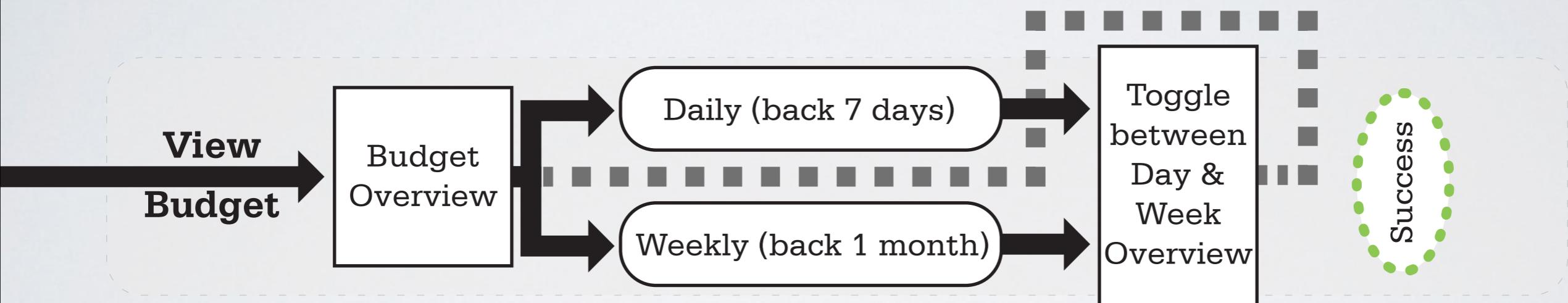
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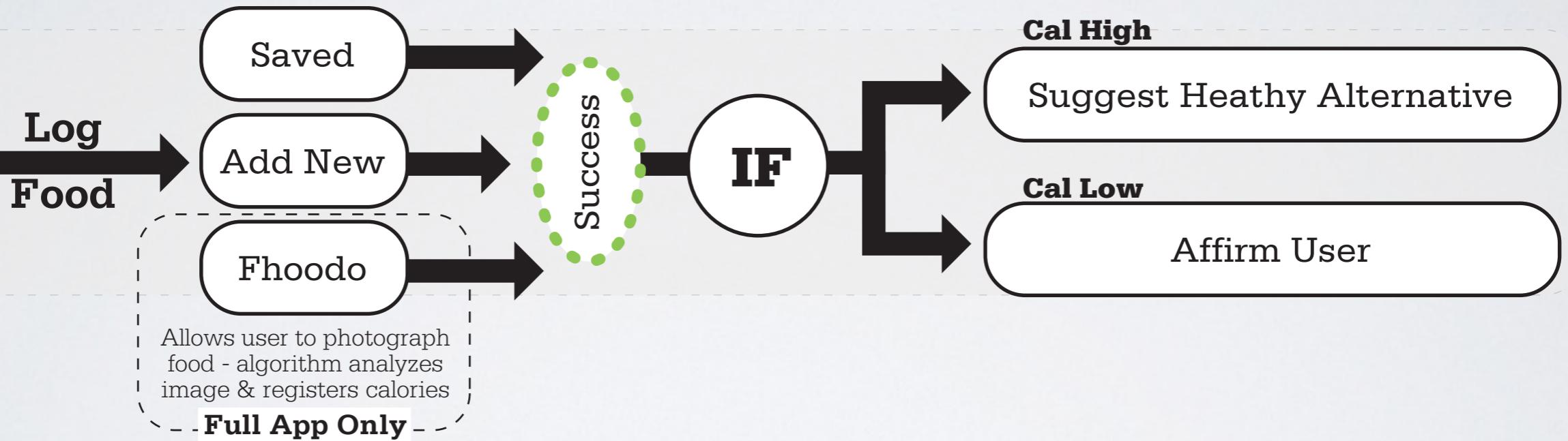
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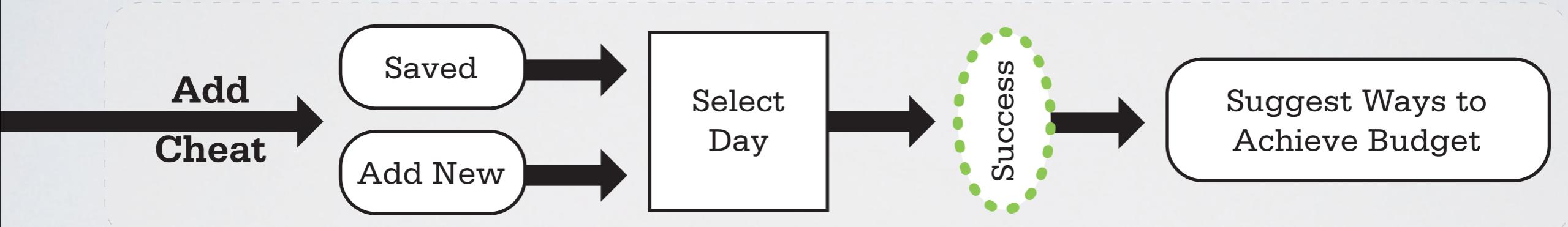
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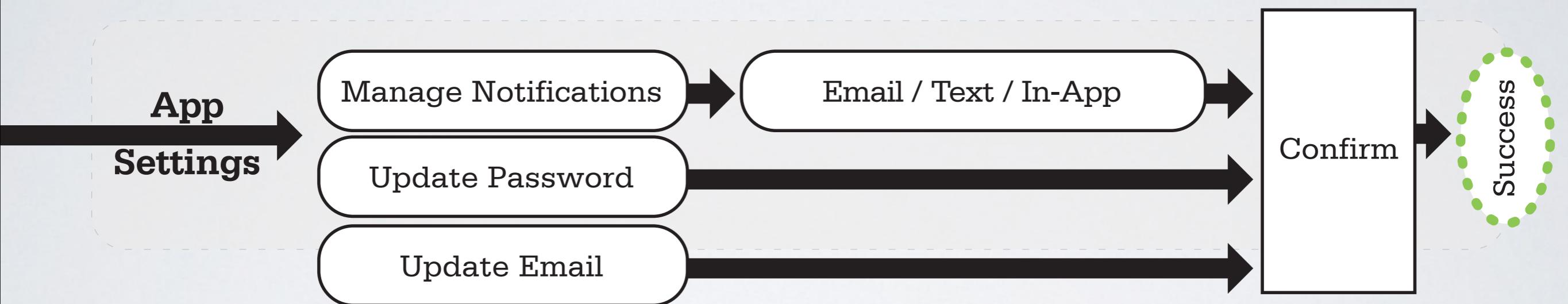
INFORMATION ARCHITECTURE



INFORMATION ARCHITECTURE



INFORMATION ARCHITECTURE



TASK LIST

1. Create a Food Budget Account using any email and password (NOTE: No data is stored in the user test)
2. Log in to Food Budget using the email and password you set in task No. 1
3. Create a budget based on maintaining your weight
4. Plan to have 2 scoops of Ice Cream this Saturday
5. View Yesterday's Budget Overview
6. View the Budget details for two days ago, <Insert date>
7. View Past Budget for the last 2 Weeks (Past data has been simulated)
8. Log that you ate a Banana
9. You have lost weight by eating right. Update your weight in the application

The image shows a mobile application interface for 'FOODBUDGET'. The top navigation bar is blue with the app name 'FOODBUDGET' and a gear icon. Below the header, the section title 'LOG FOOD' is displayed. A sub-section titled 'Saved Meals' lists five items with their calorie counts:

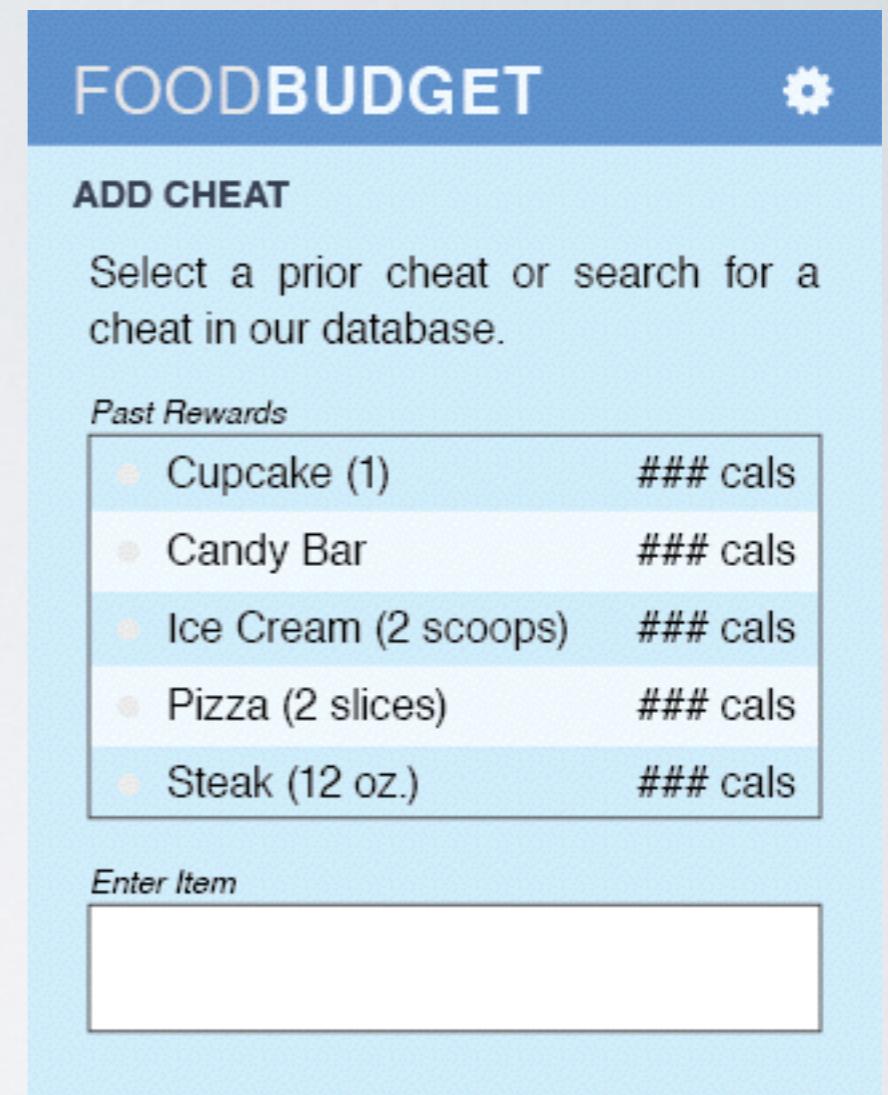
- Banana ## cals
- Cereal ## cals
- Buffalo Wings ### cals
- Water # cals
- Soda ### cals

A text input field labeled 'Enter Item' is present, along with a camera icon and the text 'Take Photo'. The bottom section is titled 'LOG MEAL' and features three large buttons with icons: a blue plus sign for 'Modify Budget', a green arrow pointing up for 'Home', and a cupcake icon for 'Add Cheat'. There are also smaller, partially visible buttons for 'Logout' and 'Help'.

SME DEFINITION

Anya Todd RD, LD is a registered, licensed dietitian specializing in vegan nutrition.

- Worked with a variety of clients in the last 10 years
- Counseled children and adults in areas of weight management, chronic disease treatment and preventive nutrition
- Received BS in nutrition from Case Western Reserve University in Cleveland and completed her internship at the Cleveland Clinic
- Holds training certificates in:
 - Adult and pediatric weight management from the Academy of Nutrition and Dietetics
 - Plant-based nutrition from eCornell and the T. Colin Campbell Foundation
- Teaches the Maternal & Pediatric Nutrition course and a Sports Nutrition course for the Wellness Forum Institute of Health Studies
- Sits on their Health Advisory Board
- Serves as the State of Ohio's coordinator of the Vegetarian Nutrition Dietetic Practice Group of the Academy of Nutrition and Dietetics
- Writer for the website, Your Daily Vegan.



The screenshot shows the 'FOODBUDGET' app interface. At the top, there is a blue header bar with the app name 'FOODBUDGET' and a gear icon. Below the header, a section titled 'ADD CHEAT' is displayed with the sub-instruction 'Select a prior cheat or search for a cheat in our database.' A table titled 'Past Rewards' lists various food items with their calorie counts. An input field labeled 'Enter Item' is provided for searching. At the bottom, a navigation bar features three main icons: 'Modify Budget' (blue plus sign), 'Log Food' (carrot and meat icon), and 'Home' (green arrow). There are also smaller, partially visible icons for 'Budget Summary' and 'Food Log'.

Past Rewards	
Cupcake (1)	### cals
Candy Bar	### cals
Ice Cream (2 scoops)	### cals
Pizza (2 slices)	### cals
Steak (12 oz.)	### cals

Enter Item

SELECT CHEAT DAY >

Modify Budget Log Food Home

Budget Summary Food Log

SME REVIEW

"I think the concept of allowing a caloric budget to factor in what may be deemed as "cheat" foods is very relevant at this time. Several trendier diets are based around having that one cheat day, and for many people, this allows them to keep on track the other 6 days per week. The detractors of this type of thought state we shouldn't be viewing food as "rewards" at all because it starts eliciting some emotional response/component & can lead to difficulty in dieting in the long run. I am not so sure where I fall in those discussions? In kids, I think the idea of rewarding with food is not a good one - as I think it can potentially trigger food issues down the road. In adults, I have seen this concept work & also fail; however, I think this is a program that would be a bit different in that it is based around caloric needs rather than "go totally crazy on food & pay no mind to calories cuz it's a cheat day/meal/snack!"

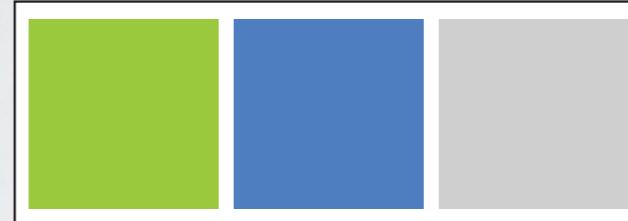
I like the idea of the alert system too. I can definitely see people utilizing this program. Food journaling/tracking is critical in making changes in one's intake."

The screenshot shows the 'FOODBUDGET' app interface. At the top, there is a blue header bar with the app name and a gear icon. Below the header, a section titled 'ADD CHEAT' with the sub-instruction 'Select a prior cheat or search for a cheat in our database.' is visible. A list titled 'Past Rewards' displays five items with their corresponding calorie counts (represented by three '#'): Cupcake (1) #### cals, Candy Bar #### cals, Ice Cream (2 scoops) #### cals, Pizza (2 slices) #### cals, and Steak (12 oz.) #### cals. Below this is a text input field labeled 'Enter Item'. Further down, a section titled 'SELECT CHEAT DAY' is shown with a right-pointing arrow. At the bottom, there is a navigation bar with three main buttons: 'Modify Budget' (blue plus sign icon), 'Log Food' (carrot and meat icon), and 'Home' (green arrow icon). There are also smaller, partially visible icons for 'Food Log' and 'Home'.

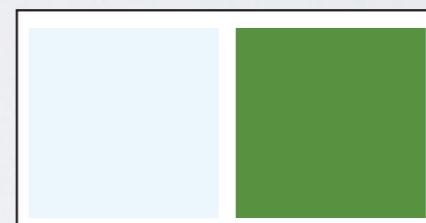
GROUP PALETTE

- Refined from analysis of health, insurance and health-related logos
- Preference testing using Intuition HQ – reviewed by each group member

Primary Set



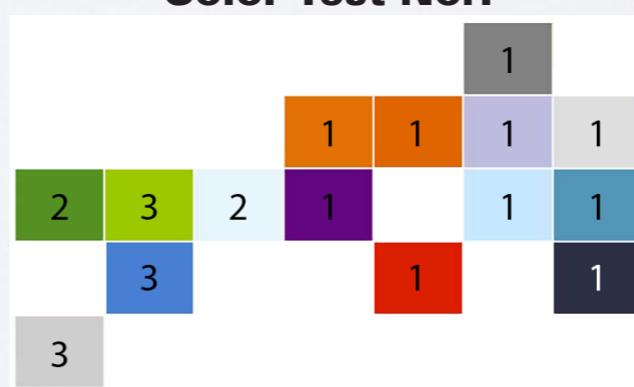
Secondary Set



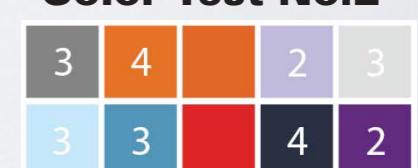
Accent Set



Color Test No.1



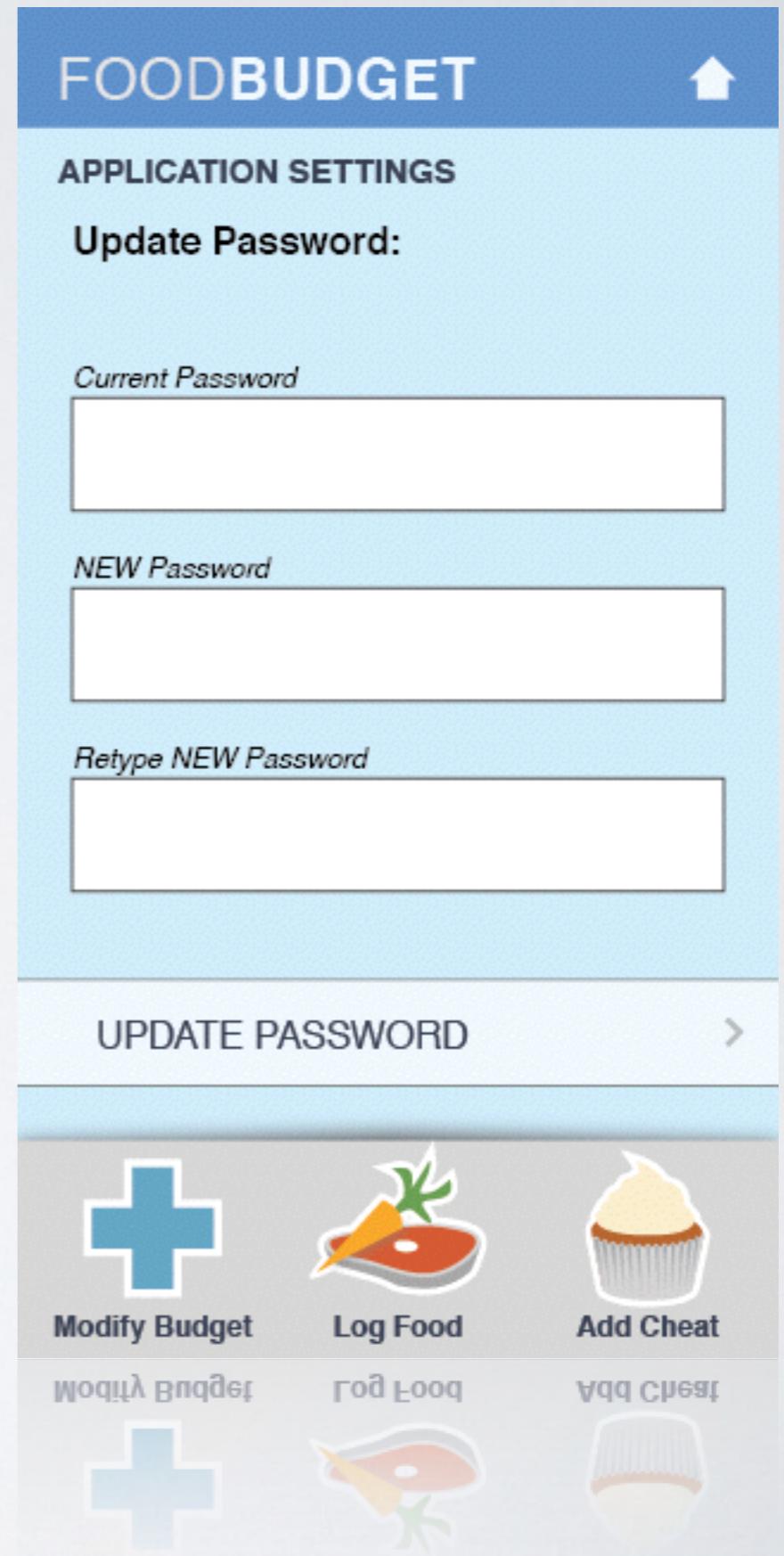
Color Test No.2



V2 REVISIONS

Based on my user reviews, before I begin user testing I plan to change:

- The main screen 'i' information button to be a simple 'details' button
 - The 'i' is unclear to users that is how to toggle between the 'Details' and 'Overview' views. Two of the users guessed correctly to achieve the task, but the purpose should be more direct
- Add buttons to the main screen 'Overview', 'Details' and Week view information to have the same functionality as the current swipe functionality (also keeping the swipe functionality)
 - This was an issue with all of the user reviews. Swiping did not seem to be as intuitive as I had thought it would be. Users in the review wanted to
- Add a 'Back' button to the Create and Modify Budget screens
 - This was an oversight in the original design that was picked up by one of the user reviews
- Try to resolve the Just In Mind issue where sometimes the input area loses focus, as seen in the user reviews when trying to create an account and logging in
 - This will take some research, but others in class have also noted this as a problem as well. Perhaps we can solve it as a group
- To decrease prototype lag, I plan to run all of my PNGs through TinyPNG [<http://tinypng.org>] to reduce the file size as much as possible to speed up interactions through the JustInMind prototype. I feel that the lag causes the user to think that nothing is happening when they touch a button. In all actuality, JustInMind creates a web-based



~FIN~

Ryan G. Wilson
ArtGr 672
Application Design
Fall Semester, 2013

Food Budget

Medium Fidelity Prototype, Version 2

<https://www.justinmind.com/usernote/tests/10045389/11171658/11171660/index.html>

Project Problem Statement

The purpose for this project is to learn how to design testable prototypes. This is an important skill for modern designers since we need to understand how to make simple and testable examples of proposed final products so as to:

- Better communicate goals to clients
- Refine interfaces and interactions in a reasonable amount of time
- Learn how to perform, oversee and analyze user testing
- Define purposes for why design is created (over qualifiable, subjective reasoning)
- Document the research, design, user testing and refinement processes

Product Summary – Hypothesis

Food Budget is a component of our larger Health and Wellness application that allows the user to make and/or track an eating plan for the week, month, etc. The underlying concept functions similarly to a financial budget, where, in place of monetary spending Food Budget allows you to budget for high-calorie food items like ice cream, buffalo wings or potato chips and still stay within your weekly food budget. There will be room for a gamification of healthy eating - users can be awarded 'cal points' to be spent on a fun snack - or - a 'reward zone' where the user can set up what their reward might be (candy bar, pizza, etc).

Users of Food Budget are looking for a way to learn, assist or reinforce healthy eating habits. They are probably aware that they are either not healthy eaters, could eat healthier or want to make a lifestyle change, such as losing weight. Food Budget will need to educate its users on what constitutes healthy eating in the sense that it fits into the calorie counting format that Food Budget will provide. It is the intent of Food Budget to provide its users with an education about portioning and caloric budgeting (e.g. if you plan to have an unhealthy meal on the weekend, spend your week eating healthier options).

Proposed Goals

The goals of this project are to create interest in and awareness of healthier eating. Overeating and obesity are a problem, now not only in the United States, but globally. Nutrition awareness and promotion of healthy lifestyles are vague and compounded with good marketing for bad

products. Many people are unaware of their poor eating habits and/or unaware of the unhealthy aspects of products labeled 'natural', 'organic' or otherwise appear to be healthy.

Proposed Product Key Features

Food Budget will allow users to:

- Create an account
- Create a food budget based on calories (and potentially other nutritional information)
- Application can suggest a caloric budget based on stats (height, weight, age)
- Application can suggest a caloric food based on personal goals (weight loss, healthier eating, etc.)
- Allows for a budget for special meals or treats (ice cream, weekend steak dinner, etc.)
- Log/Capture meals, snacks and beverage consumption
- Suggest alternatives for next time when logging when cal count is high
- Affirm the user when logging when cal count is low
- Add Reward meals to budget from or towards
- Push alerts (email, text, notification) per user choice when budget is close to max
- Track eating patterns / Ability to review past budgets
- Rewards for staying within or meeting budgets

Secondary Features

- User assistance for first time users and help system if users get lost
- Auto opt-in for notifications (email and device based) - Opt out in settings

Proposed Personas

Fred J.



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'Between my doctor and my shortness of breath, I know that I need to be healthier. But I work hard and like to enjoy the little things in life like going out to a nice dinner.'

Male / 47 / Married / 2 children / Chicago, IL / Homeowner

BS, MBA / Financial Analyst for a hedge fund

Every day Fred wakes up, eats breakfast, usually consisting of either bacon and eggs or cold cereal, gets ready for work and rides the train about 45 minutes to work downtown. Over the past year he has started to notice that it takes longer for him to catch his breath after walking up the stairs to the platform. A few months ago his wife suggested he see his doctor to get a physical and to make sure everything was 'in working order'. The doctor ran some tests and, aside from being overweight, Fred is in decent health for his age. The doctor did recommend a better diet, regular exercise and cutting out Fred's occasional cigar.

Fred enjoys eating - but more so how food tastes in his mouth. When he eats, he eats for enjoyment. Typically for lunch he goes out with co-workers to one of the establishments near his work, which consists of the choice of sub sandwiches, burgers, fried chicken, thai food or Chinese. Fred's wife, Barbara, is a stay at home mom, prepares dinner. Over the years she has noted what Fred likes and doesn't like and no longer prepares those meals. Barbara tries to make healthy choices for her family, but it is difficult to also cater for their tastes. Fred's favorite meal that she cooks is pineapple glazed pork loin wrapped in bacon - he usually has two helpings. On the weekends Fred usually grills steaks for the family.

Fred was once fit in his 'prime' and is troubled to find out he is out of shape now in middle age. He wants to take his doctor's advice, but thinks it will be difficult to stay away from the unhealthy choices of food that he makes. Ideally, he would like to lose 20-30 pounds in the next year.

Fred uses a laptop for work and knows how to diagnose basic technological issues on his machine. He commonly uses spreadsheet programs, but also spends a good amount of time researching companies (for work) and sports (in his free time) on the internet. He and his family have a shared cellular plan and have all used smartphones for over three years.

Key Attributes:

- Comfortable with computers
- Desire to try a healthier lifestyle
- At the beginning of his health goals

Overview of Application Use - Fred:

Fred will use the application for both calorie tracking and to schedule reward meals for the weekend. He will track his at home meals and beverages (weekdays: breakfast and dinners, weekends: all meals, except if the family goes out for a meal) and meals out (weekday lunches, weekend potential for meals out). Fred enjoys eating "good" food and will be attempting to schedule his "reward" meals for the weekends in order to balance his calorie intake for the week. Being a smartphone user, he will mostly use the application on his smartphone to track his meals and beverages, but may also use the web-based application on his laptop from time to time.

Susan T.

'Before I went away to college I heard of 'the Freshman 15' - I thought it was a myth or that it wouldn't happen to me. I'm healthy, I run a few times a week and do yoga when I can. However, between dormitory food and parties on the weekend, there was nothing I could do. I enjoy going out with friends for dinner and drinks but there aren't many healthy choices.'



'partying' on the weekends.

Female / 21 / Single / No children / Ames, IA / Rents

Studying Veterinary Medicine / Student

Susan is a good student. She is studying to become a veterinarian at the local university and will graduate soon. She understands the importance of eating healthy, but doesn't feel like there are enough healthy choices when going out for meals and drinks with friends.

Susan doesn't live far from campus or from the area where she engages in her social activities. She mostly walks everywhere she needs to go. A few times a week she runs, 30-60 minutes a time when she can find the time. She used to do yoga more often, but her classes and social life have been keeping her from the gym this semester. She wants to make healthier food choices during the week so that she can offset

Susan is moderately good with computers. She mainly uses her laptop to write papers, do research and play on social media sites. She has a smartphone. Her smartphone is two generations old, a hand-me-down from her parents. It still works, but she doesn't do much with it because she perceives it as 'slow'.

Key Attributes:

- Familiar with web browsing/interaction on websites
- Desire to eat healthier

Overview of Application Use - Susan:

Susan will use the application mostly for the reward structure. She will track her meals and beverage intake during the week in order to spend most of her calories on the weekend for "bad food choices" and alcoholic beverages. She may or may not use the reward function seeing as she does not have a specific reward in mind, but just the general "going out" weekend meals and drinking. Susan will use the application on her phone and on her laptop, depending on which offers her the best internet signal when she is ready to use the app.

Daniel P.

'I know people say this all the time, but I really do love my job... which is funny, because when I was a kid I hated school. I have always been a bigger guy so school was more like torture for me. Now that I'm in my 30s I am more interested in turning my weight around.'



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Male / 33 / Single / No children / Cincinnati, OH / Homeowner

MS / High School Science Teacher

Daniel is passionate about teaching middle school science. He has been at his current school for the past ten years, since he graduated from college. His daily routine revolves around his disability. Dan has always been a bigger guy, but a few years ago he was diagnosed with Type II diabetes. Several times he has attempted to keep his diabetes under control by diet and exercise, but feels that he lacks the willpower to keep both up.

Dan likes to eat, so much that he notes that it is one of his 'pastimes' along with watching movies and playing video games. Aside from using his television and video game console, Daniel lists himself as 'technologically inept'. He is the last of his friends to still have a flip phone, a fact that he wears as a badge. Dan is also a social media holdout, claiming to not have interest or desire to waste time on those sites. For his job, Dan has a laptop, but he uses it for grading, giving class presentations, getting directions and sparingly using the internet.

Daniel would be interested in using an application or device that would help him to get motivated as long as there is training included.

Key Attributes:

- Needs to moderate diet
- Moderately technical

Overview of Application Use - Daniel:

Dan will use the app to assist his weight loss and management. His budget will help him to refine his eating habits. However, no successful diet is so strict to disallow cheating. Dan may use the reward system from time to time, but that will not be his primary goal for using the application. He will use the application on his computer since he does not have a smartphone.

Vanessa D.

'After I left Paul I was relieved. I wasn't getting as much out of life as I want. Now I want to feel sexy and don't know how to meet people.'



Female / 48 / Divorced / 3 children / Philadelphia, PA / Homeowner

High School Graduate / Factory worker

Vanessa, mother of three, is recently divorced. Her marriage to Paul, her now ex-husband lasted 25 years. Newly single, Vanessa is interested in reentering the dating scene but feels awkward doing so. Her self-image after her failed marriage is not great; she is feeling overweight, unsure

and undesirable. Vanessa's friends at work have suggested a personal trainer, but she has neither the time nor the money to join a gym. She would like to gain more self confidence and look better, but has no immediate goals set to achieve either.

Her eating habits are not great. Being a full-time worker and raising three children means that dinners, and consequently her lunches are mostly casseroles. Neither she nor her children like vegetables much. She does like some fruit, such as apples, orange juice without the pulp and she adds 'the flavor of gummi peach rings'.

Vanessa's children have a laptop that they share, but she has never used it. Technology, in her words, 'scares her'. At her job she operates a mechanical press, which runs off of a computer interface, but her part of the labor is removing the pressed pieces and stacking them in crates. She has a pay-as-you-go cell phone that she keeps only for emergencies. She has used the phone twice in the four years she has had it. Once when her car broke down leaving her stranded in the grocery store parking lot after it closed and once when she had a tire blowout on the way to visit her sister 3 hours north.

She would like to rekindle some of her hobbies from before her marriage, like dancing and reading. She is also an avid knitter.

Key Attributes:

- Non technical
- Wants to be healthier, but doesn't know how to go about it
- Desire to make a change at this point in her life

Overview of Application Use - Vanessa:

Vanessa will be using the application to help her to make better food choice decisions with the motivation to lose weight. She may occasionally use the reward system to plan out meeting with friends or, she hopes, dating. Technology will be the difficulty for Vanessa, seeing as she does

not feel technologically competent. She will be using the web-based application and will not be using a mobile version of the application.

-----END PERSONAS-----

General Prototype Overview Information

What is a Prototype For?

A prototype is a simple and inexpensive way to test and refine a system (as well as a design) working with users and getting their feedback from very early stages of production. Prototyping does not have to, and usually does not, cost much money or take too much time to implement. According to the Nielsen/Norman Group, “the biggest improvements in user experience come from gathering usability data as early as possible in a design project”.

Why Do We Start Out With a Low Fidelity Prototype?

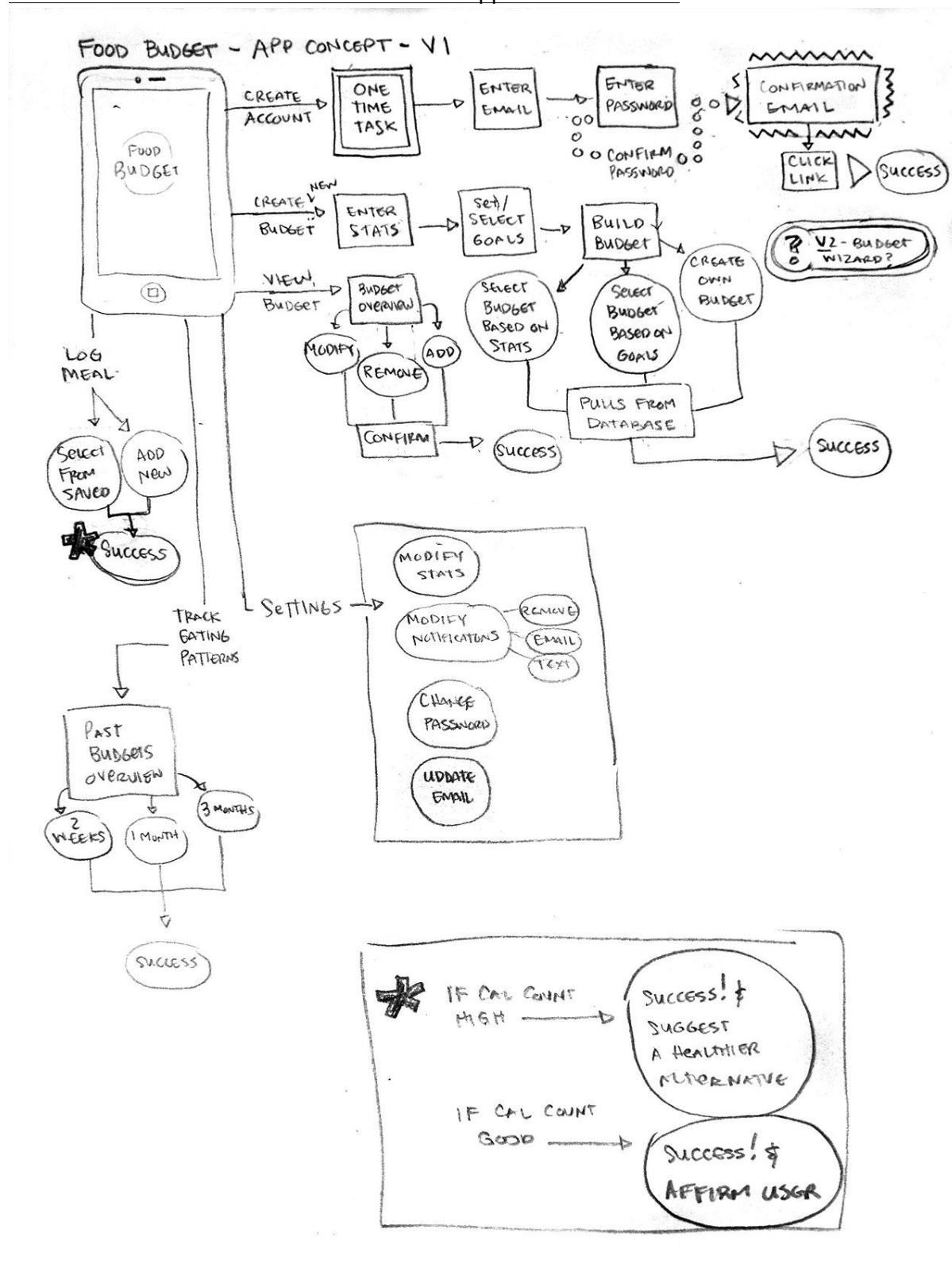
Starting with a low fidelity design is important because you do not spend as much time refining in the design before putting the system in front of the user. It is important to get user feedback to not only refine the system but to refine the design as well.

Why Do We Test with a Vague Task List?

The purpose for providing your user a vague task list when testing out a prototype is to find where the system or design is unclear to the user. A failure in a user test, either within a task or a complete failure helps the investigator/designer/developer consider potential errors or unclear interactions for future versions. A scenario-based task list may be too hand-holding for a user, or may direct a user to complete the task through the verbiage of the task list rather leaving the interaction up to the user themselves. During user testing we do not want to test how well we can walk a user through our prototype, but how well the user can interact with the system we built and if the system functions as expected by the user.

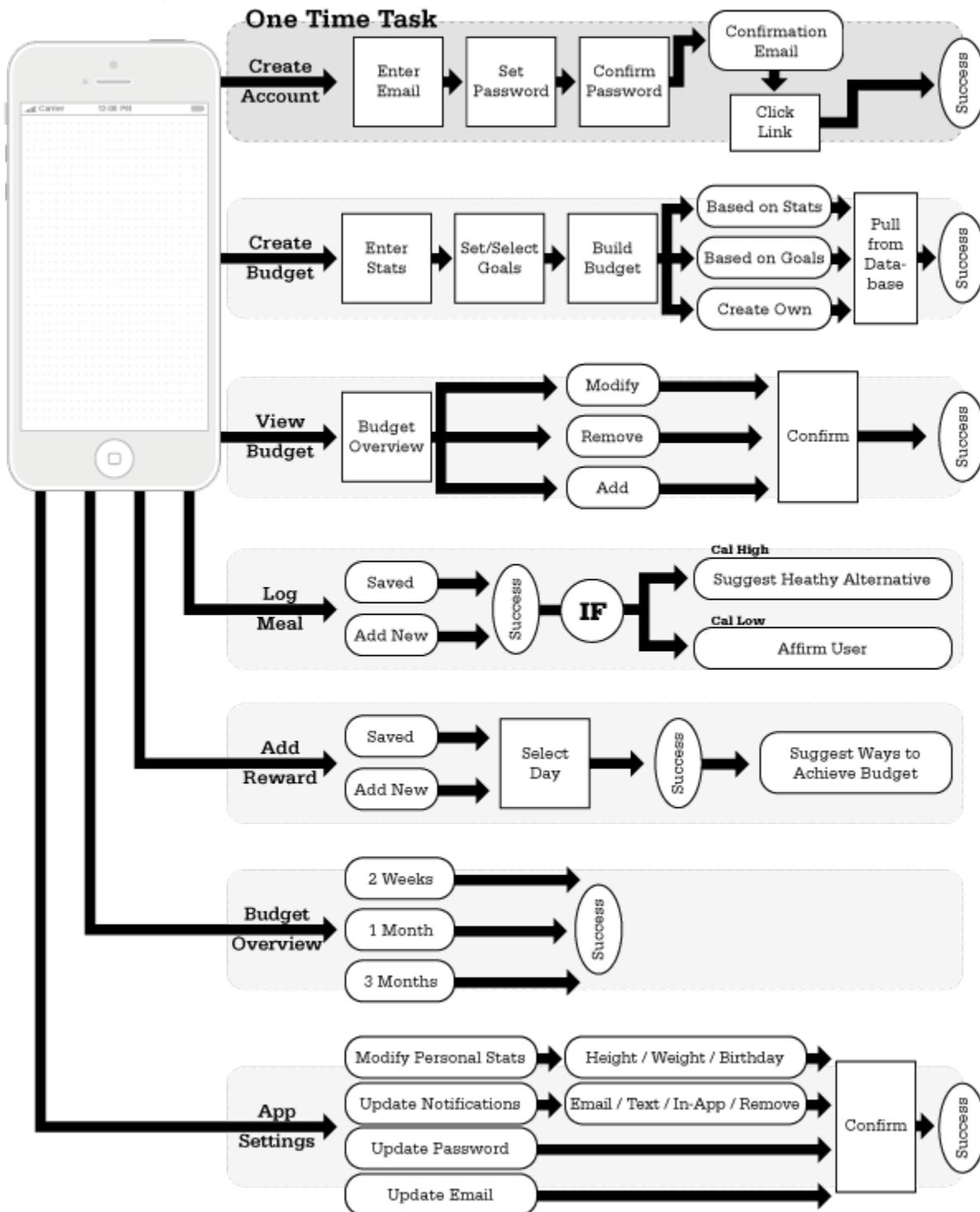
Information Architecture

Information Architecture - Version 1: Mobile Application Workflow



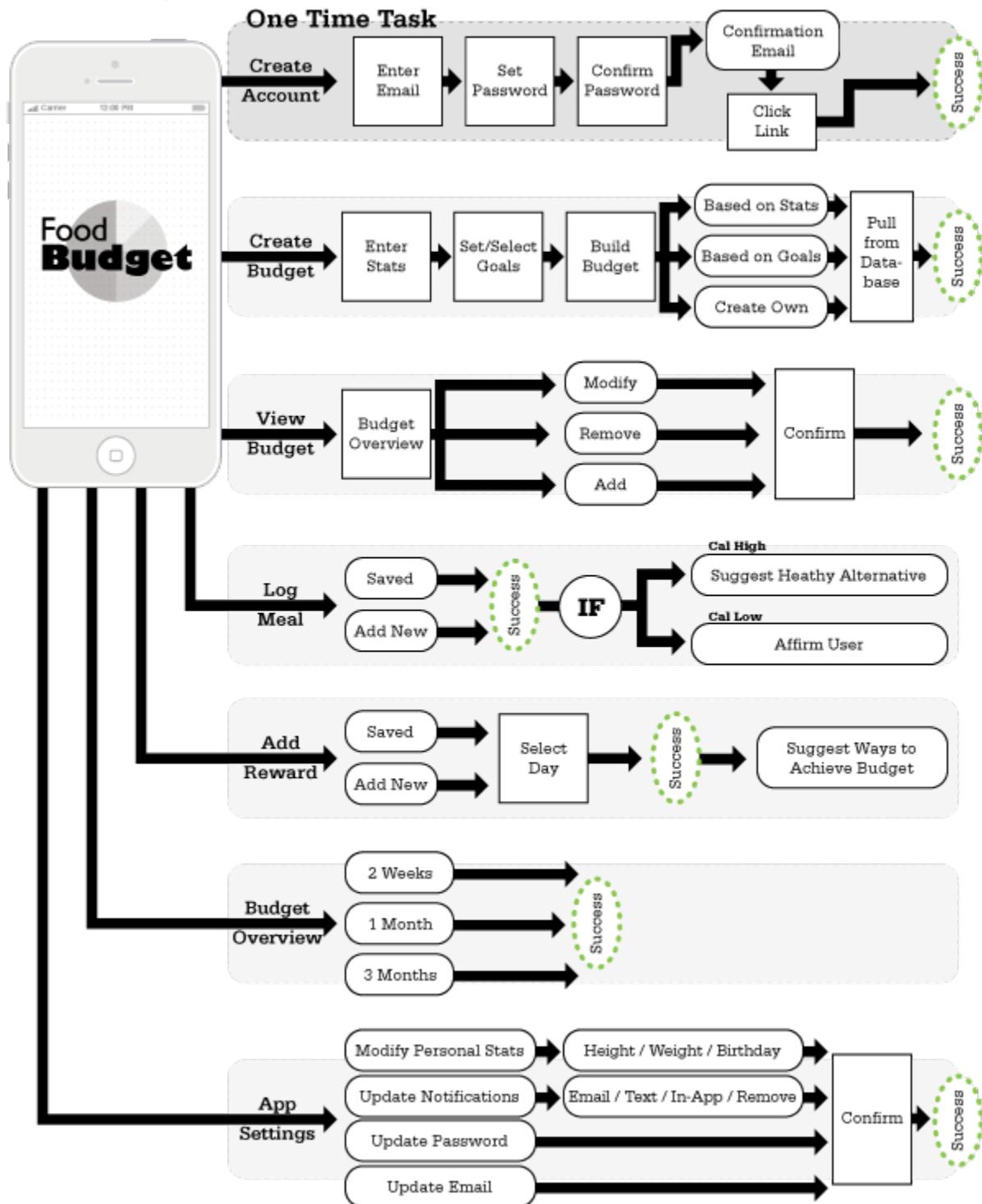
Information Architecture - Version 2: Mobile Application Workflow

Food Budget - Application Concept, V2



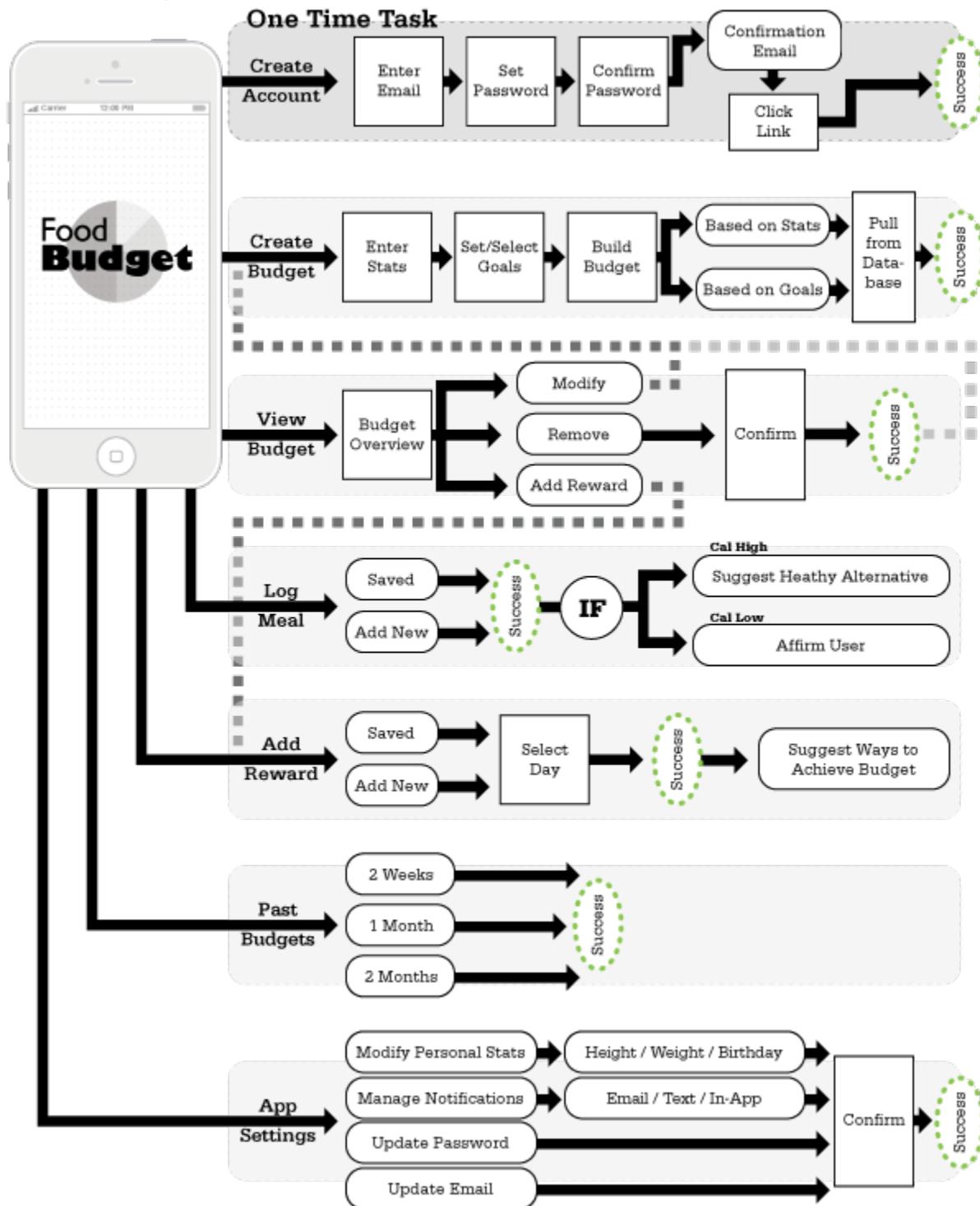
Information Architecture - Version 3: Mobile Application Workflow

Food Budget - Mobile Application Concept, V3

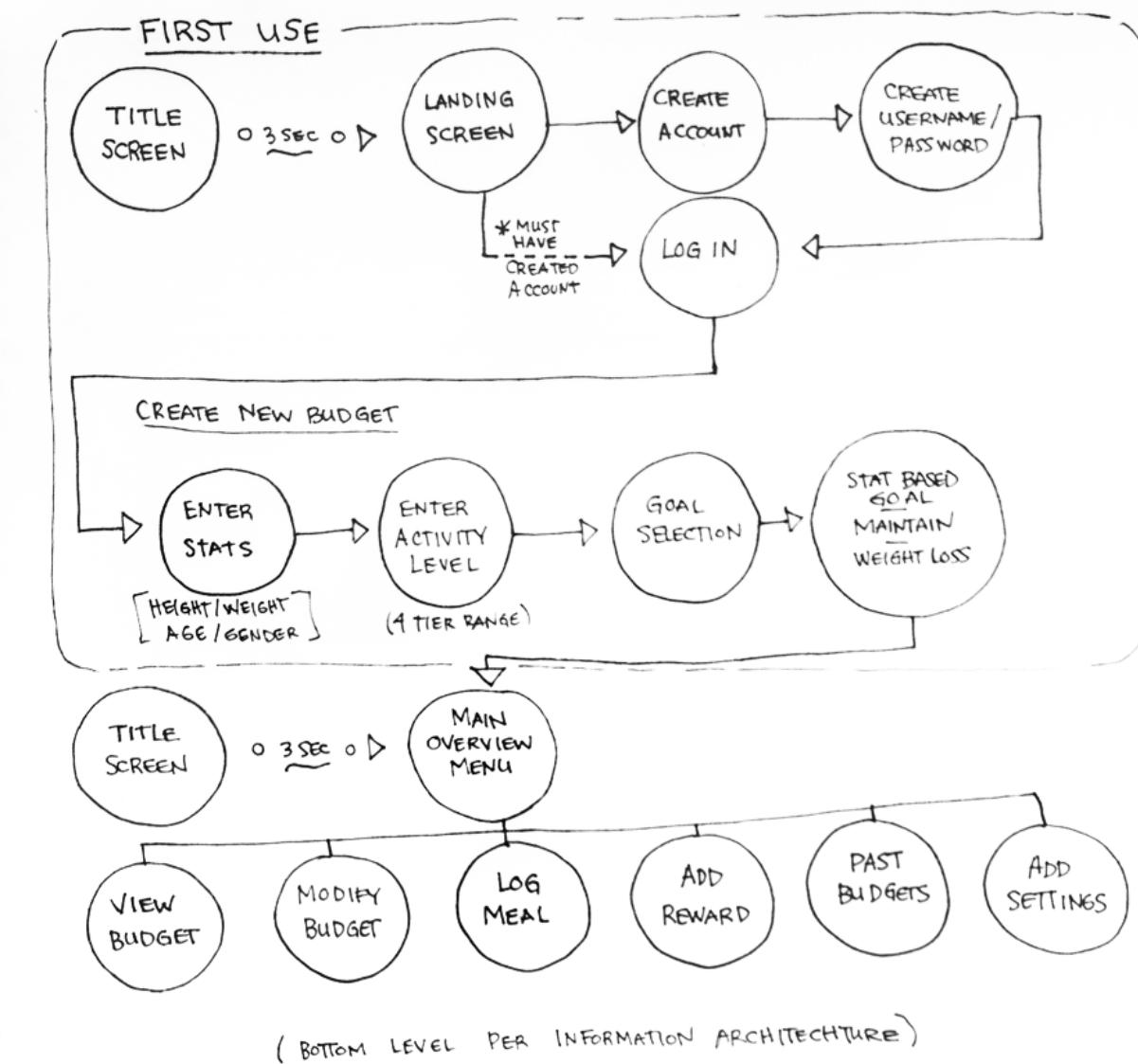


Information Architecture - Version 4: Mobile Application Workflow

Food Budget - Mobile Application Concept, V4

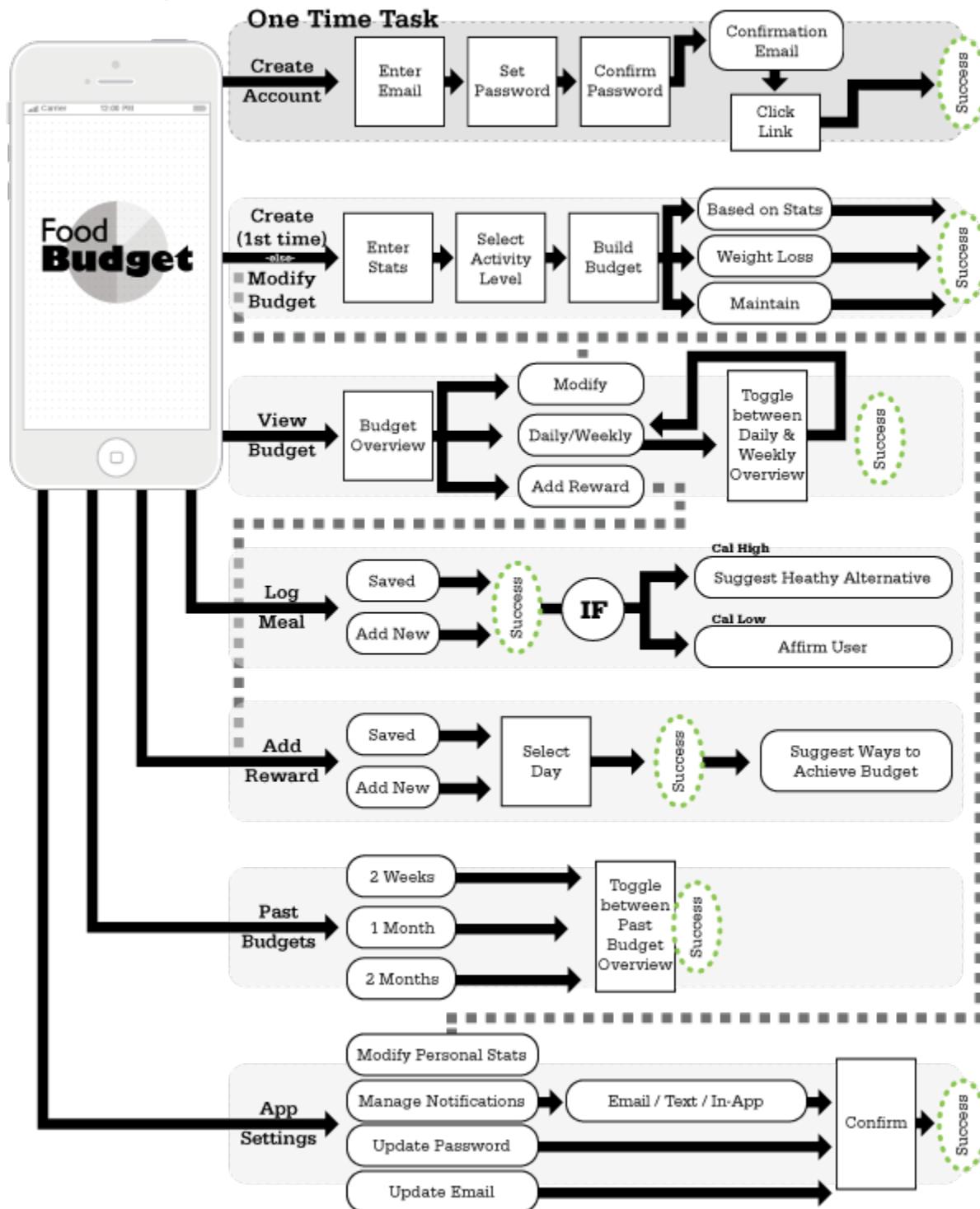


Prototype Version 1, Revision – Flowchart



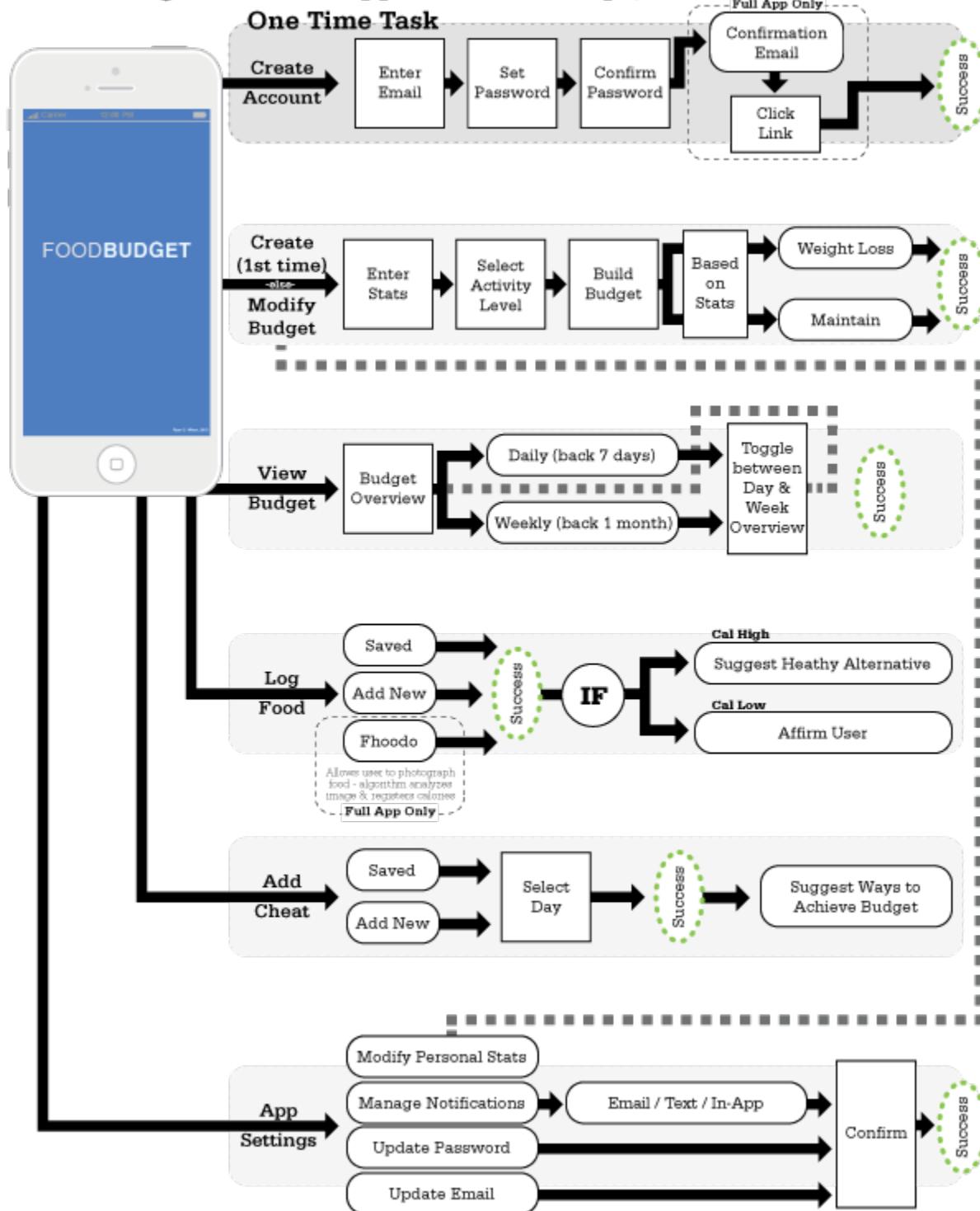
Information Architecture - Version 5: Mobile Application Workflow

Food Budget - Mobile Application Concept, V5



Information Architecture - Version 5: Mobile Application Workflow

Food Budget - Mobile Application Concept, V6



Task Analysis - Version 1, Revision

Create an Account (first time use)

1. Click on 'Create an Account'. NOTE: This button will only be visible if user is NOT signed in. Other potential options in this state would be application overview and application demos.
2. Enter email address
3. Create unique Username
4. Create Password
5. Confirm Password
6. System sends a confirmation email / Screen displays a success screen and tells user to check their email (display email entered) and click on the link within the email to confirm
7. User clicks link in email, is taken to a confirmation website page asking user to log in to application
8. User logs in to application
9. Success - Welcome confirmation, sends to Create New Budget

Create a New Budget (first time use)

1. Enter after first log in to the application
2. Enter height, weight, birthdate and gender
3. Set activity level (none, low, moderate, high)
4. Build budget - Overview of calculated stats per user
 - a. Select 'Budget Based on Stats - XX cals/day'
 - b. Select 'Budget Based on Weight Loss - XX cals/day'
 - c. Select 'Budget Based on Healthy Eating/Maintaining Weight - XX cals/day'
5. Success - Budget complete confirmation - Overview

Modify Budget (after first time use)

1. Click on 'Modify Budget'
2. Update height, weight, birthdate and gender
3. Update activity level (none, low, moderate, high)
4. Build budget - Overview of calculated stats per user
 - a. Select 'Budget Based on Stats - XX cals/day'
 - b. Select 'Budget Based on Weight Loss - XX cals/day'
 - c. Select 'Budget Based on Healthy Eating/Maintaining Weight - XX cals/day'
5. Success - Budget complete confirmation - Overview

View Budget

1. Click on 'View Budget'
2. User sees default daily budget overview
 - a. Option to see weekly budget overview
 - b. Option to Modify current budget
3. Weekly budget shows weekly budget overview
 - a. Option to see daily budget overview
 - b. Option to Modify current budget

4. Modify takes user to 'Modify Budget' process (above)
5. Success - No main success beside reviewing budget overviews

Log Meal

1. Click on 'Log Meal'
2. Select from 'Saved Items' (i.e., items entered previously) or 'Add New Items'
3. User selects item they ate or adds new items from list or manually enters
4. Cals are calculated from database
5. Success - Your item(s) have been added
 - a. If Cal count high, suggest healthier alternatives for next time
 - b. If Cal count good, reaffirm user they are doing a good job

Add Reward

1. Click on 'Add Reward'
2. Select from 'Saved Items' (i.e., items entered previously) or 'Add New Items'
3. User selects item they ate or adds new items from list or manually enters
4. Select 'Date/Day/Schedule'
5. User adds the reward meal/treat to the budget calendar
6. Cals are re-calculated to allow for meal/treat
7. Success - Your item has been added, suggest ways to keep cals down to reach goal

Settings

1. Options to:
 - a. Modify stats (e.g., update weight, height, etc.) - Redirects to Modify Budget
 - b. Manage Notifications
 - i. Turn All On/Off
 - ii. Set email notifications (Opt in/out)
 - iii. Set Text notifications (Opt in/out)
 - iv. Set device-based notifications (Opt in/out)
 - c. Update Password
 - d. Update Contact Information (email)

Wireframe Prototype Task List - V1

1. Create Account - Using any email and password (No data is stored after user test)
2. Log in - Using the email and password you used above
3. Create Budget - Create a budget based on maintaining your weight
4. Add Reward - Add a Reward of 2 scoops of Ice Cream that you plan to have on Saturday
5. View Current Budget
6. View Past Budgets - View Past Budget for the last 2 Weeks and for the past 2 Months (Past data has been simulated)
7. Log a Meal - Log that you had a Banana today
8. Update Weight - Using Settings

User Testing Prototype Task List - V2

1. Create a Food Budget Account using any email and password (*NOTE: No data is stored in the user test*)
2. Log in to Food Budget using the email and password you set in task No. 1
3. Create a budget based on maintaining your weight
4. Plan to have 2 scoops of Ice Cream this Saturday
5. View Yesterday's Budget Overview
6. View the Budget details for two days ago, <Insert date>
7. View Past Budget for the last 2 Weeks (*Past data has been simulated*)
8. Log that you ate a Banana
9. You have lost weight by eating right. Update your weight in the application

Reading Reviews

User Assumptions, p22, Lean UX

1. Who are the users?
 - a. Adults of varying ages who have interest in setting and meeting a weekly caloric goal - see Personas above
2. Where does your product fit in the their work or lifestyle?
 - a. Food Budget is a web-based application that works on any internet-enabled device - for the focus of this project, Food Budget will focus on smartphones
3. What problems does your project solve?
 - a. Contrary to popular belief, willpower is not an effective way for most people to manage and maintain their weight and eating habits. Food Budget is the technological equivalent of 'digital willpower', allowing for users to track, chart and store their caloric intake - also allowing the user to schedule high calorie items ("Rewards") for intake in the future (e.g. weekend) and balancing the remainder of the weekly budget to accommodate the Reward.
4. When and how is your project used?
 - a. Food Budget will be most used on a daily basis by the tracking of meals, beverages and snacks and scheduling Rewards. Food Budget is a web-based application that works on any internet-enabled device - for the focus of this project, Food Budget will focus on smartphones
5. What features are important?
 - a. Food Budget will be most used on a daily basis by the tracking of meals, beverages and snacks and scheduling Rewards. Additional user feedback (e.g. overview of present and past budgets) is the secondary information provided by the application.
6. How should your product look and behave?
 - a. The design of Food Budget will be aesthetically pleasing - clean and simple design. The application will be responsive and responsible - allowing for user supportive feedback and user assistance.

Basic Questions, p57, Lean UX

1. Is there a need for the solution you are designing?
 - a. With obesity spreading globally, there is an obvious need to help individuals in making healthier choices
2. Is there a value in the solution and features you are offering?
 - a. Yes, I believe that there is value in supporting individuals in their desire to either lose weight, eat well and/or watch their caloric intake
3. Is your design/solution usable?
 - a. I believe that once the design is refined it will be very usable, either within the system (as defined by my group) or as a stand alone application option

Product and Design Research

Research: Similar Applications

iPhone Apps:

Calorie-Calculator: <https://itunes.apple.com/us/app/calorie-calculator/id437245487?mt=8>

Lose It!: <https://itunes.apple.com/us/app/lose-it!-weight-loss-program/id297368629?mt=8>

Calorie Calculator Quick: <https://itunes.apple.com/us/app/calorie-calculator-quick/id422348188?mt=8>

CalorieSmart: <https://itunes.apple.com/us/app/caloriesmart-calorie-counter/id314870192?mt=8>

iCalCalc: <https://itunes.apple.com/us/app/icalcalc-calorie-calculator/id298247591?mt=8>

Argus: <https://itunes.apple.com/us/app/argus-your-fitness-tracker/id624329444?mt=8>

Web Based:

Calorie King: <http://www.calorieking.com/interactive-tools/how-many-calories-should-you-eat/>

About Article w/ Calorie Calculator: <http://nutrition.about.com/od/changeyourdiet/a/calguide.htm>

Define Subject Matter Expert (SME)

Anya Todd RD, LD is a registered, licensed dietitian specializing in vegan nutrition. Anya has worked with a variety of clients in the last decade of practice. She has counseled children and adults in areas of weight management, chronic disease treatment and preventive nutrition.

Anya received her BS in nutrition from [Case Western Reserve University](#) in Cleveland and completed her internship at the Cleveland Clinic. Along with a passion for nutrition, Anya enjoys cooking and obtained vegan culinary training at the School of [Natural Cookery](#) in Boulder, Colorado. Anya holds additional training certificates in adult and pediatric weight management from the Academy of Nutrition and Dietetics, along with certification in plant-based nutrition from eCornell and the T. Colin Campbell Foundation.

Currently, Anya teaches the Maternal & Pediatric Nutrition course as well as a Sports Nutrition course for the [Wellness Forum Institute of Health Studies](#) and also sits on their Health Advisory Board. Additionally, she serves as the State of Ohio's coordinator of the [Vegetarian Nutrition](#)

[Dietetic Practice Group](#) of the Academy of Nutrition and Dietetics and is a writer for the website, Your Daily Vegan.

Research: Caloric Budgeting

It is important to understand what the ideal healthy weight range is for each individual. Knowing that, it is easy to understand how many calories per day that individual needs to maintain their current weight and how many calories they need to lose weight.

Once a healthy eating lifestyle is developed, the hardest part is to keep it up. The hardest part of trying to lose weight is to maintain a reduced and/or healthy eating lifestyle if there is no room for flexibility in diet. Caloric budgeting allows for individuals, within reason, to intake more calories one day if their caloric intake is reduced over others. For example, do you want to have ice cream on Saturday? That is fine, just simply reduce your caloric intake by X for 2 days prior and 2 days after. Caloric budgeting is about balancing daily and weekly caloric intake for maintaining or losing weight.

SME Project Feedback

From Anya Todd, RD, LD:

I think the concept of allowing a caloric budget to factor in what may be deemed as “cheat” foods is very relevant at this time. Several trendier diets are based around having that one cheat day, and for many people, this allows them to keep on track the other 6 days per week. The detractors of this type of thought state we shouldn’t be viewing food as “rewards” at all because it starts eliciting some emotional response/component & can lead to difficulty in dieting in the long run. I am not so sure where I fall in those discussions? In kids, I think the idea of rewarding with food is not a good one - as I think it can potentially trigger food issues down the road. In adults, I have seen this concept work & also fail; however, I think this is a program that would be a bit different in that it is based around caloric needs rather than “go totally crazy on food & pay no mind to calories cuz it’s a cheat day/meal/snack!”
I like the idea of the alert system too. I can definitely see people utilizing this program. Food journaling/tracking is critical in making changes in one’s intake.

From my SME's feedback I will remove the word "reward" associated to eating poorly. I will rename "reward" to "cheat", which will retain a negative connotation but still get the point across that it is a diet-breaking treat.

Unofficial Survey Prospective Users - Survey Questions

This survey is to capture the interest in a potential new application for individuals interested in eating right and being healthy. Your responses will be used to inform the design and functionality of this application.

1. Are you male or female?
2. Which category below includes your age?
3. What is the highest level of school you have completed or the highest degree you have received?
4. What is your annual income?
5. How frequently do you use the internet?
6. What devices do you use to browse the internet?
7. Which social networking websites do you use most often?
8. Do you have interest in losing or maintaining your weight?
9. Do you feel that you are an unhealthy eater?
10. Have you ever tried dieting before?
11. If yes, What did you find the most difficult part of the diet to be?
12. Do you think that by eating and drinking less you can lose weight?
13. Do you feel guilty when you overeat or eat unhealthy foods?
14. What would be your level of interest in an application that would help you track and monitor how much you eat and drink?
15. What would be your level of interest in an application that would help you develop a plan to maintain or lose weight?
16. What would be your level of interest in an application that would suggest alternatives to your current diet?
17. What would be your level of interest in an application that would allow you to view your caloric intake for the day, week, past week and past month?
18. What would be your level of interest in an application that would allow you to schedule when you want to cheat or splurge on your diet and adjust your intake around it?

Unofficial Survey Results

Q1:

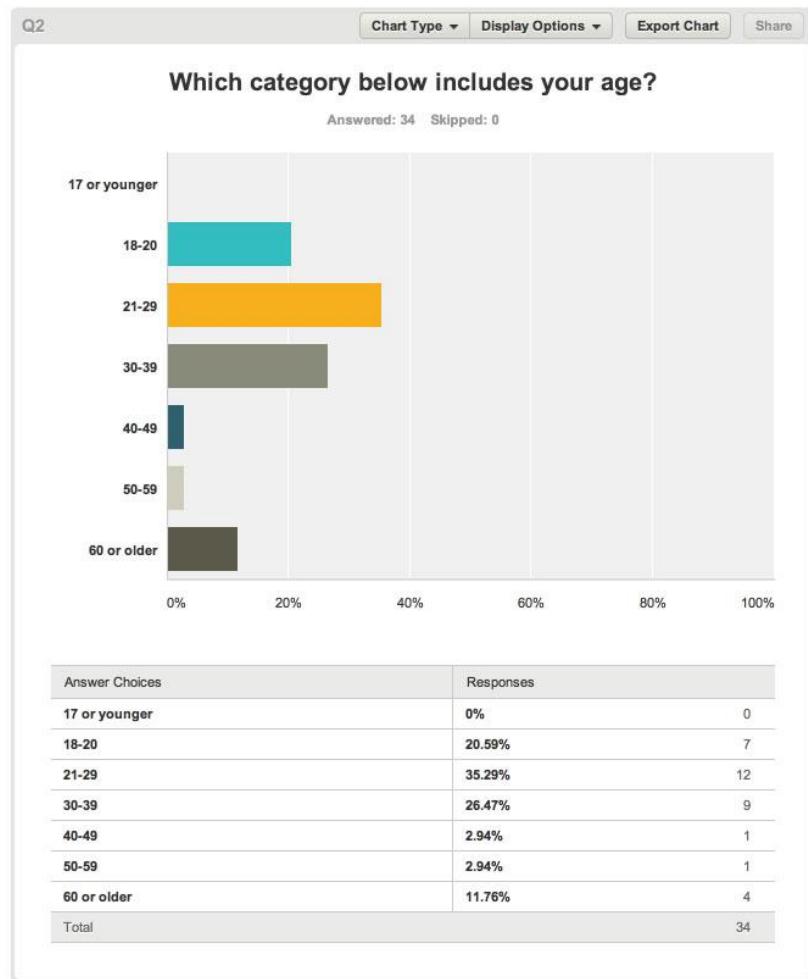
The screenshot shows the SurveyMonkey interface for a "Food Budget Survey". The top navigation bar includes links for Home, My Surveys, Survey Services, Plans & Pricing, Upgrade, goodarts, and a green "+ Create Survey" button. Below the navigation is a toolbar with Design Survey, Collect Responses, and Analyze Results buttons, along with a link to the classic Analyze tool.

The main area displays the survey title "Food Budget Survey" and the respondent count "RESPONDENTS: 34 of 34". There are two tabs: "Question Summaries" (selected) and "Individual Responses". A sidebar on the left shows "CURRENT VIEW" with options to FILTER, COMPARE, and SHOW, and a note about rules. It also lists "SAVED VIEWS (1)" named "Original View (No rules applied)".

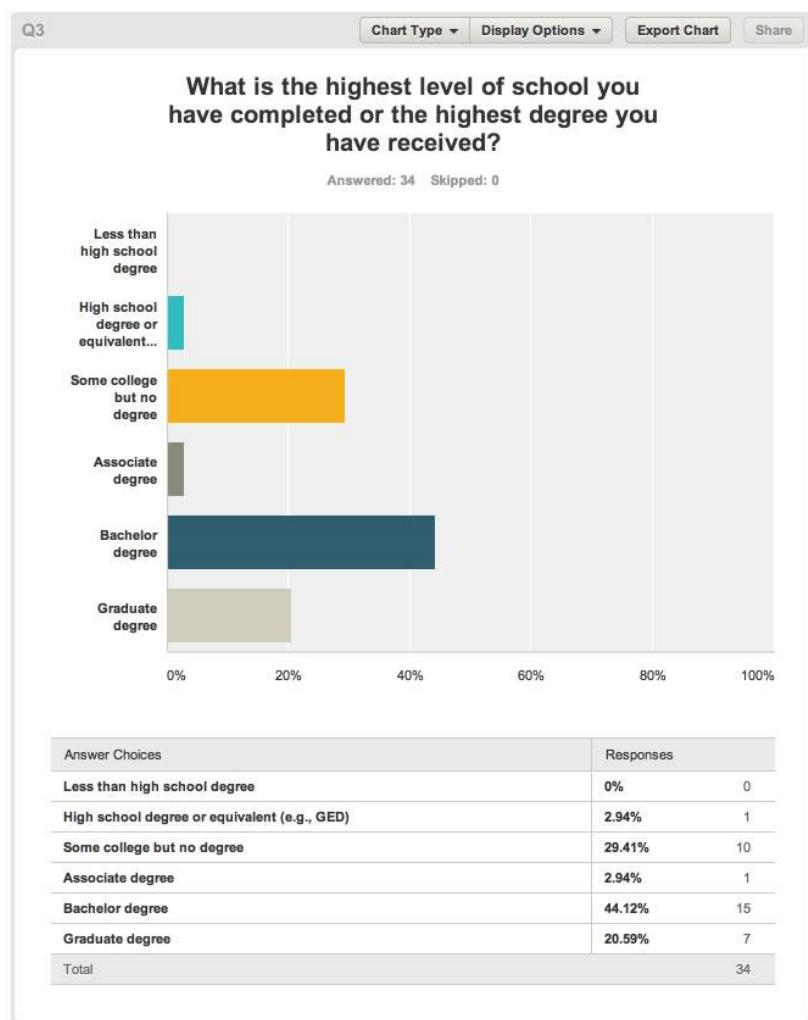
The central chart, titled "Are you male or female?", shows the distribution of responses. The x-axis represents percentages from 0% to 100%. The chart has two bars: "Male" (yellow-green) at approximately 47.06% and "Female" (teal) at approximately 52.94%. Below the chart is a table of "Answer Choices" and "Responses".

Answer Choices	Responses
Male	47.06%
Female	52.94%
Total	34

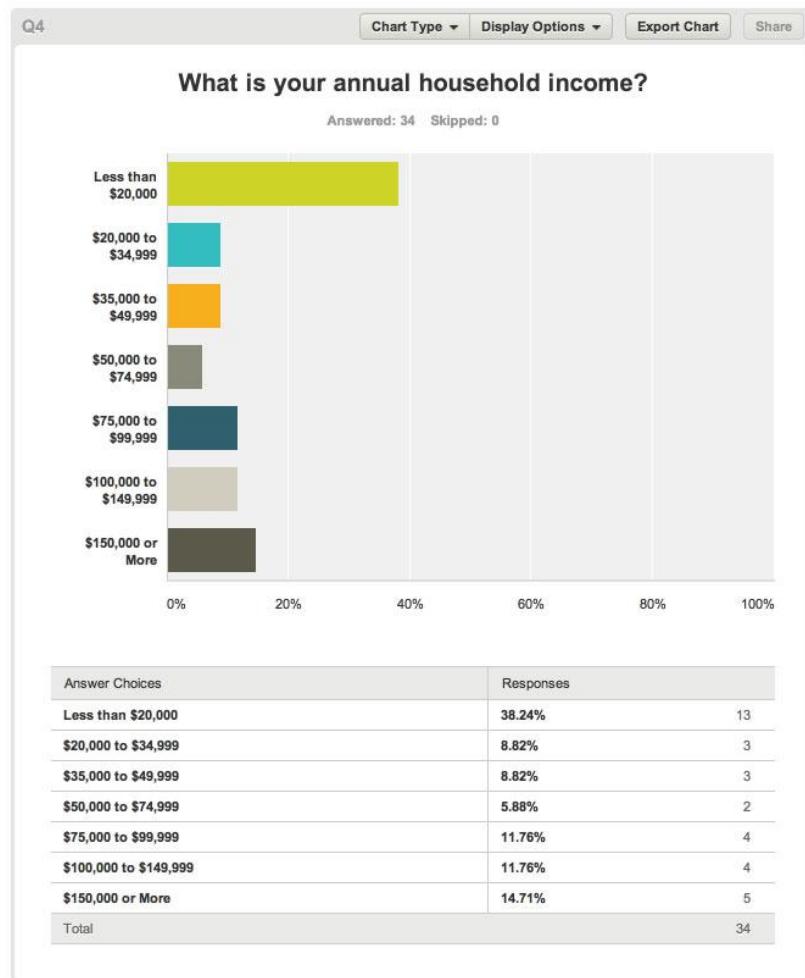
Q2:



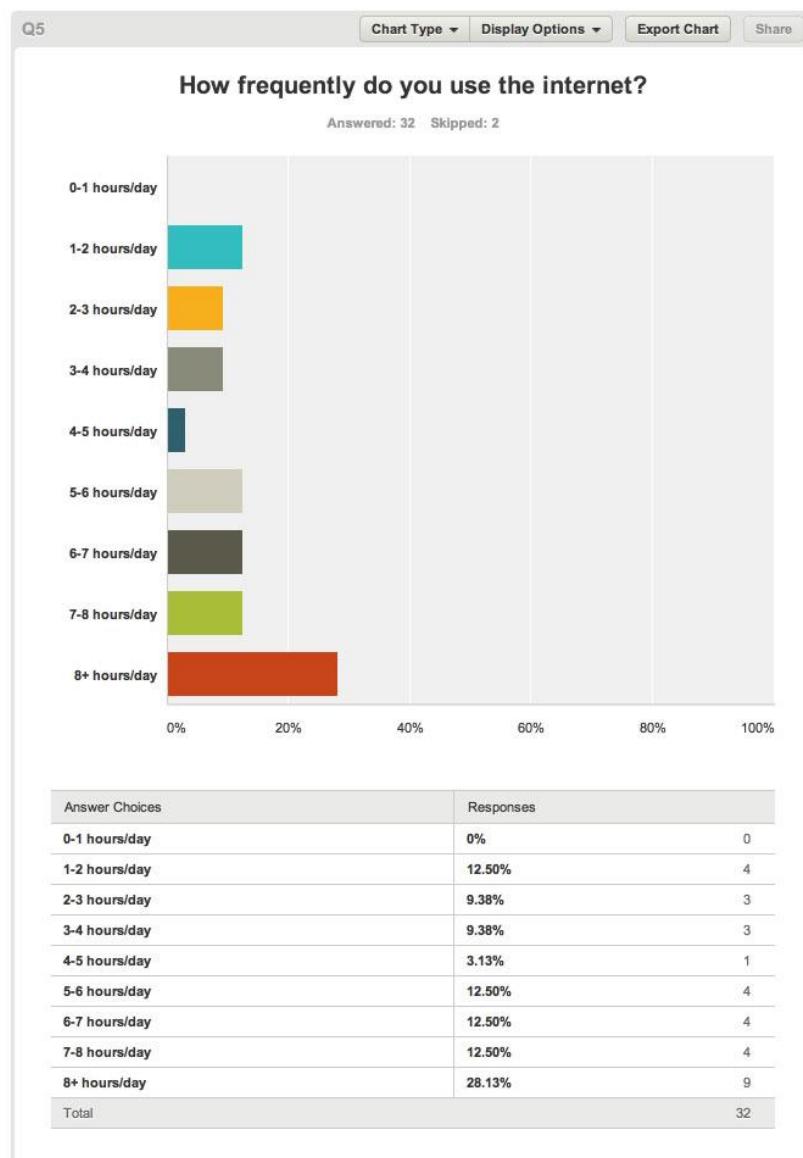
Q3:



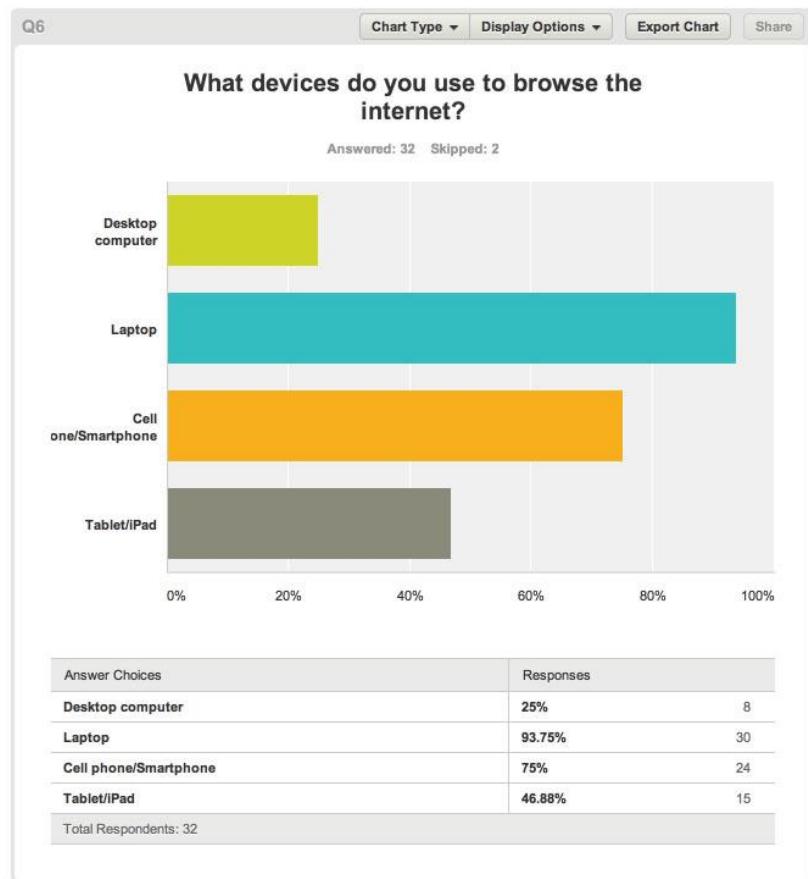
Q4:



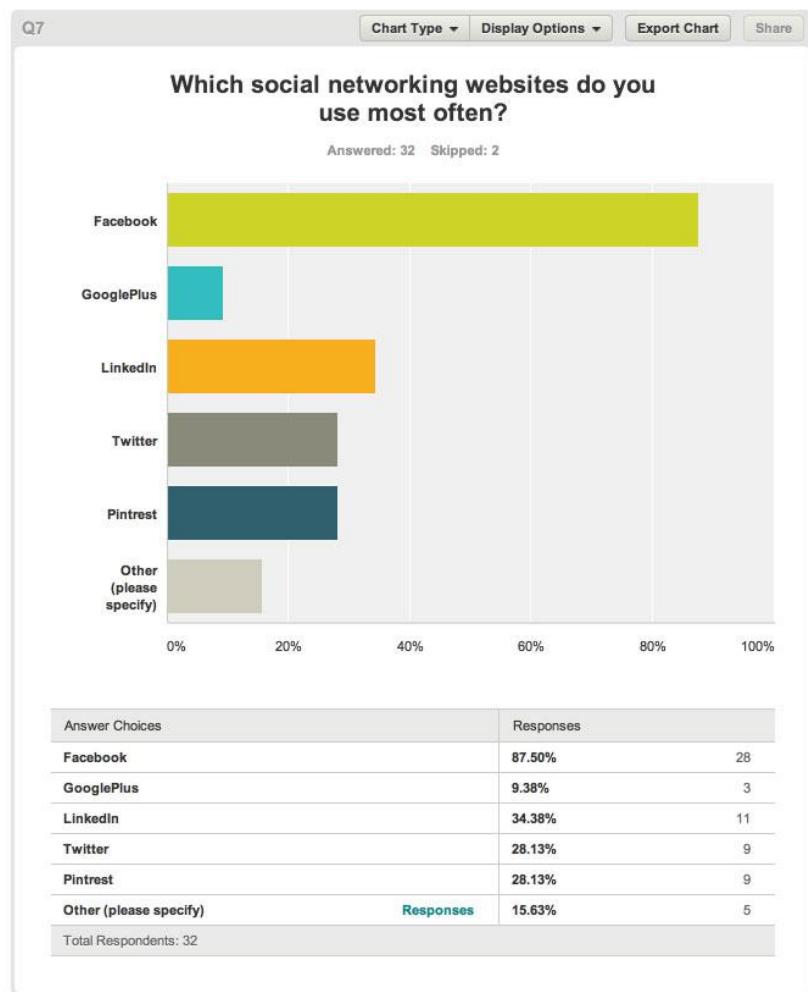
Q5:



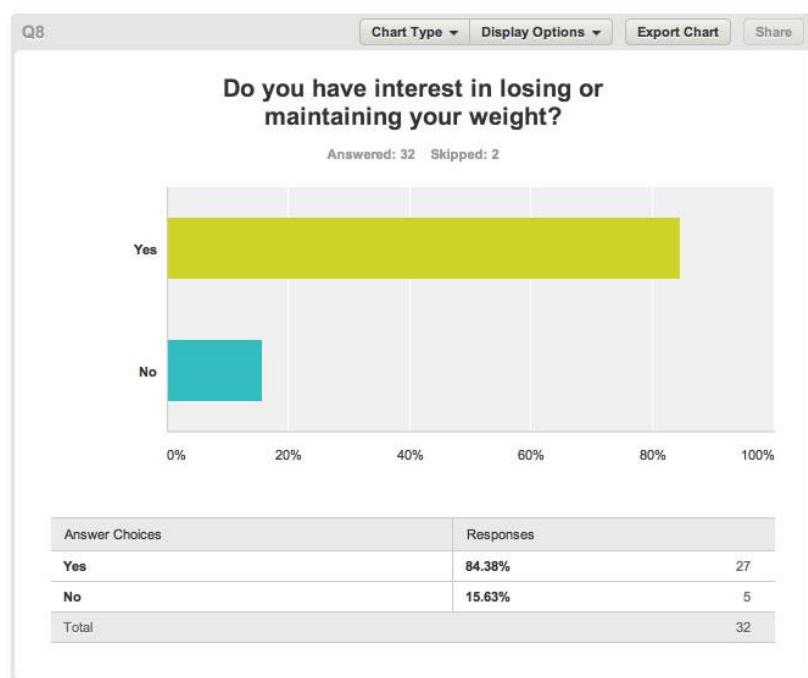
Q6:



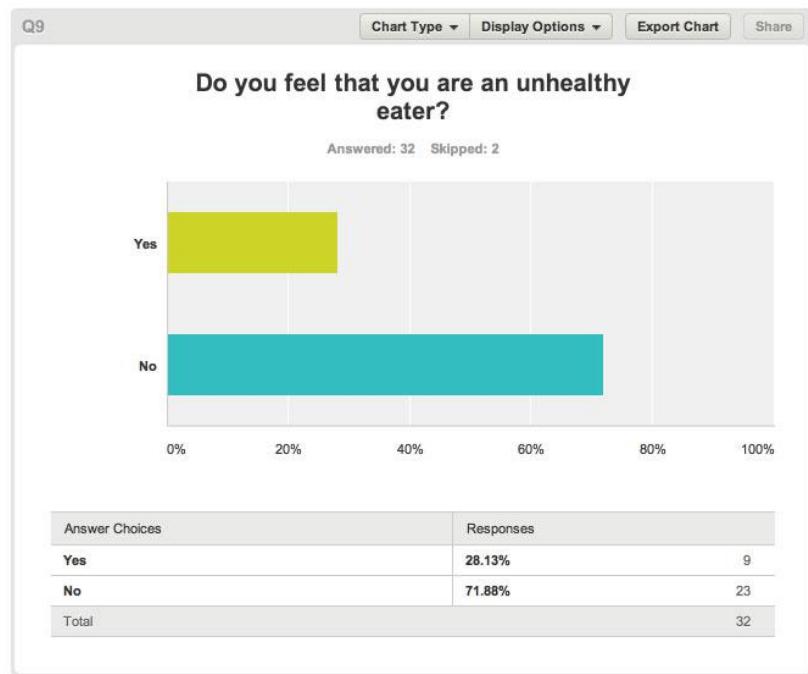
Q7:



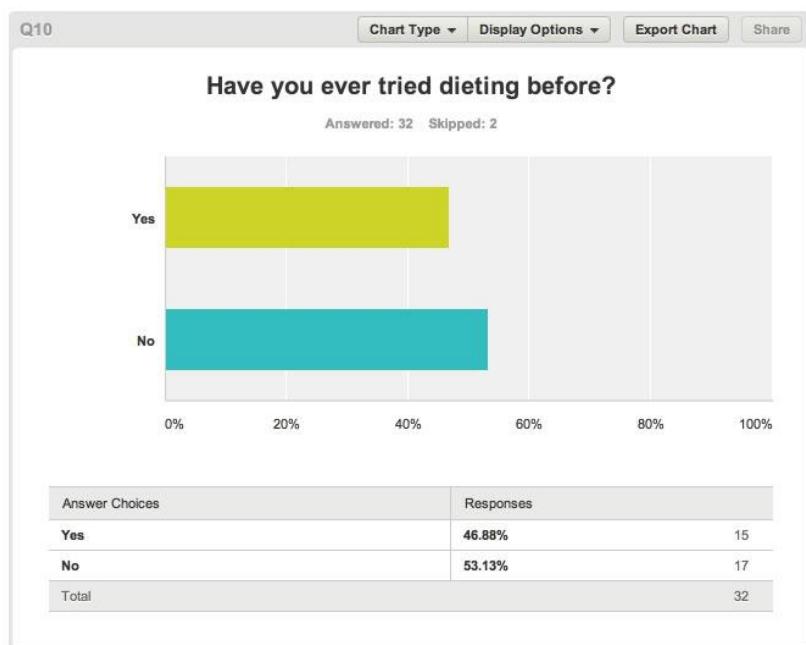
Q8:



Q9:



Q10:



Q11:

Q11

If you answered 'Yes' to question 10 - What did you find the most difficult part of the diet to be?

Answered: 15 Skipped: 19

[Responses \(15\)](#) [Text Analysis](#) [My Categories](#)

PRO FEATURE
Use text analysis to search and categorize responses; see frequently-used words and phrases. To use Text Analysis, upgrade to a GOLD or PLATINUM plan.

[Upgrade](#) [Learn more »](#)

Categorize as... Filter by Category Search responses

Showing 15 responses

Maintaining weight loss over time!
9/25/2013 5:48 PM [View respondent's answers](#)

Controlling portions
9/25/2013 1:37 PM [View respondent's answers](#)

Not eating as much. Controlling portion sizes.
9/25/2013 8:54 AM [View respondent's answers](#)

Not sabotaging diet in social settings
9/24/2013 6:04 PM [View respondent's answers](#)

A diet for not losing weight, but eating healthy. The challenge was finding consistent availability of foods across the different locations where I shopped.
9/24/2013 10:51 AM [View respondent's answers](#)

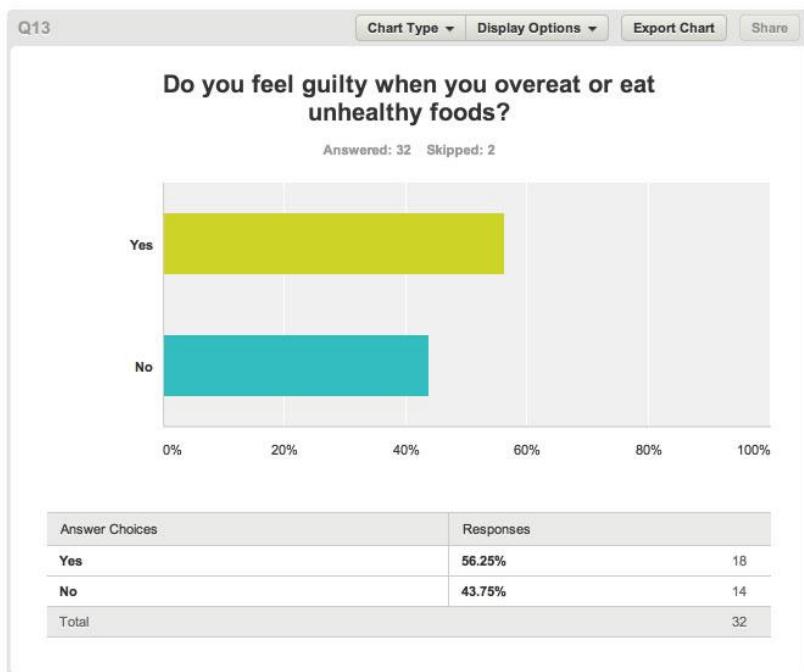
Not eating hotdogs. Or any other unhealthy meat I like to indulge in.
9/24/2013 8:23 AM [View respondent's answers](#)

Sticking to the plan and not getting bored (for exercise regimens)
9/23/2013 10:02 PM [View respondent's answers](#)

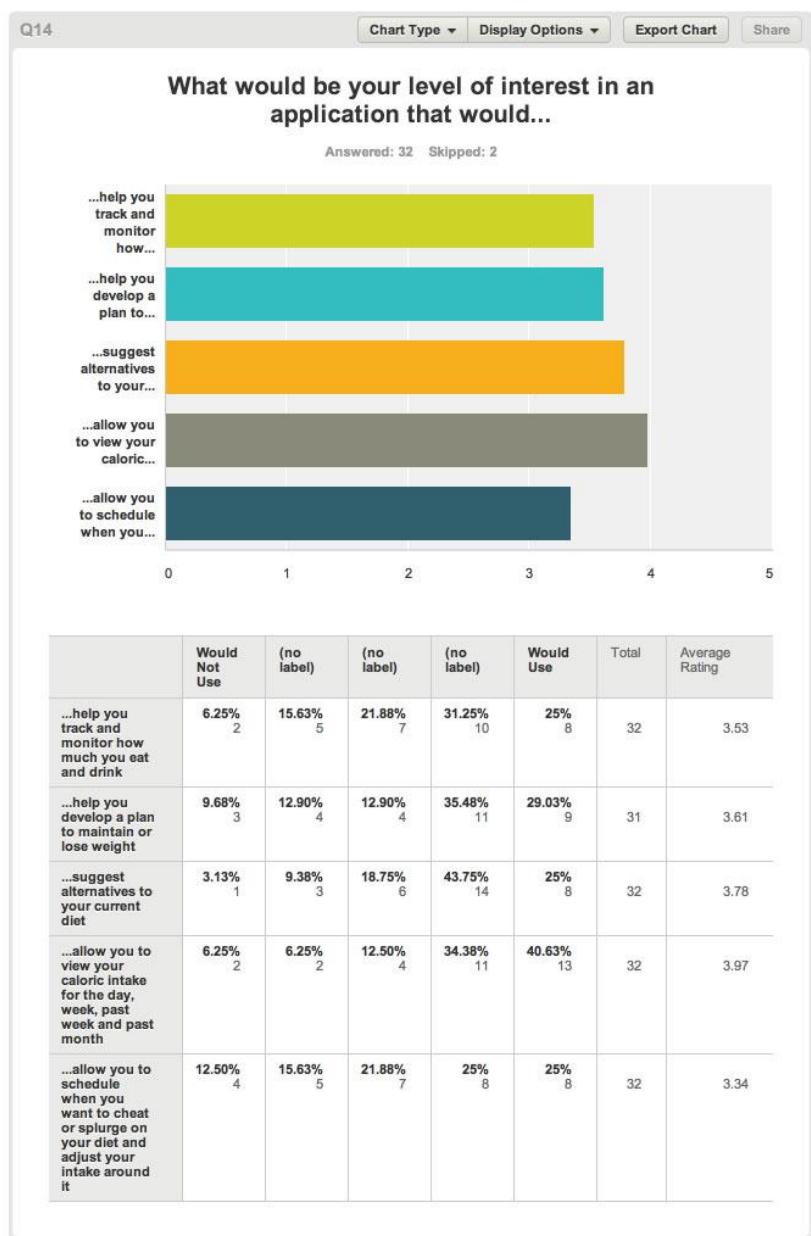
Q12:



Q13:



Q14:



(re)Define User Requirements

Through my (unofficial) survey, and as suspected/proposed through my Persona study, my users would find interest in an application that would support them in meal tracking that:

- Allows them to view their current and past (week & month) caloric intake
- Suggest healthier alternatives (when logging meals)
- Help them develop a plan for weight loss/maintenance
- Schedule when they can cheat on their diet

One option that I want to add, that was not tested in the (unofficial) survey is giving the user the ability to log meal by photo recognition. This would ideally speed up the meal tracking function of the application and lower the chance that a user would fail to log calories and/or stop using the application altogether. Photo to meal/calorie translation technology is still far from perfect as noted in the review of Meal Snap an iPhone application that claims to be able to do just that (<https://itunes.apple.com/us/app/meal-snap-calorie-counting/id425203142?mt=8>).

Another website followed their own testing of the Meal Snap application, taking a photo of the same meal at different times of the day in a different container yeilded varying results – from McDonald's oatmeal (correct) to fried rice with meat: <http://www.zdnet.com/blog/health/can-iphone-meal-snap-photo-app-magically-tell-whats-in-your-meal-we-put-it-to-the-test/167>

No matter the current tech on meal imaging, since this project offers the ability to take advantage of future technology, I would like to add this to my application, regardless of how unfeasible the idea is (with endless variations of food that an algorithm and a database would not be able to completely cover).

Style Guide

As a group, we defined a basic style guide for our applications, so as to combine them under a unified look in Phase III of this project. The image below represents our base style:

Style Guide for Active Awareness

Font Sets

Helvetica Goudy Old Style

Helvetica Goudy Old Style

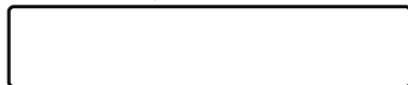
Helvetica Goudy Old Style

Corner Radius

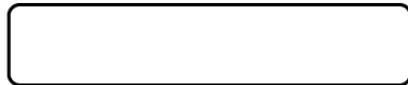
3 pt rounded corners



5 pt rounded corners



10 pt rounded corners



How Color Relates to the Health Field

Research on Architectural Color

from <http://continuingeducation.construction.com/crs.php?L=222&C=928>

"Applied research and careful study conducted by professionals on the impact of color and design on healthcare settings have changed the design palette used in new healthcare settings. There is a wide consensus that there is no clear evidence suggesting that any one color is effective in achieving a particular healthcare outcome. In fact, the highly subjective nature of color, color combinations as well as cultural associations of color palettes make the selection of effective color for any environment difficult to predict. However, data does suggest that design professionals who understand the elements of color and the introduction of nature into healthcare environments can make an impact on healing. Architects who engage all five senses into the design process can enhance the healing process."

from <http://www.healthcaredesignmagazine.com/article/healing-hues-choosing-paint-colors-healthcare>

Are there specific colors that are more highly recommended for different healthcare settings?

"You want a nice balance of both warm and cool colors. Cool colors tend to be more calming, so things that are in the blues and the blue-greens, those types of colors really put people at ease because they do bring a sense of tranquility. But you don't want to get so cool that it feels cool. So you want to balance those colors with some warmth, as well, using neutrals, beautiful beiges, warm wood tones to go along with those and give you a nice sense of tranquility.

"When you get into something that's more of an assisted-living or retirement-type of facility, you can start using colors that are a little bit richer, a little more traditional, to give you that homier feel that's more comforting.

"But stay away from those highly saturated, vibrant yellows and reds, those types of colors that can certainly make you feel a little bit more anxious."

from <http://www.functionalcolor.com/healthcare/> – shows a muted library of paints, sponsored by Glidden.

"It is felt color is important to the design process; yet, there is no clear evidence to suggest that any one color is effective in achieving a particular healthcare outcome."

Research on Healthcare Logo Color Pallets

I searched Google for several healthcare company logos, combined them into a single image and ran them through a color palette generator (www.cssdrive.com/imagepalette).

Combined Healthcare logos:



Averaged Healthcare Palette:

Light Color Palette



Medium Color Palette



Dark Color Palette



Complete Color Palette



Uploaded Image:



[Click here to view original size](#)

Current color:



Selected color:



Last 8 selected colors: (Clear list)



Visually, I think that, in a search of ‘color healthcare logos’ on Google, color similarities of logos overlaps:

- Dark Blue
- Medium Blue
- Light Blue, Turquoise
- Medium, Grass Green
- Orange/Yellow, to represent gold
- Eggplant Purple

Few used red (typically used sparingly) which can be assumed that is due to the color red’s visual relation to blood or injury.

Combined Insurance logos:



Averaged Insurance Palette:

Light Color Palette



Medium Color Palette



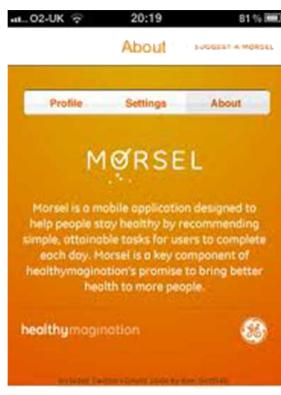
Dark Color Palette



Complete Color Palette



Combined Health App Designs:



Uploaded Image:



[Click here to view original size](#)

Current color:



Selected color:



Last 8 selected colors: (Clear list)



Averaged Health App Palette:

Light Color Palette



Medium Color Palette



Dark Color Palette

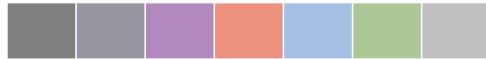


Complete Color Palette



Refined Color Palette for Project:

Light Color Palette



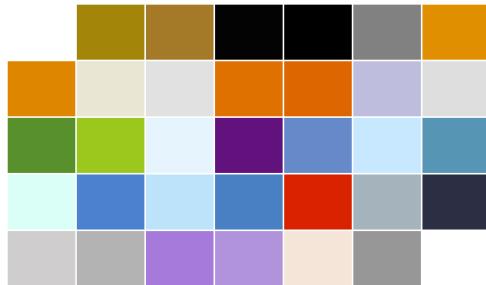
Medium Color Palette



Dark Color Palette



Complete Color Palette



Uploaded Image:



[Click here to view original size](#)

Current color:



Selected color:



Last 8 selected colors: ([Clear list](#))



Group Palette Refinement:

Primary Set



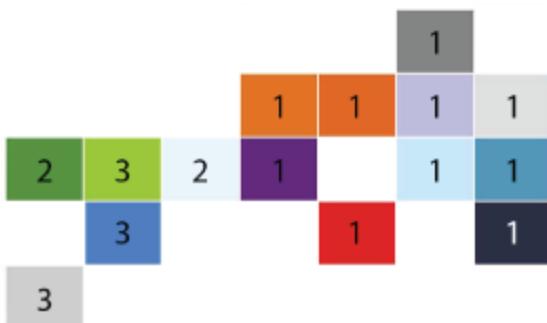
Secondary Set



Accent Set



Color Test No.1



Color Test No.2



Color tests at bottom represent group color preference testing results through IntuitionHQ.

Application Design Research





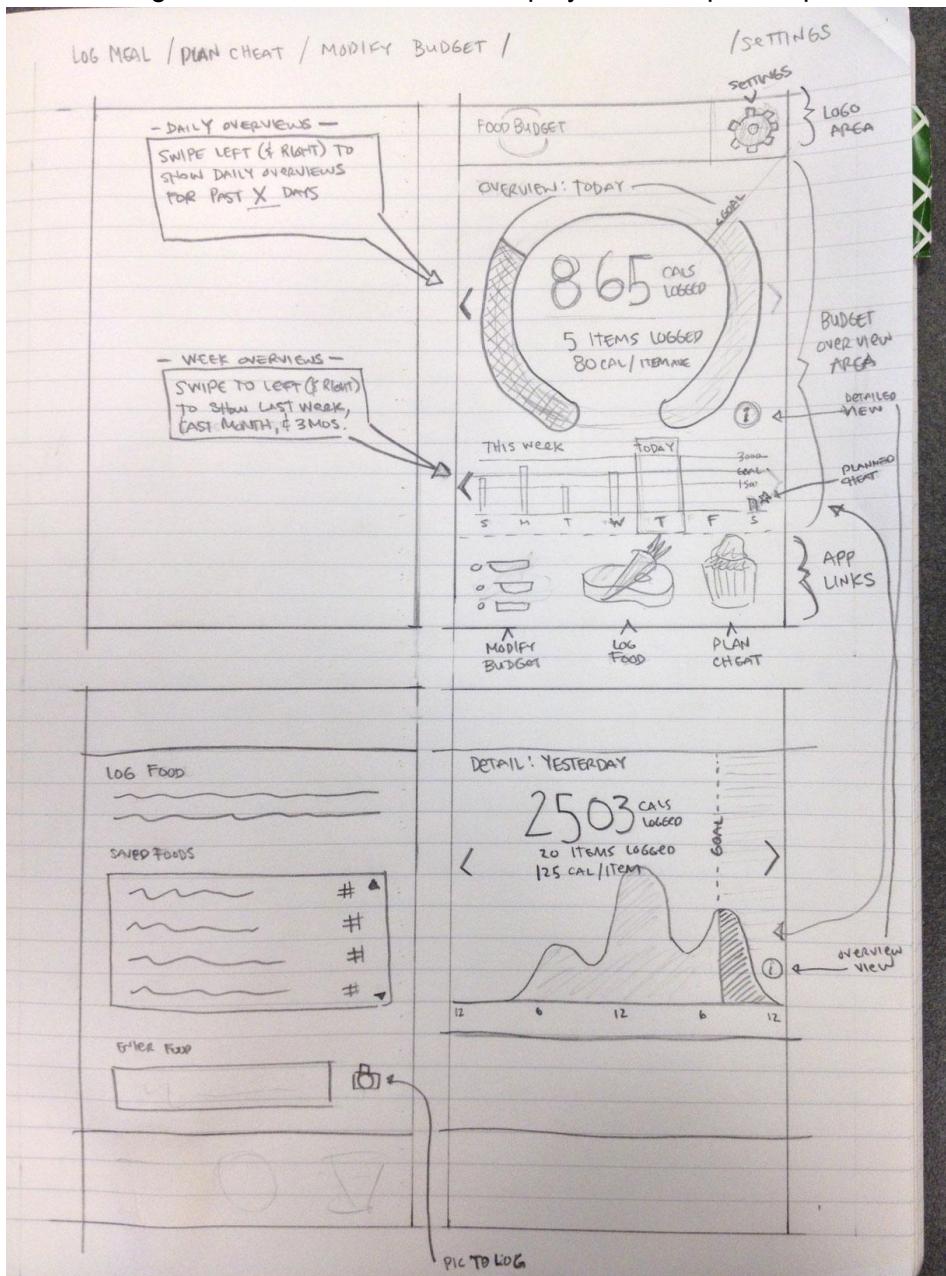


Wireframe Prototype, Version 1

<http://www.justinmind.com/usernote/tests/10045389/11174235/11174237/index.html>

Initial App Design

I wanted to design the application Food Budget to look modern, as defined by the recently released iOS 7. I wanted to use clean and simple design to accommodate a wide range of users, varied in age and technological experience, as defined in my Personas section of this report. Aside from aesthetics, I wanted to focus the design on usability, providing large touchable buttons, large readable informational displays and simple, responsive interactions.

Medium Fidelity Design, Version 1

FOODBUDGET

Ryan G. Wilson, 2013

FOODBUDGET

WELCOME

Welcome to Food Budget, a new and unique way to watch what you eat. If you don't yet have an account, please create one below:

[CREATE ACCOUNT >](#)

If you are already a Food Budget user, Log In below:

[LOG IN >](#)

For more information, visit us on the web at: www.FoodBudget.com

FOODBUDGET

OVERVIEW: WED, OCT 2nd

CALS LOGGED
2243
15 ITEMS LOGGED
CALS/ITEM AVE. **150**

CURRENT WEEK

MONDAY TUESDAY WEDNESDAY THURSDAY FRIDAY SATURDAY SUNDAY

MODIFY BUDGET LOG FOOD ADD CHEAT

FOODBUDGET

ADD CHEAT

Select a prior cheat or search for a cheat in our database.

Past Rewards

Cupcake (1)	### cals
Candy Bar	### cals
Ice Cream (2 scoops)	### cals
Pizza (2 slices)	### cals
Steak (12 oz.)	### cals
Cheese (1)	### cals

Enter Item

SELECT CHEAT DAY >

MODIFY BUDGET LOG FOOD HOME

Medium Fidelity Prototype, Version 1

<http://www.justinmind.com/usernote/tests/10045389/11174243/11174245/index.html>

Medium Fidelity Prototype, Version 1 – Unofficial Reviews

Gender: Male, Age: Late 20s , Marital Status: Married, Education: PhD Student

Task Review: All tasks completed well. One failure - updating weight was not completed by clicking the correct button. User went back to the Home screen instead.

User Review Video: <http://www.youtube.com/watch?v=xzjl-9gSmAg>

Results: Add buttons as well as swipe for Overview (and Details) Budget area, Refine Task list to be more vague (don't use the words that are in the buttons - users will match words, not an effective user test). The plan for the next version is to update the 'Modify Budget' button to work as originally intended (for version 1 of prototype, it was incomplete). This should solve the failure issue in the user review. Also, the reviewer noted that the buttons were too small on the 'Add Cheat' and 'Log Food' screens for the 'Stored Foods'. In the next version I will make these areas larger to make them easier to click.

Visual Changes Between Versions

The image displays three versions of the FoodBudget application interface, showing visual changes between different versions.

Welcome Screen:

FOODBUDGET

Ryan G. Wilson, 2013

FOODBUDGET

WELCOME

Welcome to Food Budget, a new and unique way to watch what you eat. If you don't yet have an account, please create one below:

CREATE ACCOUNT >

If you are already a Food Budget user, Log In below:

LOG IN >

For more information, visit us on the web at: www.FoodBudget.com

Overview Screen:

FOODBUDGET

OVERVIEW: WED, OCT 2nd

CALS LOGGED **2243**

15 ITEMS LOGGED

CALS/ITEM AVE. **150**

CURRENT WEEK

MONDAY GOAL LINE TUESDAY WEDNESDAY THURSDAY FRIDAY SATURDAY SUNDAY

Modify Budget **Log Food** **Add Cheat**

Add Cheat Screen:

FOODBUDGET

ADD CHEAT

Select a prior cheat or search for a cheat in our database.

Past Rewards

Cupcake (1)	### cals
Candy Bar	### cals
Ice Cream (2 scoops)	### cals
Pizza (2 slices)	### cals
Steak (12 oz.)	### cals
Cookie (1)	### cals

Enter Item

SELECT CHEAT DAY >

Modify Budget **Log Food** **Home**

Medium Fidelity Prototype, Version 2

<https://www.justinmind.com/usernote/tests/10045389/11171658/11171660/index.html>

Unofficial Review Results

Medium Fidelity Prototype, Version 2 – Unofficial Review

User No. 1

Gender: Male, Age: 28, Marital Status: Single, Education: Graduate College

Task Review: User performed all of the tasks as expected.

User Review Video: <http://www.youtube.com/watch?v=fybcnc2ELhY>

Results:

- User had issues with the swipe to get to past days, expecting it to be a button
- The info button on the main screen was unclear, expected it to be labeled ‘details’
- User wanted to schedule the cheat task date first instead of food item first. NOTE: I don’t think this is necessary to change. This would be a learned task if user interacted with the application more than once.

Overall, I think this user interacted with the prototype as expected. He did not think he was an “experienced user” with building prototypes, and accounted for understanding the “lag” of the interaction. NOTE: For the next iteration of the prototype, I plan to run all of my PNGs through TinyPNG [<http://tinypng.org>] to remove any unnecessary weight of the files, hopefully reducing lag.

User No. 2

Gender: Female, Age: 34, Marital Status: Married, Education: Graduate Degree

Task Review: User performed all of the tasks as expected.

User Review Video: <http://www.youtube.com/watch?v=2h8VgOWRhT0>

Results:

- The info button on the main screen was unclear, expected it to be labeled ‘details’

Overall, I think this user interacted with the prototype as expected. She noted at the end of her tasks that the ‘info button’ was unclear.

User No. 3

Gender: Female, Age: 24, Marital Status: Single, Education: Graduate Student

Task Review: User noted that she was unfamiliar with using an iPhone. User failed two of the tasks:

- Create a budget based on maintaining your weight: User mis-clicked on the exercise level screen, wanted to go back and then clicked on the incorrect button to “lose weight”
- View Past Budget for the last 2 weeks: User clicked and swiped and tapped on many of the buttons. This error was likely user error in combination with a slight lag of the prototype, but user gave up without finding the correct screen.

User Review Video: <http://www.youtube.com/watch?v=zYSrPdBxxZI>

Results:

- User noted that the “info” button was too small
- User was unable to tap or swipe to past budgets
- User needed a “back” button when creating budget
- User noted wanting a different method for searching through days or weeks for the budget overview - tabbed or a sliding calendar method

Potential Revision Discussion

Based on my user reviews, before I begin user testing I plan to change:

- The main screen ‘i’ information button to be a simple ‘details’ button
 - The ‘i’ is unclear to users that is how to toggle between the ‘Details’ and ‘Overview’ views. Two of the users guessed correctly to achieve the task, but the purpose should be more direct
- Add buttons to the main screen ‘Overview’, ‘Details’ and Week view information to have the same functionality as the current swipe functionality (also keeping the swipe functionality)
 - This was an issue with all of the user reviews. Swiping did not seem to be as intuitive as I had thought it would be. Users in the review wanted to
- Add a ‘Back’ button to the Create and Modify Budget screens
 - This was an oversight in the original design that was picked up by one of the user reviews
- Try to resolve the Just In Mind issue where sometimes the input area loses focus, as seen in the user reviews when trying to create an account and logging in
 - This will take some research, but others in class have also noted this as a problem as well. Perhaps we can solve it as a group
- To decrease prototype lag, I plan to run all of my PNGs through TinyPNG [<http://tinypng.org>] to reduce the file size as much as possible to speed up interactions through the JustInMind prototype. I feel that the lag causes the user to think that nothing is happening when they touch a button. In all actuality, JustInMind creates a web-based

prototype, so, if the internet connection is slow or the image files are too large, the application will appear to lag, just like any non-optimized website would

For the final design phase I want to test (using A/B testing in Intuition HQ
[<http://www.intuitionhq.com>]):

- The size of the buttons at the bottom of each screen
- Color icons versus white, flat icons
- Flattening the entire design of the app

Appendix I

Low Fidelity Screens
Version 1



Food Budget



Welcome

Welcome to Food Budget, a new and unique way to watch what you eat. If you don't yet have an account, please create one below:

Create Account



If you are already a Food Budget user,
Log In below:

Log In



For more information, visit us on the
web at: www.FoodBudget.com



Back

Create Account

Creating your Food Budget account is easy; just enter your email address and set a password

Email

Password

Retype Password

Create Account





Back

Create Account

Thank you for creating a Food Budget account! You are minutes away from using your account.

Please check your email for your account confirmation. Click the link within the email and you are ready to start your budget!

Once that is done, Log In below:

Log In





< Back

Log In

Enter your email and password below:

Email

Password

Log In



Food Budget

Get Started

Tuesday, September 17, 2013

Start your Food Budget experience by creating your budget below!



View
Budget



Log
Meal



Add
Reward



Create
Budget



View Past
Budgets



Settings



Food Budget

Overview

Tuesday, September 17, 2013

33% of your weekly goal



View
Budget



Log
Meal



Add
Reward



Create
Budget



View Past
Budgets



Settings

Food **Budget**



Create Budget

Enter your Date of Birth, Weight and Height in the boxes below:

Date of Birth (e.g. 09/30/1978)

Weight (e.g. 180lbs)

Height (e.g. 5'11")

Enter Stats



Food **Budget**

 Home

Create Budget

Set your goal for using Food Budget

select a goal



Set Goal



Food **Budget**

Create Budget

Select a budget based on:

Your Stats (*14,000 cals/week*) 

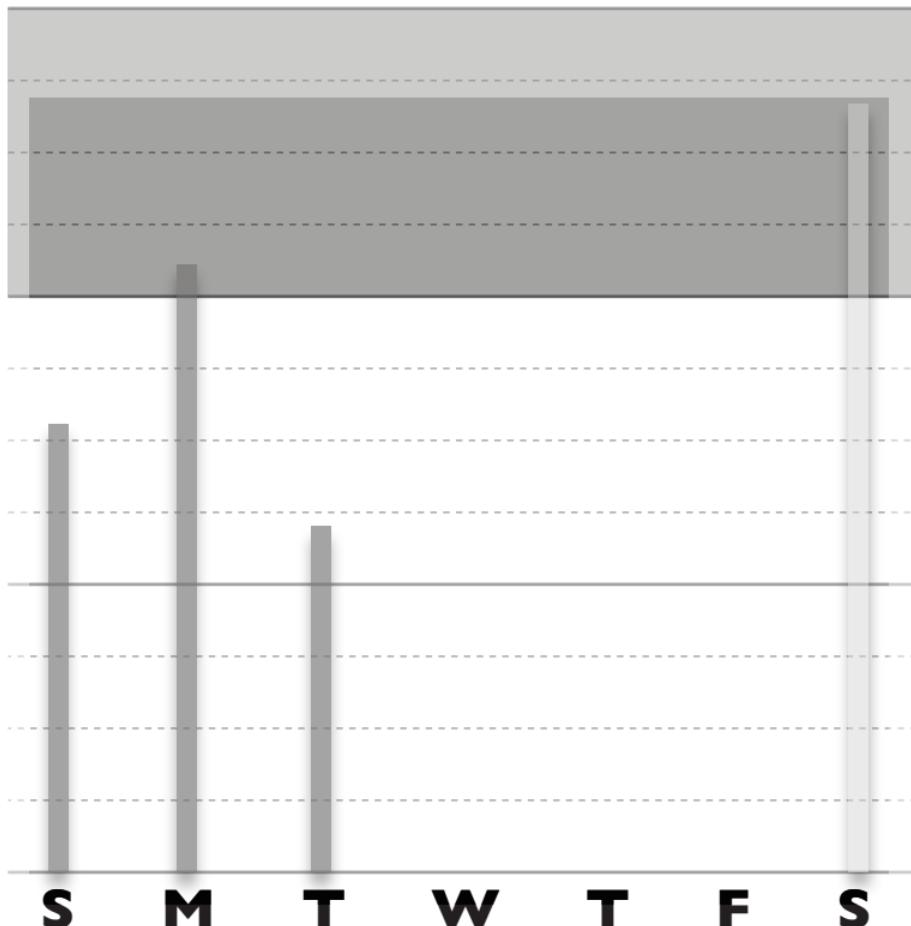
Your Goal (*12,000 cals/week*) 

Food Budget

 Home

Budget Overview

33% of your weekly goal



Modify



Remove



Add Reward

Food Budget

 Home

Budget Overview

33% of your weekly goal

Remove Budget

Are you sure you want to
remove this budget?

Remove

Cancel

S

M

T

W

T

F

S



Modify



Remove



Add Reward

Food Budget

 Home

Log Meal

Select an item from your saved meals or add an item through our database.

Saved Meals

● Banana	## cals
● Cereal	## cals
● Buffalo Wings	### cals
● Water	# cals
● Soda	### cals
▲ Add	+++ cals

Enter Item

Log Meal



Food Budget

 Home

Log Meal

Select an item from your saved meals or add an item through our database.

Saved Meals

Banana

Item Added

There are ## calories in a _____.

To meet your budget you might want to have _____ next time.

Soda

OK

Enter Item

Log Meal >

Food Budget

 Home

Log Meal

Select an item from your saved meals or add an item through our database.

Saved Meals

Banana

Item Added

XX cals

Corn

You have made a healthy choice!

XX cals

Buffalo Wings

Good job!

XX cals

Water

XX cals

Soda

OK

XX cals

Enter Item

Log Meal



Food Budget

 Home

Add Reward

Select a prior reward or add a reward through our database.

Past Rewards

• Cupcake (1)	#### cals
• Candy Bar	#### cals
• Ice Cream (2 scoops)	#### cals
• Pizza (2 slices)	#### cals
• Steak (12 oz.)	#### cals
Cookie (2)	##### cals

Enter Item

Add Reward



Food Budget

 Home

Add Reward

Select the day you are planning to have your reward.

Select Day

Sunday



Monday



Tuesday



Wednesday



Thursday



Friday



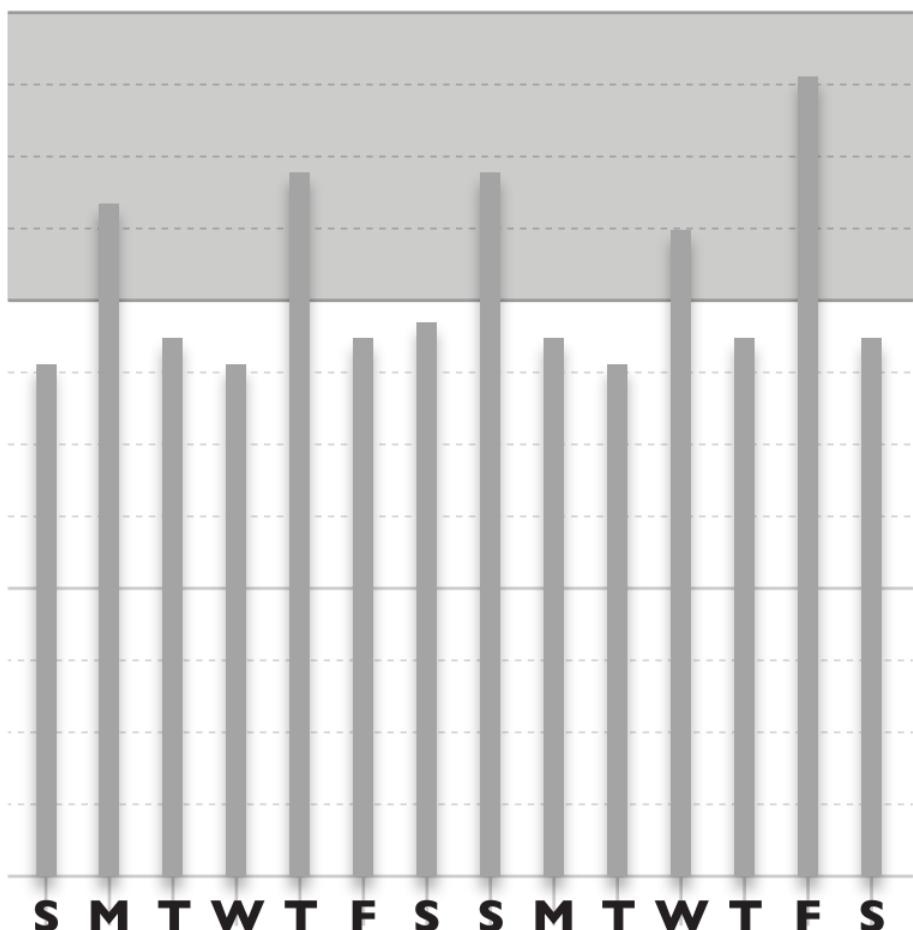
Saturday



Food Budget

Past Budget - Past 2 Weeks

10% over your goal



2W

Past 2 Weeks

1M

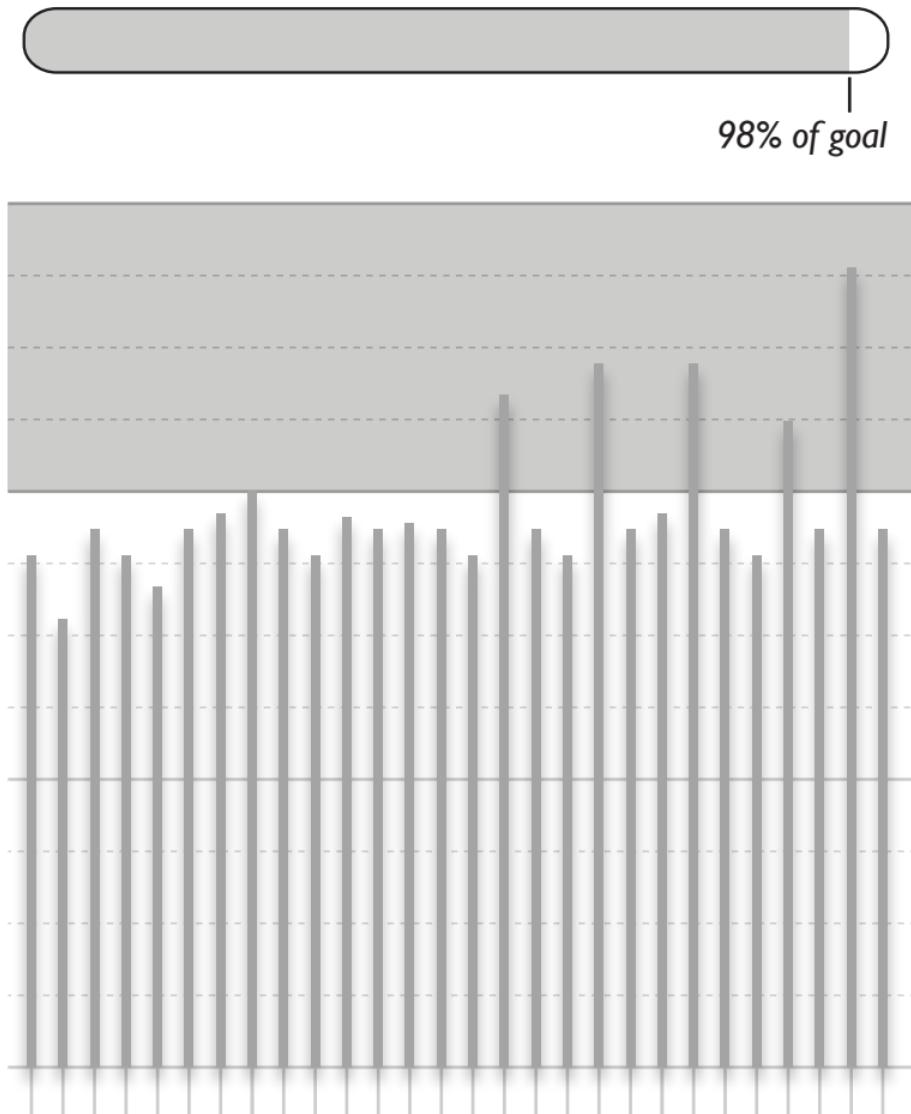
Past Month

2M

Past 2 Months

Food Budget

Past Budget - Past Month



2W

Past 2 Weeks

1M

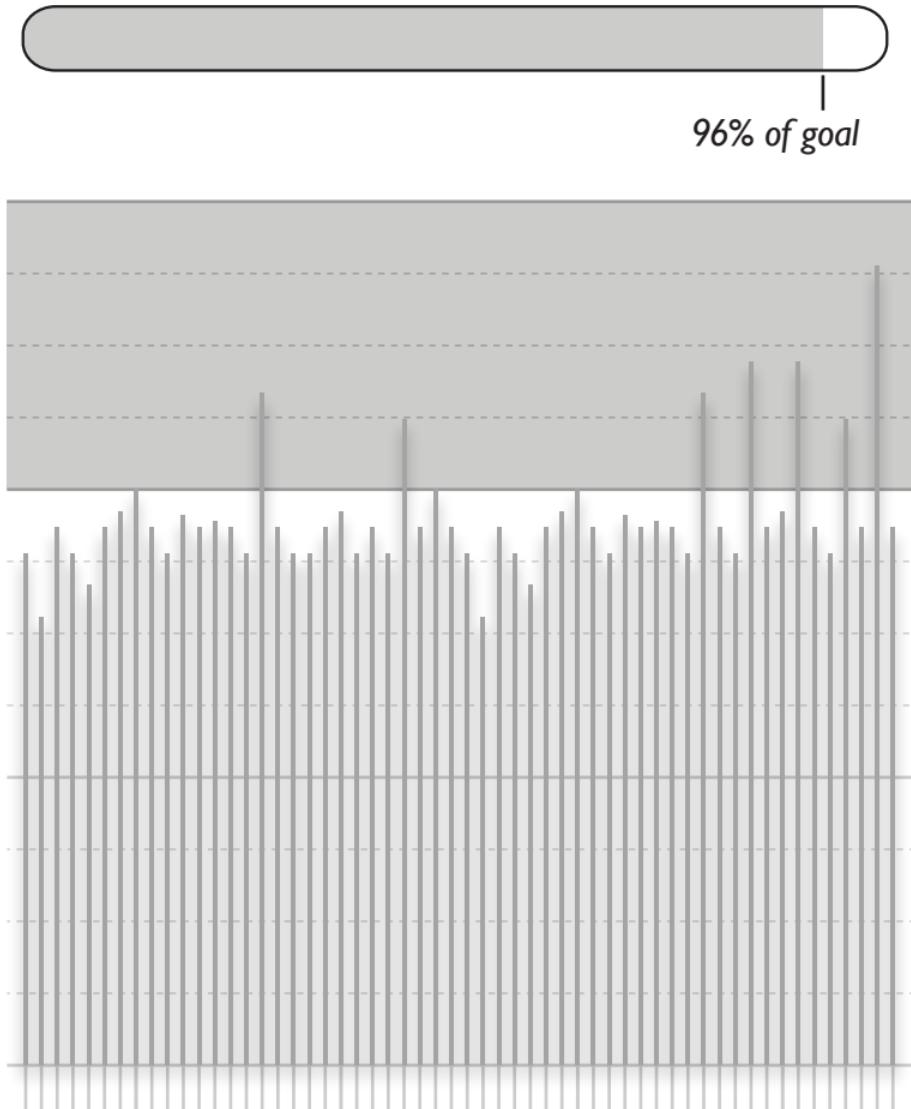
Past Month

2M

Past 2 Months

Food Budget

Past Budget - Past 2 Months



2W

Past 2 Weeks

1M

Past Month

2M

Past 2 Months



Home

Application Settings

Modify Personal Stats >

Manage Notifications >

Update Email >

Update Password >

Food Budget

 Home

Application Settings

Modify Personal Stats

Date of Birth (e.g. 09/30/1978)

Weight (e.g. 180lbs)

Height (e.g. 5'11")

Update Stats



Application Settings

Modify Personal Stats

Date of Birth (e.g. 09/30/1978)

Stats Updated

Your personal stats
have been updated

Weight (e.g. 180lbs)

OK

Height (e.g. 5'11")

Update Stats >



Home

Application Settings

Manage Notifications

Email Notifications



Text Notifications



Phone Notifications



Update Notifications



Application Settings

Manage Notifications

Notifications Updated!

Your notifications
have been updated

Text Notifications

OK

Update Notifications >



Application Settings

Update Email

Email

Update Email



Application Settings

Update Email

Email

Email Update

Your email is about to be updated.
Are you sure you want to proceed?

Cancel

OK

Update Email >



Application Settings

Update Password

Current Password

New Password

Retype New Password

Update Password



Application Settings

Update Password

Current Password

Password Updated

Your password is about to be updated.

Are you sure you want to proceed?

Cancel

OK

New Password

Update Password >

Appendix II

Medium Fidelity Screens
Version 1

FOOD BUDGET

FOOD BUDGET

WELCOME

Welcome to Food Budget, a new and unique way to watch what you eat. If you don't yet have an account, please create one below:

[CREATE ACCOUNT](#)



If you are already a Food Budget user,
Log In below:

[LOG IN](#)



For more information, visit us on the
web at: www.FoodBudget.com

CREATE ACCOUNT

Creating your Food Budget account is easy; just enter your email address and set a password

Email

Password

Retype Password

CREATE ACCOUNT



FOODBUDGET

CREATE ACCOUNT

Thank you for creating a Food Budget account! You are minutes away from using your account.

Please check your email for your account confirmation. Click the link within the email and you are ready to start your budget!

Once that is done, Log In below:

LOG IN



LOG IN

Enter your email and password below:

Email

Password

LOG IN



FOOD BUDGET

CREATE BUDGET

Enter your **Date of Birth, Weight, Height & Gender** in the boxes below:

Date of Birth (e.g. 09/30/1978)

Weight (e.g. 180lbs)

Height (e.g. 5'11")

MALE



FEMALE

ENTER STATS



FOOD BUDGET

CREATE BUDGET

Select your average **Activity Level**:

SEDENTARY (*Don't move much*) >

LIGHT (*Sit most of the day*) >

MEDIUM (*Light Exercise*) >

HEAVY (*Athlete*) >

FOOD BUDGET

CREATE BUDGET

Select a budget based on:

WEIGHT LOSS *(14,000 cals/week)* >

MAINTENANCE *(16,000 cals/week)* >

FOOD BUDGET

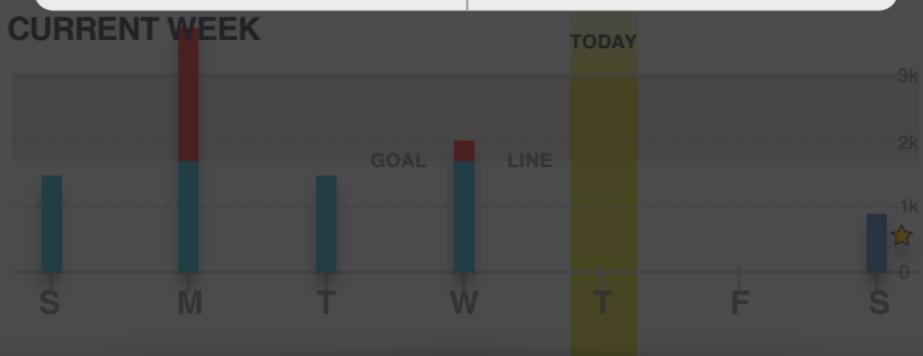


OVERVIEW: TODAY

• Scenario Change •

For the next few tasks you will be asked to imagine that you have now been using Food Budget for a month.

OK



Modify Budget



Log Food

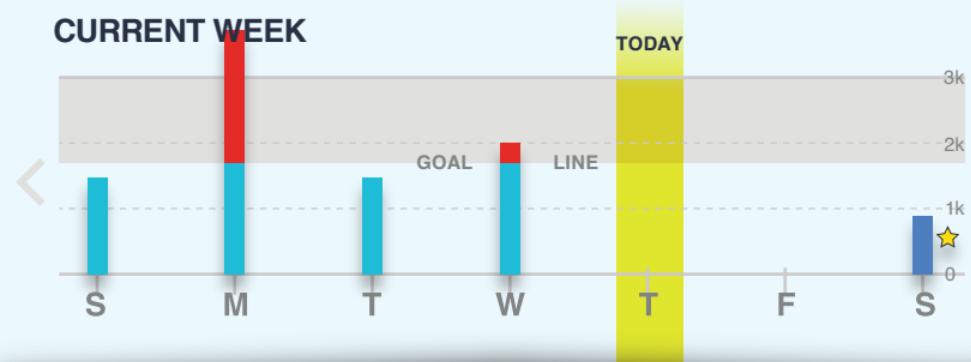
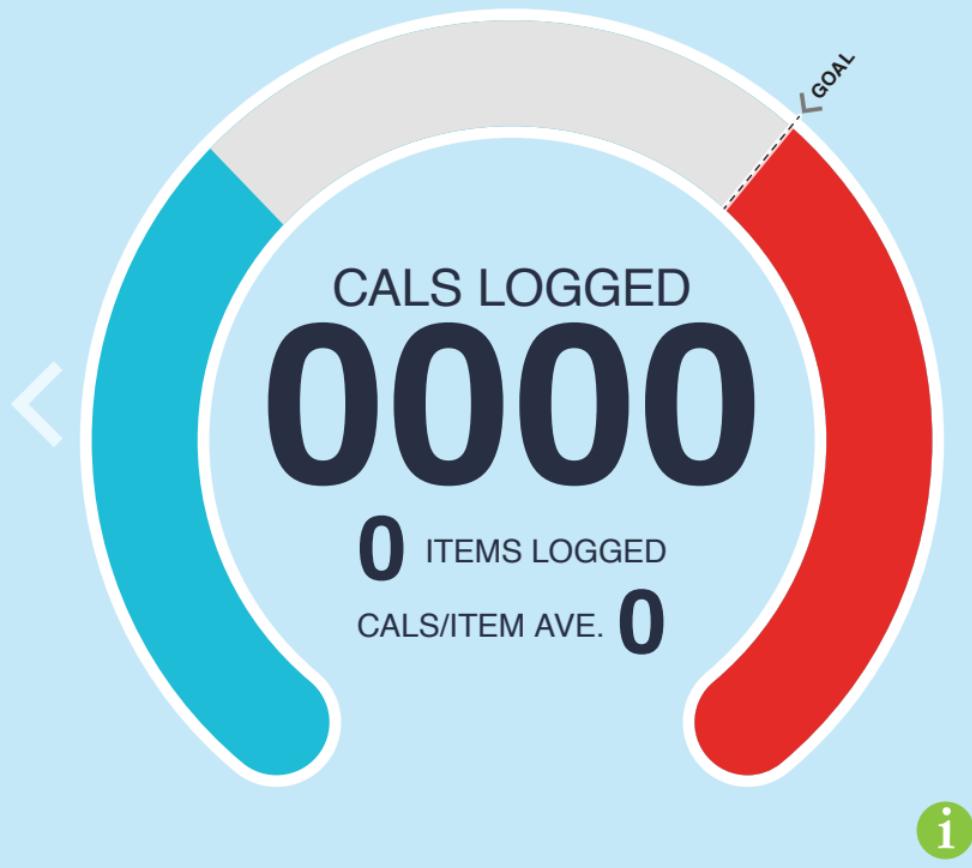


Add Cheat

FOOD BUDGET



OVERVIEW: TODAY



Modify Budget



Log Food



Add Cheat

FOOD BUDGET



LOG FOOD

Select an item from your saved meals or add an item through our database.

Saved Meals

● Banana	## cals
● Cereal	## cals
● Buffalo Wings	### cals
● Water	# cals
● Soda	### cals
● Apple	### cals

Enter Item

LOG MEAL



Modify Budget



Home



Add Cheat

FOOD BUDGET



LOG FOOD

Select an item from your saved meals or add an item through our database.

Saved Meals

● Banana	## cals
● Cereal	## cals

Buffalo Wing ### cals

Item Added

There are ## calories in a _____.
To meet your budget you might want to have _____ next time.

Enter Item

OK

LOG MEAL



Modify Budget



Home



Add Cheat

FOOD BUDGET



LOG FOOD

Select an item from your saved meals
or add an item through our database.

Saved Meals

● Banana	## cals
● Cereal	## cals

Buffalo Wings ## cals

Soda ## cals

Item Added

You have made a healthy choice!

Good job!

OK

LOG MEAL



Modify Budget



Home



Add Cheat

FOOD BUDGET



ADD CHEAT

Select a prior cheat or search for a cheat in our database.

Past Rewards

● Cupcake (1)	### cals
● Candy Bar	### cals
● Ice Cream (2 scoops)	### cals
● Pizza (2 slices)	### cals
● Steak (12 oz.)	### cals
● Cookie (2)	### cals

Enter Item

SELECT CHEAT DAY >



Modify Budget



Log Food



Home

FOOD BUDGET



ADD CHEAT

Select which day you are planning to have your cheat:

ENTER CHEAT



Modify Budget



Log Food



Home



ADD CHEAT

Select which day you are planning to have your cheat:

Cheat Scheduled

Your cheat has been scheduled. Your daily calorie intake will be adjusted to allow for your cheat food.

OK

ENTER CHEAT >



Modify Budget



Log Food



Home

FOOD BUDGET



APPLICATION SETTINGS

Select which day you are planning to have your cheat:

MODIFY PERSONAL STATS >

MANAGE NOTIFICATIONS >

UPDATE EMAIL >

UPDATE PASSWORD >



Modify Budget



Log Food



Add Cheat



APPLICATION SETTINGS

Modify Personal Stats:

Date of Birth (e.g. 09/30/1978)

Weight (e.g. 180lbs)

Height (e.g. 5'11")

MALE



FEMALE

UPDATE STATS



Modify Budget



Log Food



Add Cheat

FOOD BUDGET



APPLICATION SETTINGS

Modify Personal Stats:

Date of Birth (e.g. 09/30/1978)

Weight (e.g. 150 lbs)

Stats Updated

Your personal stats have
been updated.

Height (e.g. 5'11")

MALE



FEMALE

OK

UPDATE STATS >



Modify Budget



Log Food



Add Cheat



APPLICATION SETTINGS

Manage Notifications:

Email Notifications



Text Notifications



Phone Notifications



UPDATE NOTIFICATIONS >



Modify Budget



Log Food



Add Cheat



APPLICATION SETTINGS

Manage Notifications:

Email Notifications



Notifications Updated

Your notifications have
been updated.

OK

UPDATE NOTIFICATIONS >



Modify Budget



Log Food



Add Cheat



APPLICATION SETTINGS

Update Email:

Email

UPDATE EMAIL



Modify Budget



Log Food



Add Cheat



APPLICATION SETTINGS

Update Email:

Email

Email Update

Your email is about to be updated.
Are you sure you want to proceed?

Cancel

OK

UPDATE EMAIL >



Modify Budget



Log Food



Add Cheat



APPLICATION SETTINGS

Update Password:

Current Password

NEW Password

Retype NEW Password

UPDATE PASSWORD >



Modify Budget



Log Food



Add Cheat



APPLICATION SETTINGS

Update Password:

Current Password

NEW Password

Password Updated

Your password is about to be updated.

Are you sure you want to proceed?

Retype NEW Password

Cancel

OK

UPDATE PASSWORD >



Modify Budget



Log Food



Add Cheat

PAST TWO WEEKS



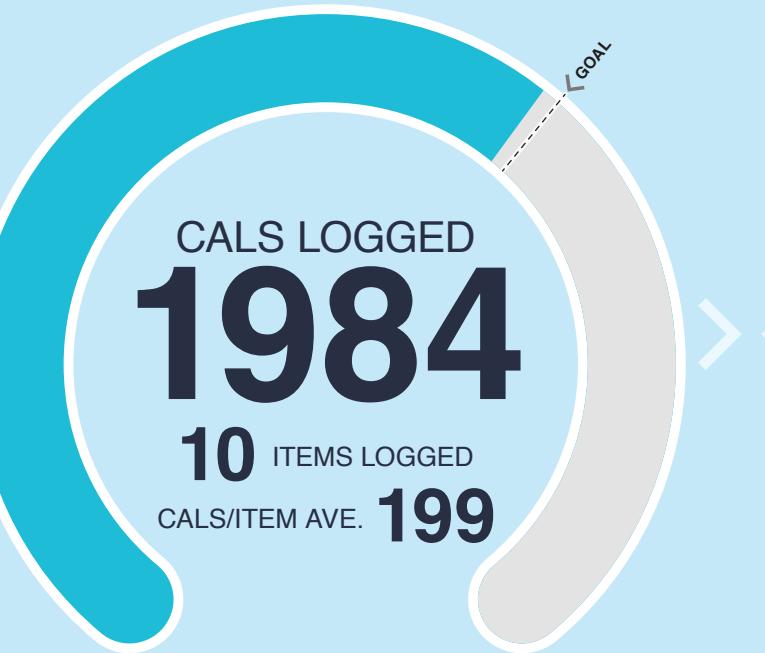
LAST WEEK



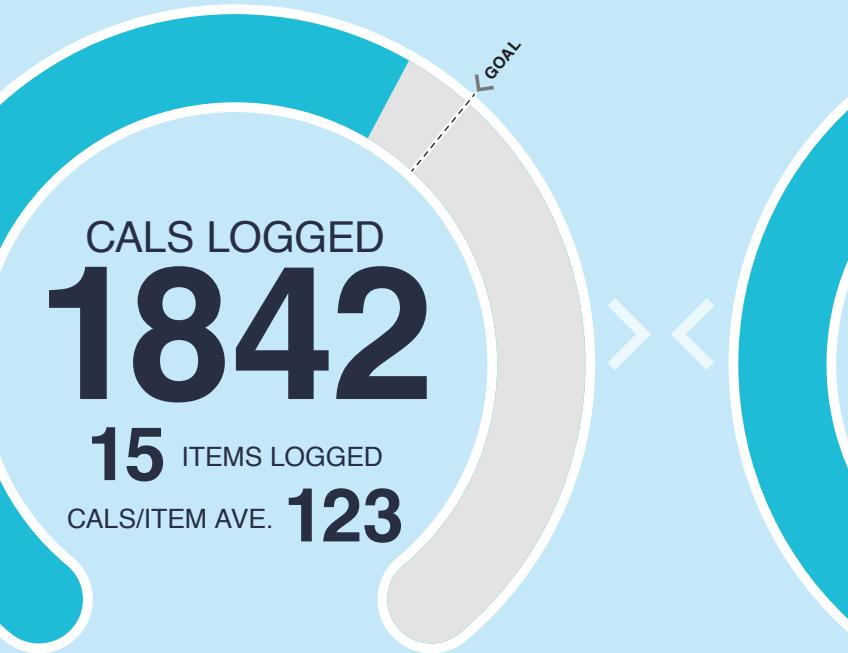
CURRENT WEEK



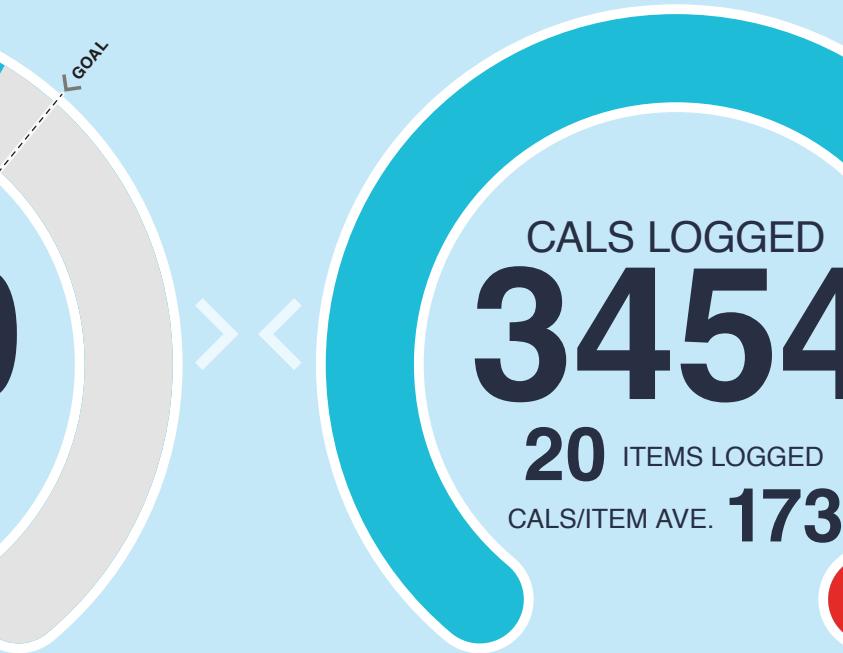
OVERVIEW: FRI, SEP 27th



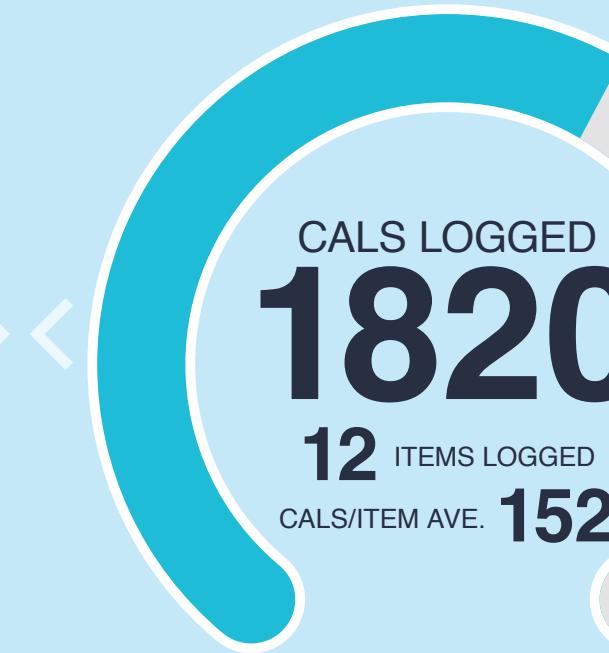
OVERVIEW: SAT, SEP 28th



OVERVIEW: SUN, SEP 29th



OVERVIEW: MON, SEP 30th



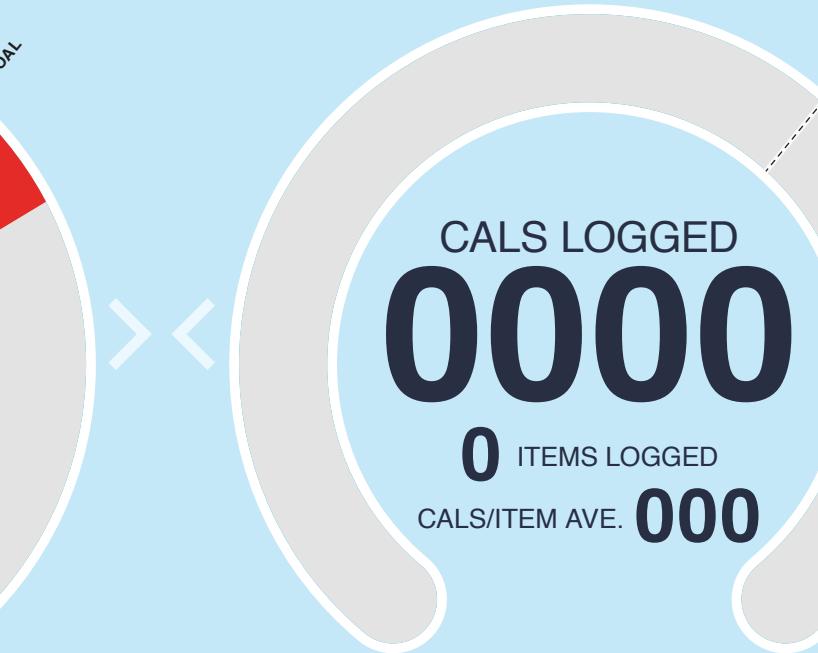
OVERVIEW: TUE, OCT 1st



OVERVIEW: WED, OCT 2nd

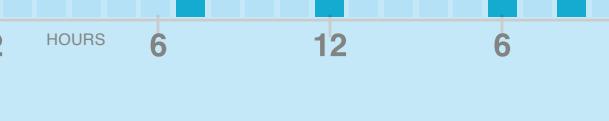


OVERVIEW: TODAY, THURS, OCT 3rd

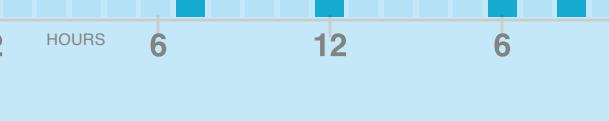


DETAIL: FRI, SEP 27th

CALS LOGGED
1984
10 ITEMS LOGGED
CALS/ITEM AVE. **199**

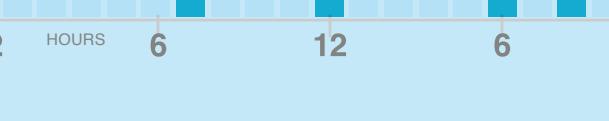


CALS LOGGED
1984
10 ITEMS LOGGED
CALS/ITEM AVE. **199**



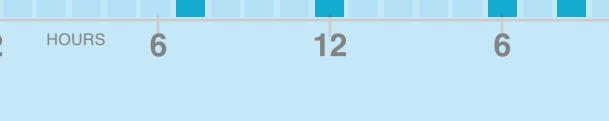
DETAIL: SAT, SEP 28th

CALS LOGGED
1842
15 ITEMS LOGGED
CALS/ITEM AVE. **123**



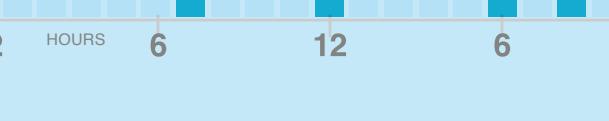
DETAIL: SUN, SEP 29th

CALS LOGGED
1860
18 ITEMS LOGGED
CALS/ITEM AVE. **104**



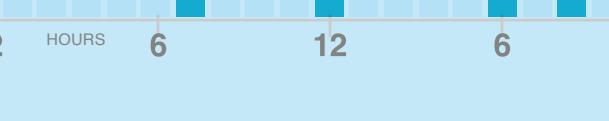
DETAIL: MON, SEP 30th

CALS LOGGED
3454
20 ITEMS LOGGED
CALS/ITEM AVE. **173**



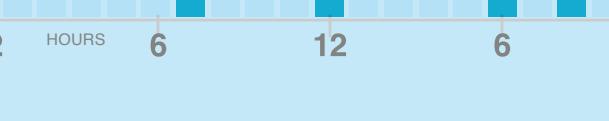
DETAIL: TUE, OCT 1st

CALS LOGGED
1820
12 ITEMS LOGGED
CALS/ITEM AVE. **152**



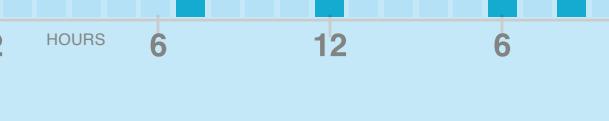
DETAIL: WED, OCT 2nd

CALS LOGGED
2243
15 ITEMS LOGGED
CALS/ITEM AVE. **150**



DETAIL: TODAY, THURS, OCT 3rd

CALS LOGGED
0000
00 ITEMS LOGGED
CALS/ITEM AVE. **000**



Appendix III

Medium Fidelity Screens
Version 2

FOOD BUDGET

FOOD BUDGET

WELCOME

Welcome to Food Budget, a new and unique way to watch what you eat. If you don't yet have an account, please create one below:

[CREATE ACCOUNT](#)



If you are already a Food Budget user,
Log In below:

[LOG IN](#)



For more information, visit us on the
web at: www.FoodBudget.com

CREATE ACCOUNT

Creating your Food Budget account is easy; just enter your email address and set a password

Email

Password

Retype Password

CREATE ACCOUNT



FOODBUDGET

CREATE ACCOUNT

Thank you for creating a Food Budget account! You are minutes away from using your account.

Please check your email for your account confirmation. Click the link within the email and you are ready to start your budget!

Once that is done, Log In below:

LOG IN



LOG IN

Enter your email and password below:

Email

Password

LOG IN



FOOD BUDGET

CREATE BUDGET

Enter your **Date of Birth, Weight, Height & Gender** in the boxes below:

Date of Birth (e.g. 09/30/1978)

Weight (e.g. 180lbs)

Height (e.g. 5'11")

MALE

FEMALE

ENTER STATS



FOOD BUDGET

CREATE BUDGET

Select your average **Activity Level**:

SEDENTARY (*Don't move much*) >

LIGHT (*Sit most of the day*) >

MEDIUM (*Light Exercise*) >

HEAVY (*Athlete*) >

FOOD BUDGET

CREATE BUDGET

Select a budget based on:

WEIGHT LOSS *(14,000 cals/week)* >

MAINTENANCE *(16,000 cals/week)* >

FOOD BUDGET



OVERVIEW: TODAY

CALS LOGGED
00000

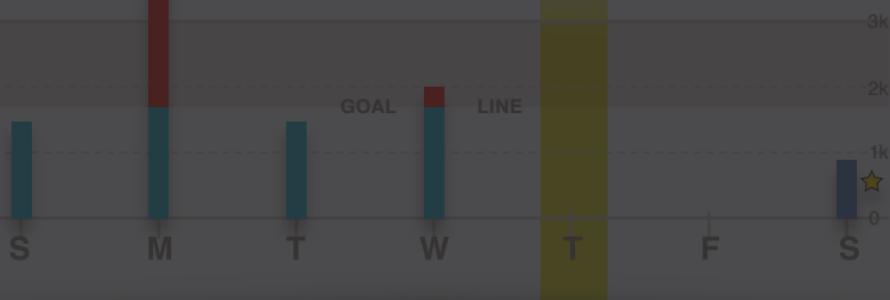
• Scenario Change •

For the next few tasks you will be asked to imagine that you have now been using Food Budget for a month.

OK

CURRENT WEEK

TODAY



Modify Budget



Log Food



Add Cheat

FOOD BUDGET



Modify Budget



Log Food



Add Cheat

FOOD BUDGET



LOG FOOD

Select an item from your saved meals or add an item through our database.

Saved Meals

● Banana	## cals
● Cereal	## cals
● Buffalo Wings	### cals
● Water	# cals
● Soda	### cals

Enter Item



Take Fhoodo

LOG MEAL



Modify Budget



Home



Add Cheat

FOOD BUDGET



LOG FOOD

Select an item from your saved meals or add an item through our database.

Saved Meals

● Banana ## cals

● Cereal ## cals

Buffalo **Item Added** ## cals

There are ## calories in a _____.

To meet your budget you might want to have _____ next time.

LOG MORE

HOME

Take Fhoodo

LOG MEAL >



Modify Budget



Home



Add Cheat

FOOD BUDGET



LOG FOOD

Select an item from your saved meals
or add an item through our database.

Saved Meals

● Banana ## cals

● Cereal ## cals

Buffalo Item Added ## cals

You have made a healthy choice! cals

Good job!

Soda ## cals

LOG MORE

HOME

Take Fhoodo

LOG MEAL >



Modify Budget



Home



Add Cheat

FOOD BUDGET



ADD CHEAT

Select a prior cheat or search for a cheat in our database.

Past Rewards

- Cupcake (1) ### cals
- Candy Bar ### cals
- Ice Cream (2 scoops) ### cals
- Pizza (2 slices) ### cals
- Steak (12 oz.) ### cals

Enter Item

SELECT CHEAT DAY >



Modify Budget



Log Food



Home

FOOD BUDGET



ADD CHEAT

Select which day you are planning to have your cheat:

ENTER CHEAT



Modify Budget



Log Food



Home



ADD CHEAT

Select which day you are planning to have your cheat:

Cheat Scheduled

Your cheat has been scheduled. Your daily calorie intake will be adjusted to allow for your cheat food.

OK

ENTER CHEAT >



Modify Budget



Log Food



Home

FOOD BUDGET



APPLICATION SETTINGS

Select which day you are planning to have your cheat:

MODIFY PERSONAL STATS >

MANAGE NOTIFICATIONS >

UPDATE EMAIL >

UPDATE PASSWORD >



Modify Budget



Log Food



Add Cheat

FOOD BUDGET



APPLICATION SETTINGS

Modify Personal Stats:

Date of Birth (e.g. 09/30/1978)

Weight (e.g. 180lbs)

Height (e.g. 5'11")

MALE

FEMALE

UPDATE STATS



Modify Budget



Log Food



Add Cheat

FOOD BUDGET



APPLICATION SETTINGS

Modify Personal Stats:

Date of Birth (e.g. 09/30/1978)

Weight (e.g. 150)

Stats Updated

Your personal stats have
been updated.

Height (e.g. 5'11")

OK

MALE

FEMALE

UPDATE STATS >



Modify Budget



Log Food



Add Cheat

FOOD BUDGET



APPLICATION SETTINGS

Manage Notifications:

Email Notifications

Text Notifications

Phone Notifications

UPDATE NOTIFICATIONS >



Modify Budget



Log Food



Add Cheat

FOOD BUDGET



APPLICATION SETTINGS

Manage Notifications:

Email Notifications



Notifications Updated

Your notifications have
been updated.

OK

UPDATE NOTIFICATIONS >



Modify Budget



Log Food



Add Cheat



APPLICATION SETTINGS

Update Email:

Email

UPDATE EMAIL



Modify Budget



Log Food



Add Cheat



APPLICATION SETTINGS

Update Email:

Email

Email Update

Your email is about to be updated.
Are you sure you want to proceed?

Cancel

OK

UPDATE EMAIL >



Modify Budget



Log Food



Add Cheat



APPLICATION SETTINGS

Update Password:

Current Password

NEW Password

Retype NEW Password

UPDATE PASSWORD



Modify Budget



Log Food



Add Cheat



APPLICATION SETTINGS

Update Password:

Current Password

NEW Password

Password Updated

Your password is about to be updated.

Are you sure you want to proceed?

Retype NEW Password

Cancel

OK

UPDATE PASSWORD >



Modify Budget



Log Food

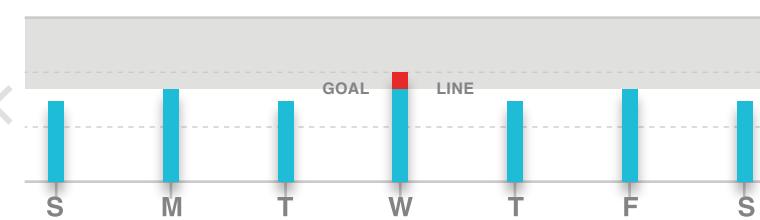


Add Cheat

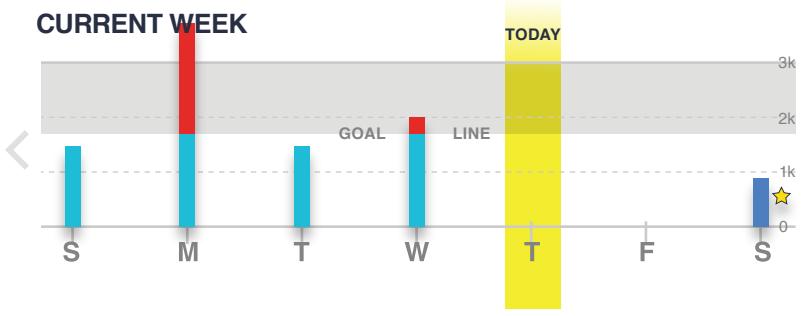
PAST TWO WEEKS



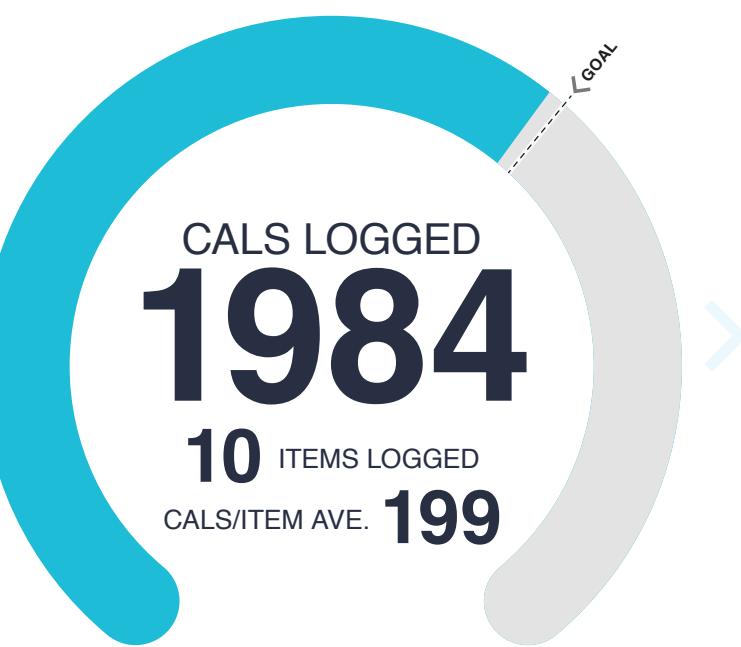
LAST WEEK



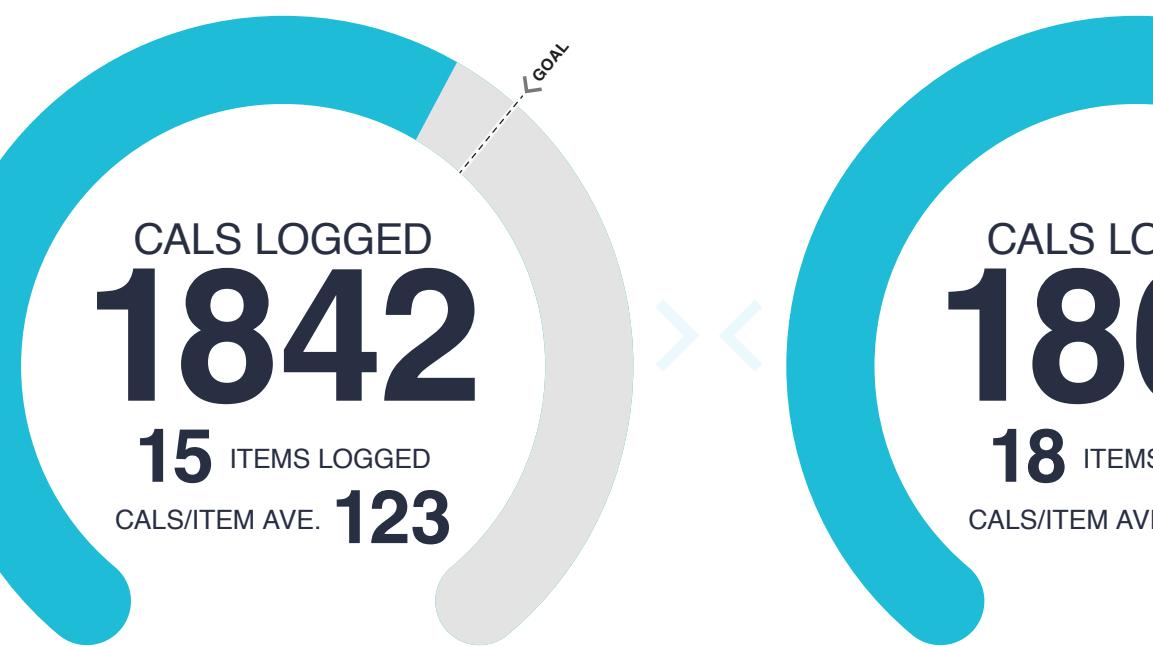
CURRENT WEEK



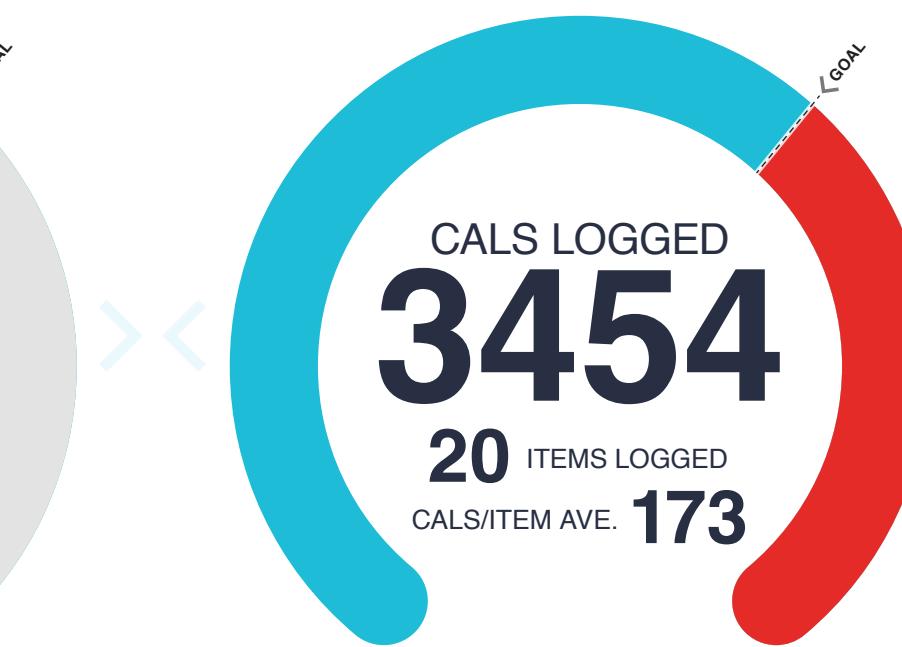
OVERVIEW: FRI, SEP 27th



OVERVIEW: SAT, SEP 28th



OVERVIEW: SUN, SEP 29th



OVERVIEW: MON, SEP 30th



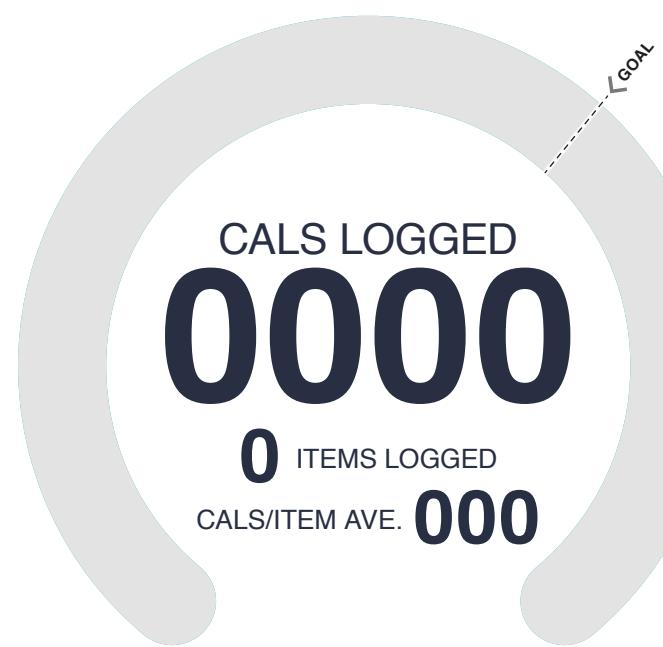
OVERVIEW: TUE, OCT 1st



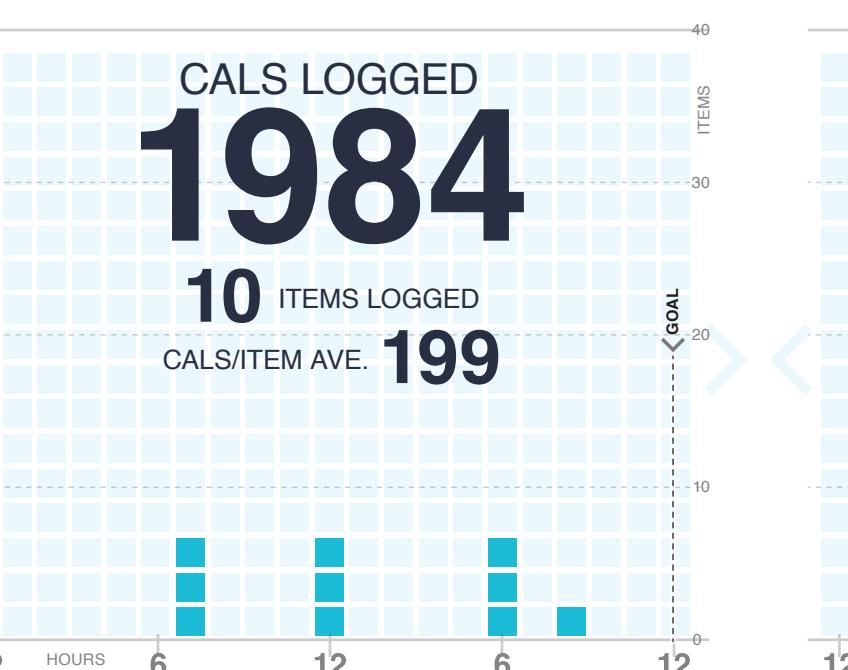
OVERVIEW: WED, OCT 2nd



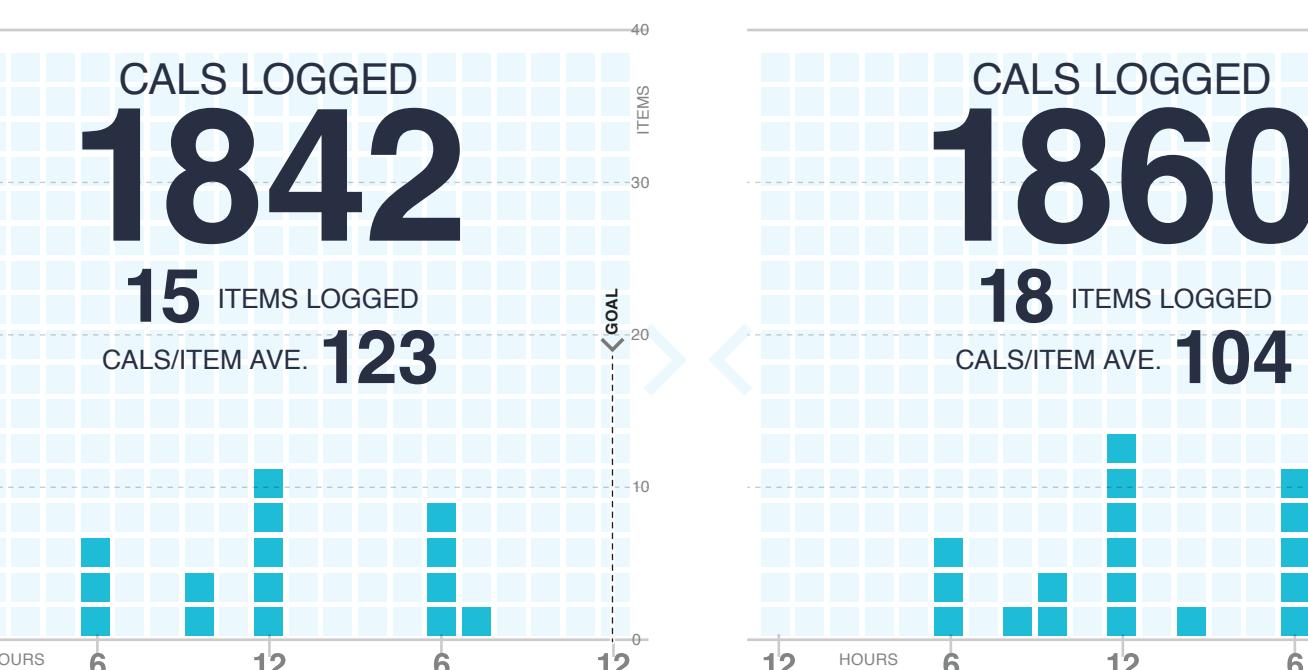
OVERVIEW: TODAY, THURS, OCT 3rd



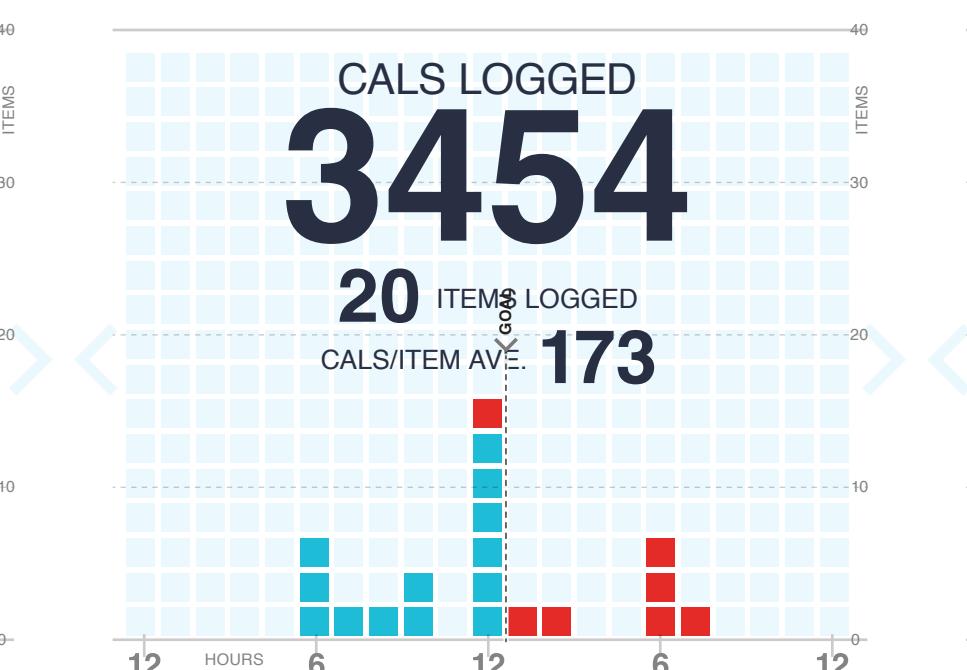
DETAIL: FRI, SEP 27th



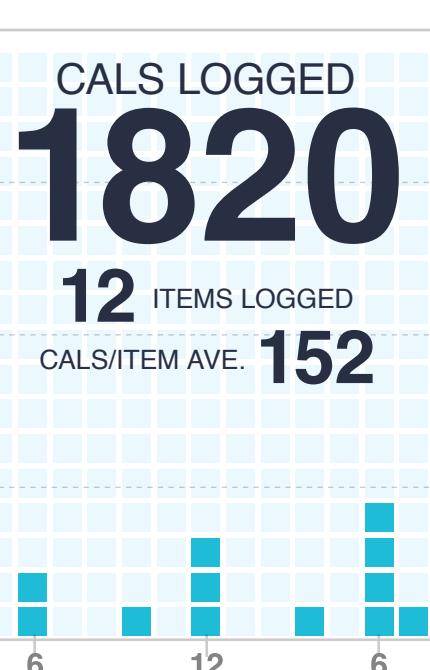
DETAIL: SAT, SEP 28th



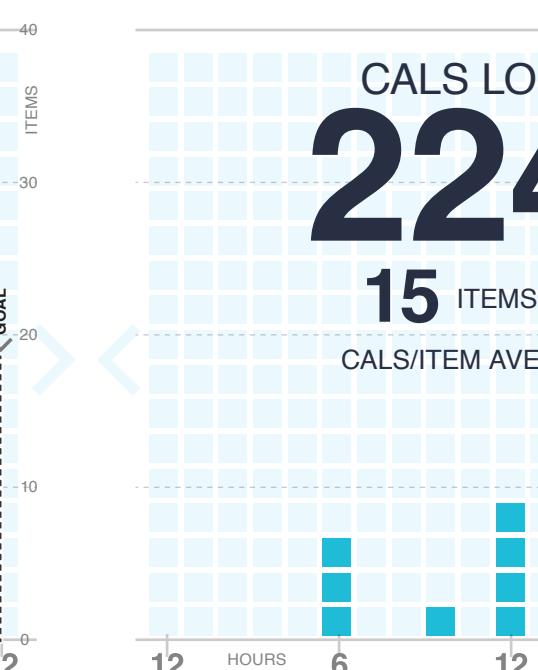
DETAIL: SUN, SEP 29th



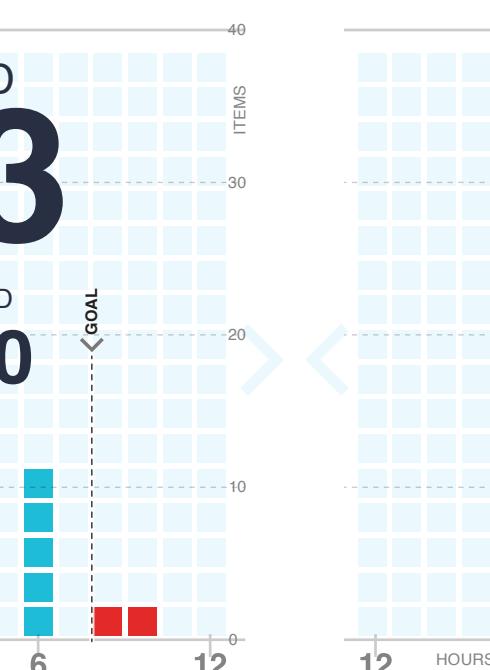
DETAIL: MON, SEP 30th



DETAIL: TUE, OCT 1st

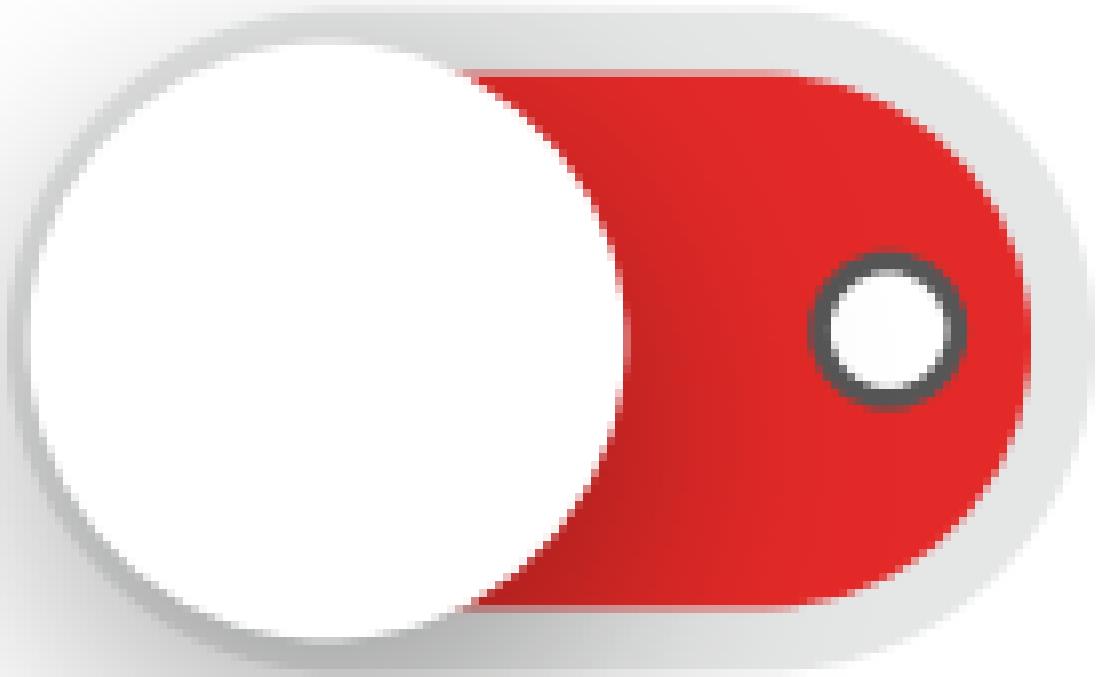


DETAIL: WED, OCT 2nd

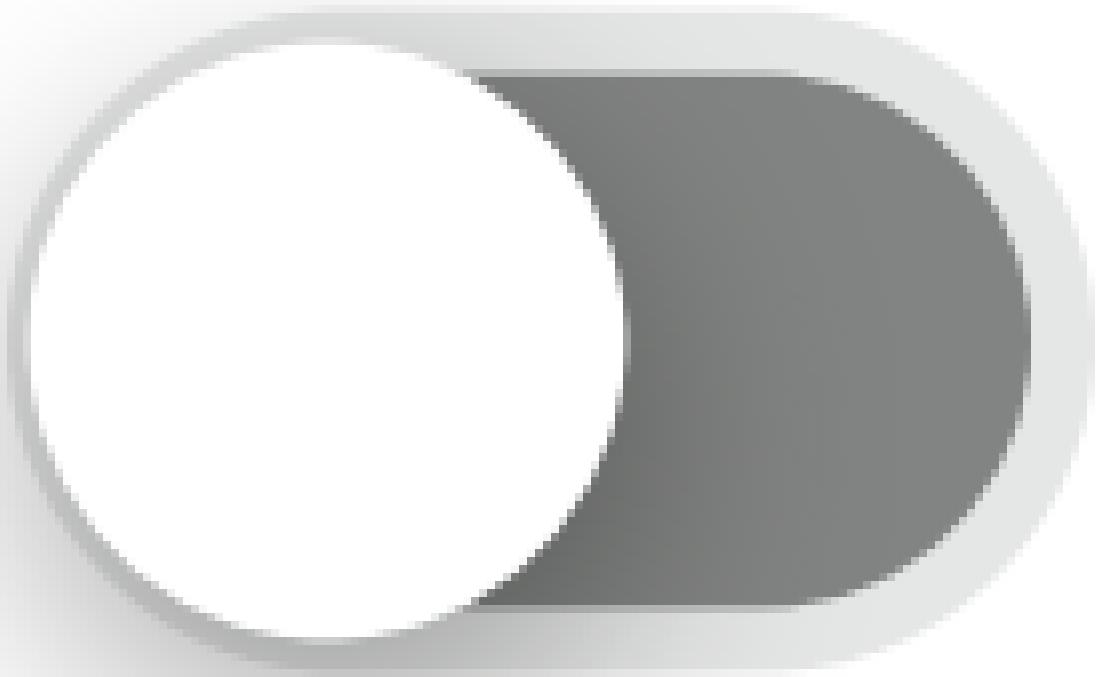


DETAIL: TODAY, THURS, OCT 3rd











**Not Available
in Prototype**

FB

FOOD BUDGET



MODIFY BUDGET

Enter your **Date of Birth**, **Weight**, **Height & Gender** in the boxes below:

Date of Birth (e.g. 09/30/1978)

Weight (e.g. 180lbs)

Height (e.g. 5'11")

MALE

FEMALE

ENTER STATS



Home



Log Food



Add Cheat

FOOD BUDGET



MODIFY BUDGET

Select a budget based on:

WEIGHT LOSS *(14,000 cals/week)* >

MAINTENANCE *(16,000 cals/week)* >



Home



Log Food



Add Cheat

FOOD BUDGET



MODIFY BUDGET

Select your average **Activity Level**:

SEDENTARY (*Don't move much*) >

LIGHT (*Sit most of the day*) >

MEDIUM (*Light Exercise*) >

HEAVY (*Athlete*) >



Home



Log Food



Add Cheat

FOOD BUDGET



MODIFY BUDGET

Select a budget based on:

WEIGHT LOSS (14,000 cals/week) >

Budget Modified

Your budget has been modified. New entries will reflect your new stats. Past results will reflect your old budget.

OK



Home



Log Food



Add Cheat



USER TESTING

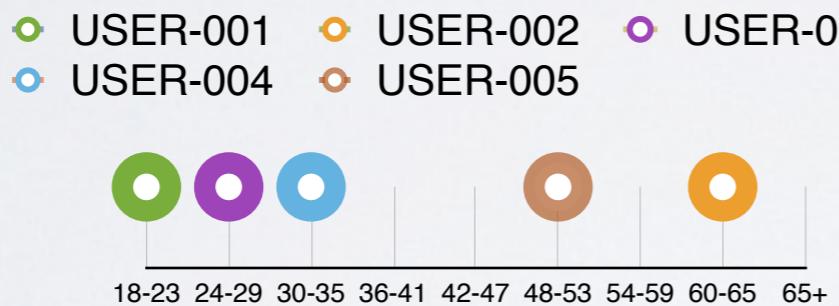
Health Application Study:
Caloric Budgeting

FOOD**BUDGET**

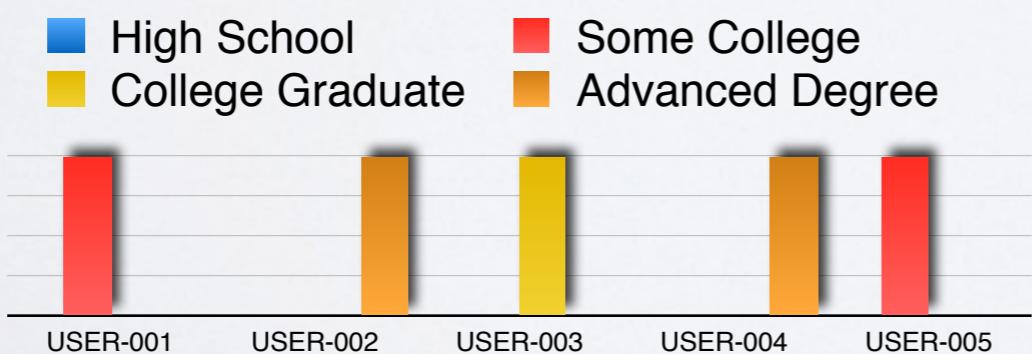
PARTICIPANT OVERVIEW

- Even age distribution
- 60% female
- 100% above a High School degree
- 80% native English speakers, 20% Romanian

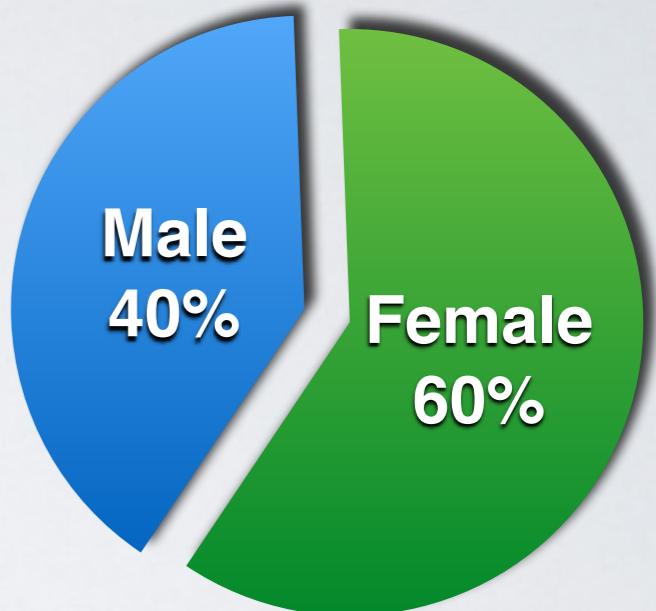
AGE



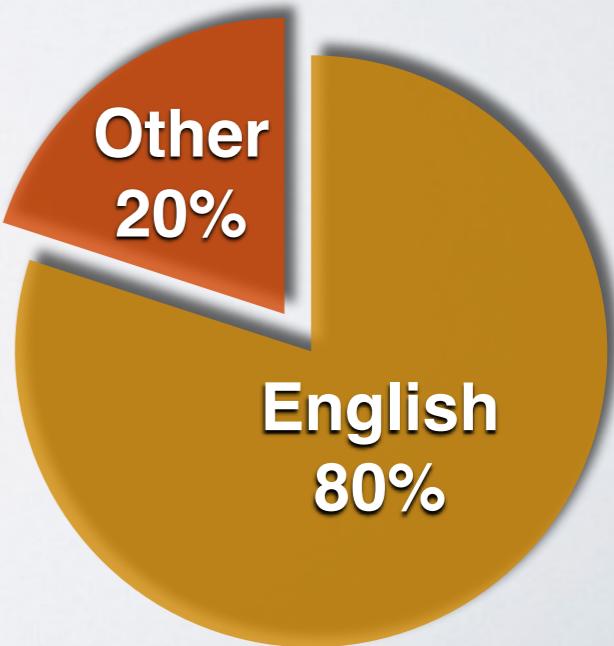
EDUCATION



GENDER



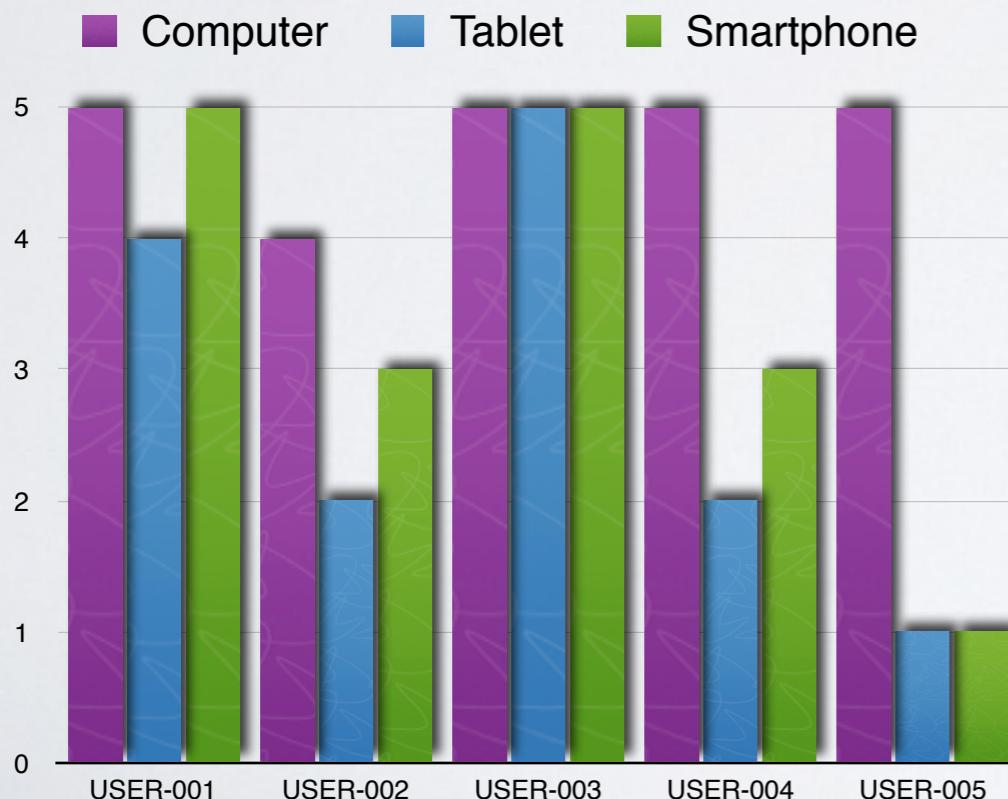
LANGUAGE



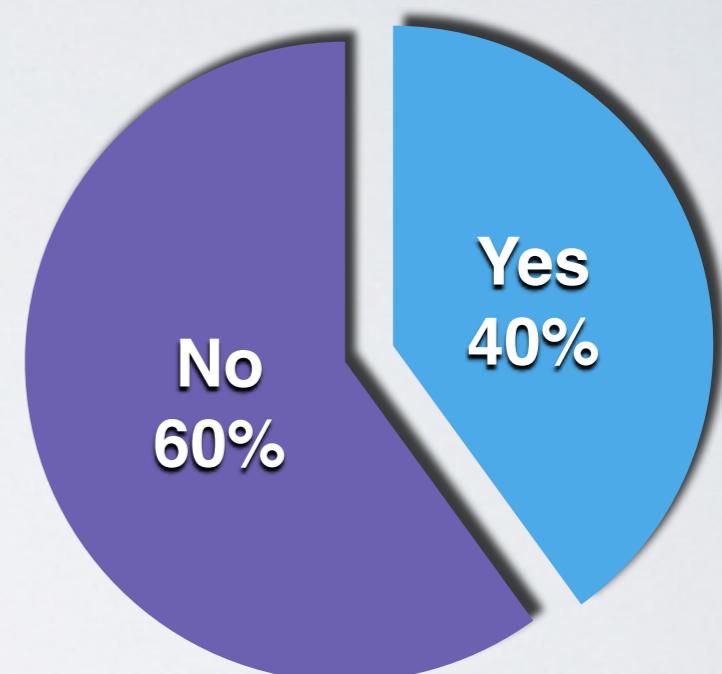
...PARTICIPANT OVERVIEW

- More participants comfortable with traditional forms of computing over mobile computing devices (tablets, smartphones)
- Even distribution of PC and Mac users: One participant uses/chose both
- More than half of the participants do NOT currently user a Heath & Wellness app

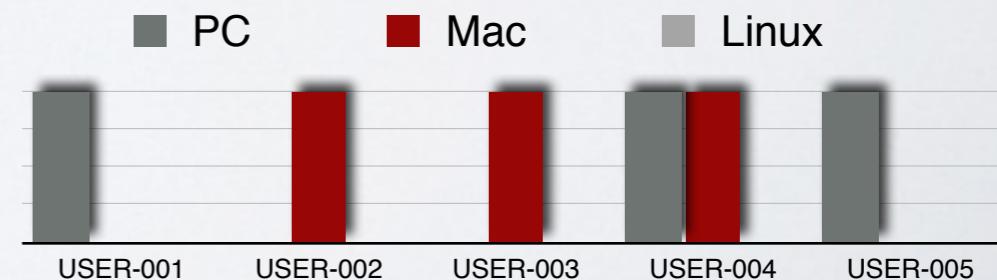
DEVICE COMFORT



CURRENTLY USE A H&W APP



OPERATING SYSTEM



PERSONAS



Fred J.

Male / 47 / Married / 2 children /
Chicago, IL / Homeowner / BS, MBA

Key Attributes:

- Comfortable with computers
- Desire to try a healthier lifestyle
- At the beginning of his health goals



Susan T.

Female / 21 / Single / No children /
Ames, IA / Renter / Student

Key Attributes:

- Familiar with web browsing/interaction on websites
- Desire to eat healthier



Daniel P.

Male / 33 / Single / No children /
Cincinnati, OH / Homeowner / MS

Key Attributes:

- Needs to moderate diet
- Moderately technical



Vanessa D.

Female / 48 / Divorced / 3 children /
Philadelphia, PA / Homeowner / HS

Key Attributes:

- Non technical
- Wants to be healthier, but doesn't know how to go about it
- Desire to make a change at this point in her life

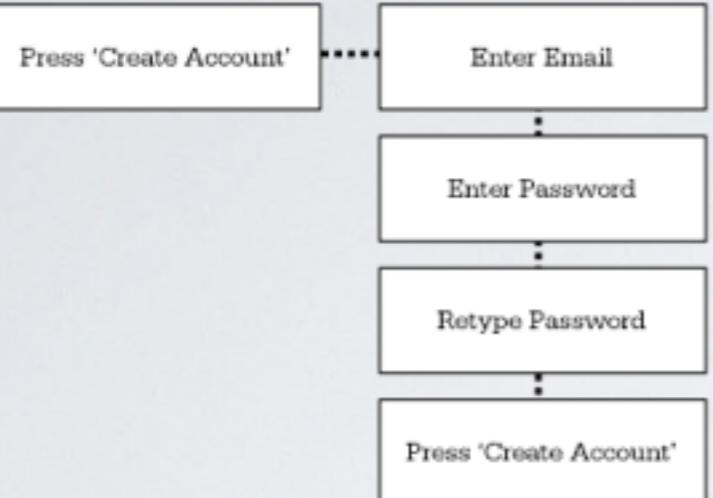
TASK CHARTS

TASK I: Create a Food Budget Account using any email and password =

NOTE: No data is stored in the user test

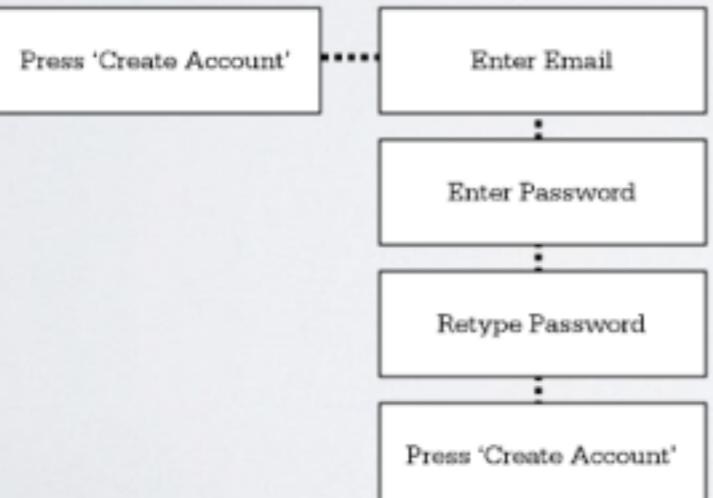
Expected Path

2 Clicks



Actual Path - Averaged

2 Clicks



**100%
Completion
Rate**

**Average
Time:
65.6 sec**

**Best
Time:
45 sec**

TASK CHARTS



TASK 2: Log in to Food Budget using the email and password you set in task No. 1

Expected Path

2 Clicks



Actual Path - Averaged

2 Clicks



**100%
Completion
Rate**

**Average
Time:
19.6 sec**

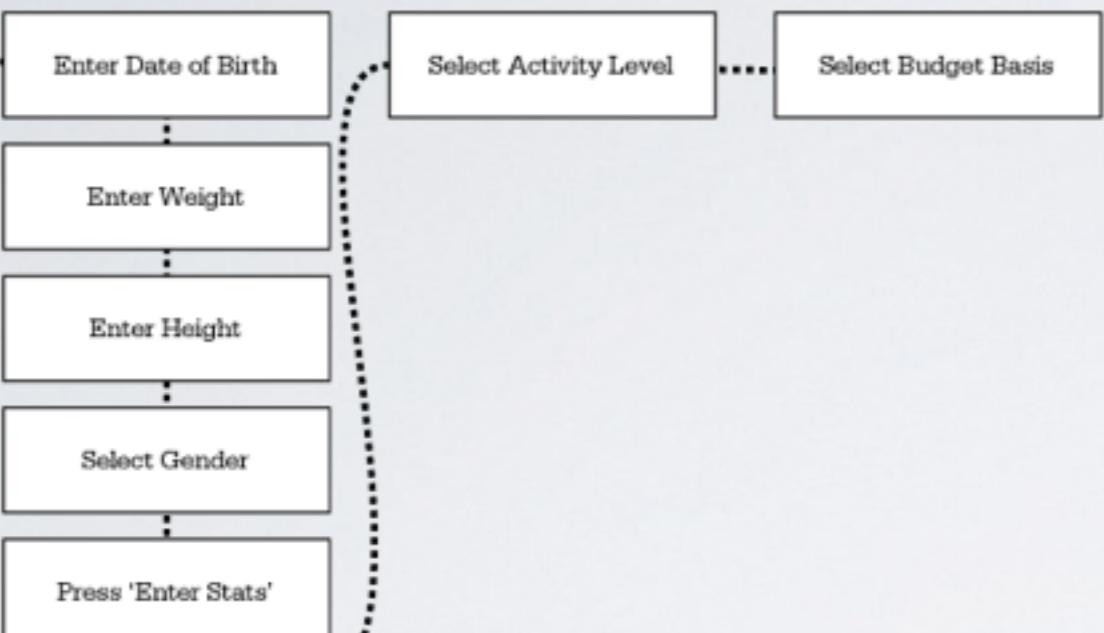
**Best
Time:
14 sec**

TASK CHARTS

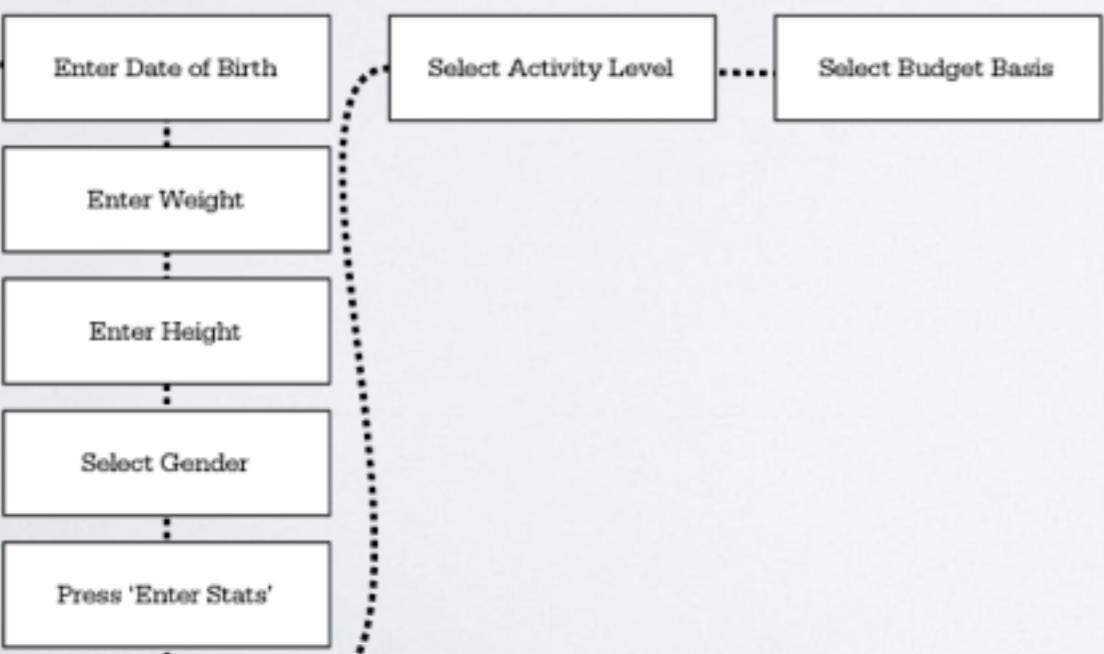


TASK 3: Create a budget based on maintaining your weight

Expected Path



Actual Path - Averaged



**100%
Completion
Rate**

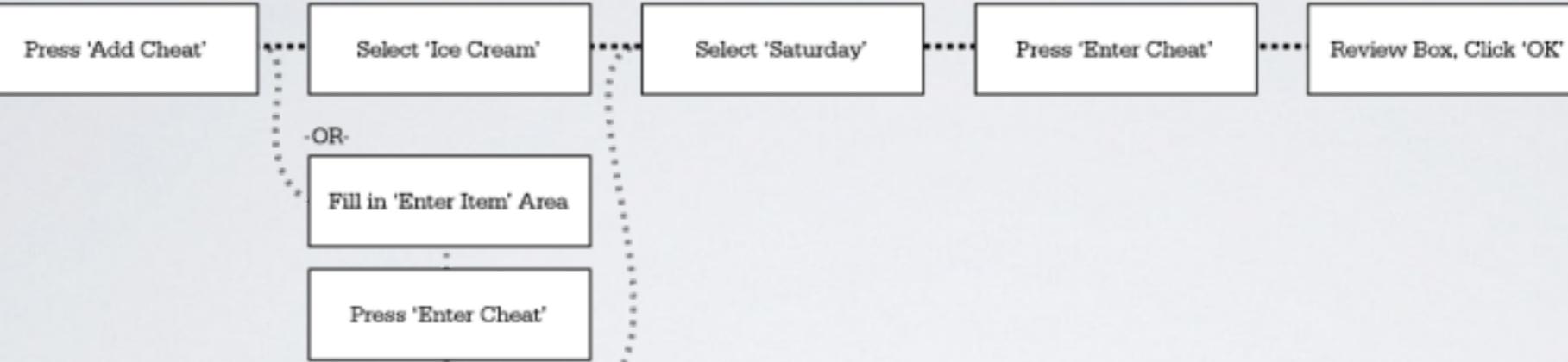
**Average
Time:
90.4 sec**

**Best
Time:
51 sec**

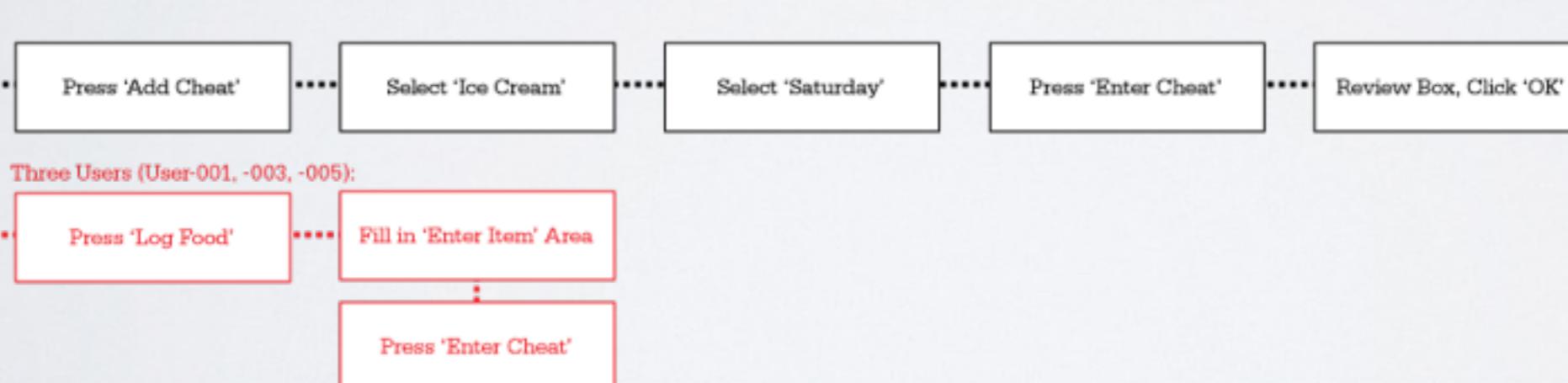
TASK CHARTS

TASK 4: Plan to have 2 scoops of Ice Cream this Saturday

Expected Path



Actual Path - Averaged



**40%
Completion
Rate**

**Average
Time:
74.6 sec**

**Best
Time:
26 sec**

TASK CHARTS

TASK 5: View Yesterday's Budget Overview

Expected Path

1 Click

Swipe L or Click L arrow
in Overview area
of Main Screen

Actual Path - Averaged

1 Click

Swipe L or Click L arrow
in Overview area
of Main Screen

ALL Users (User-001, -002, -003, -004, -005):

Wanted to click on
the prior day in
the weekly overview

One User (User-004):

Didn't find the
swipes/buttons

One User (User-001):

Failed to click the
'Overview' button

**60%
Completion
Rate**

**Average
Time:
76.4 sec**

**Best
Time:
36 sec**

TASK CHARTS



TASK 6: View the Budget details for two days ago, October 1st

Expected Path

IF user is at the screen from prior task...

Swipe L or Click L arrow
in Overview area
of Main Screen

Press 'Details' Icon

2 Clicks

IF user is NOT at the screen from prior task...

Swipe L or Click L arrow
TWICE in Overview area
of Main Screen

Press 'Details' Icon

2 Clicks

-OR-

Press 'Details' Icon

Swipe L or Click L arrow
in Overview area
of Main Screen

2 Clicks

-OR-

Press 'Details' Icon

Swipe L or Click L arrow
TWICE in Overview area
of Main Screen

2 Clicks

Actual Path - Averaged

IF user is at the screen from prior task...

Swipe L or Click L arrow
in Overview area
of Main Screen

Press 'Details' Icon

2 Clicks

IF user is NOT at the screen from prior task...

Swipe L or Click L arrow
TWICE in Overview area
of Main Screen

Press 'Details' Icon

2 Clicks

-OR-

Press 'Details' Icon

Swipe L or Click L arrow
in Overview area
of Main Screen

2 Clicks

-OR-

Press 'Details' Icon

Swipe L or Click L arrow
TWICE in Overview area
of Main Screen

2 Clicks

**100%
Completion
Rate**

**Average
Time:
19.2 sec**

**Best
Time:
5 sec**

TASK CHARTS



TASK 7: View Past Budget for the last 2 Weeks - Past data has been simulated

Expected Path

1 Click

Swipe L or Click L arrow
twice in Graph area
of Main Screen

Actual Path - Averaged

1 Click

Swipe L or Click L arrow
twice in Graph area
of Main Screen

One User (User-002):

Did not find

**80%
Completion
Rate**

**Average
Time:
27.2 sec**

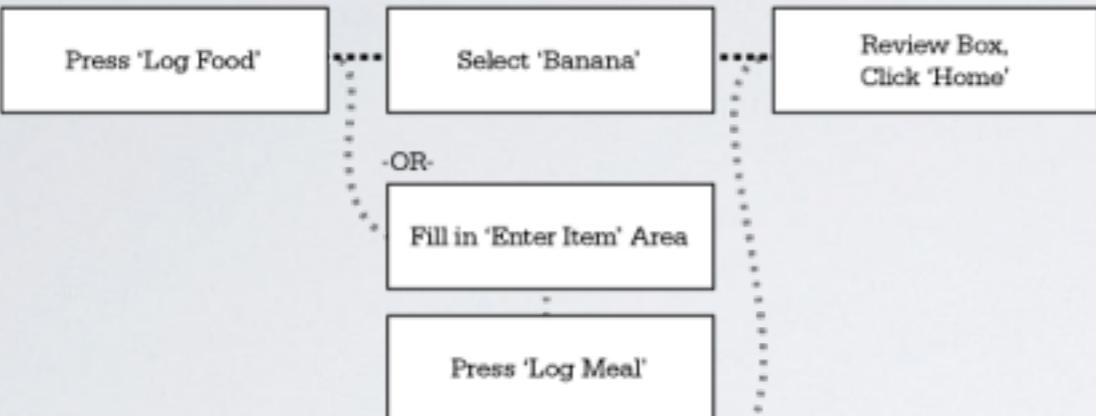
**Best
Time:
7 sec**

TASK CHARTS



TASK 8: Log that you ate a Banana

Expected Path



3 Clicks

Actual Path - Averaged



3 Clicks

**100%
Completion
Rate**

**Average
Time:
10 sec**

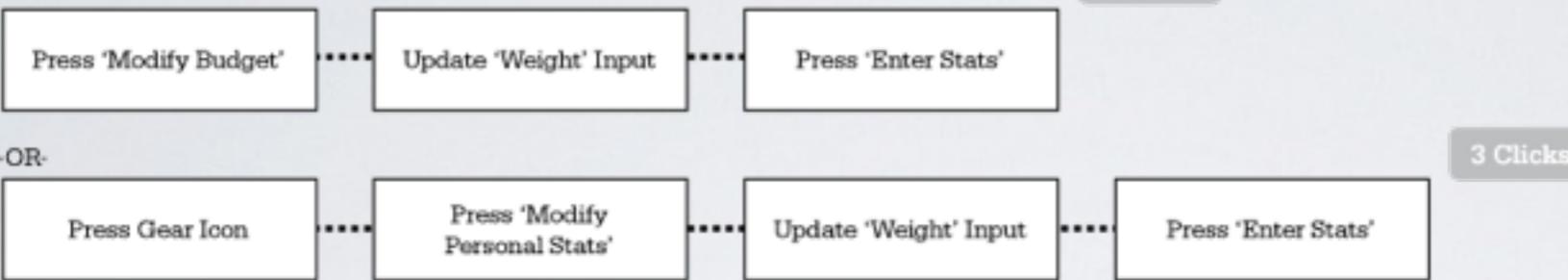
**Best
Time:
5 sec**

TASK CHARTS

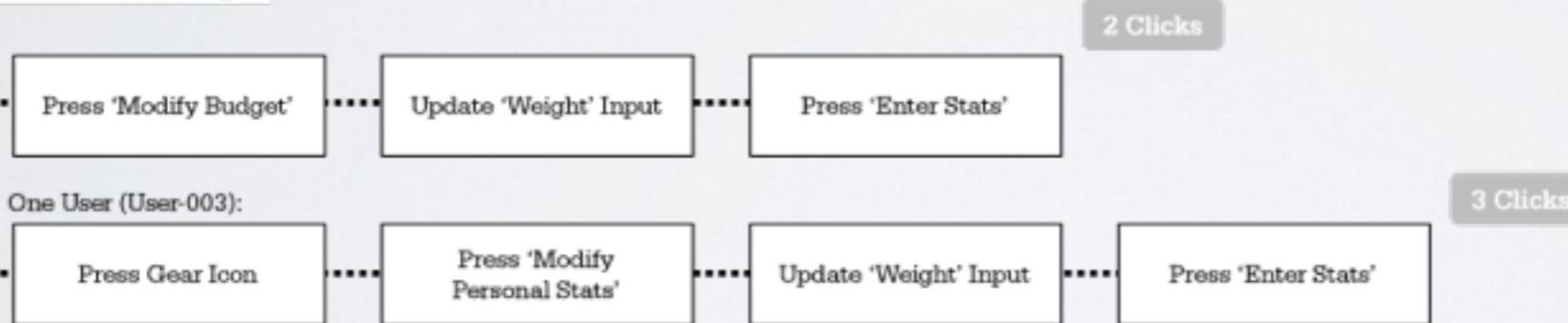


TASK 9: You have lost weight by eating right. Update your weight in the application

Expected Path



Actual Path - Averaged



**100%
Completion
Rate**

**Average
Time:
37.8 sec**

**Best
Time:
16 sec**

PROBLEM AREAS

Task 4

Three Users (User-001, -003, -005):



Task 5

ALL Users (User-001, -002, -003, -004, -005):



One User (User-004):

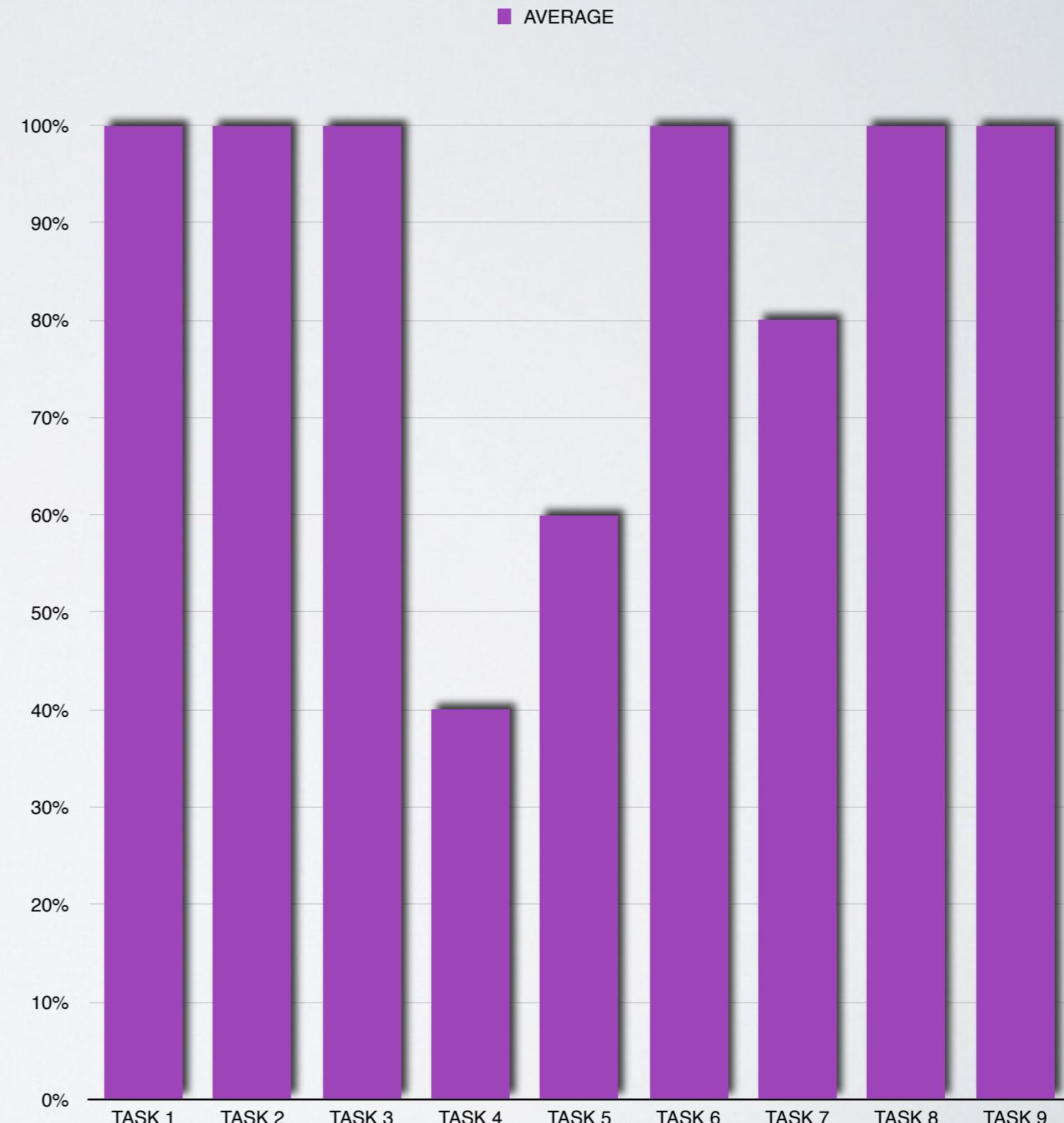


One User (User-001):



Task 7

One User (User-002):



PARTICIPANT FEEDBACK

User-001 Feedback:

Pro: Well laid out. Nice graphics. Easy to read.

Con: Desires a more customized budget. Adding foods would be cumbersome until a library is built up.

User-002 Feedback:

Pro: Fairly simple to use. Not a tough learning curve.

Con: Input unresponsive at times. Took a while to use - their typical app usage is under 2 minutes.

User-003 Feedback:

Pro: Not a steep learning curve, didn't know what they were doing at first, but picked it up quickly.

Con:

User-004 Feedback:

Pro: App was fun and pretty. Felt like playing with something. Easy to use - took a few seconds to figure out.

Con: Unless it does something new, they would get bored of using app after a while. Needs a 'kick'.

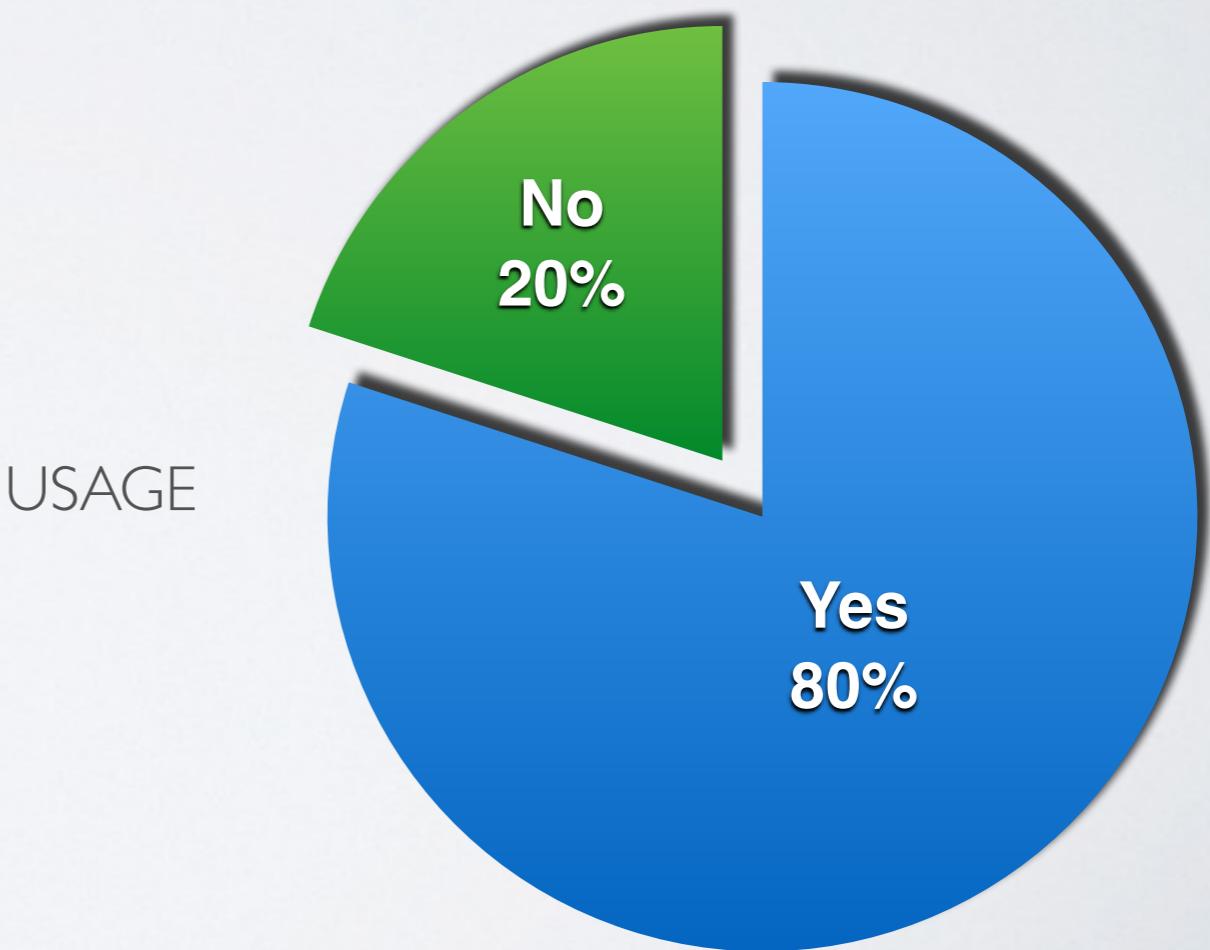
User-005 Feedback:

Pro: Like the ability to reviewing and planning intake. "Helps plan more of what you are eating for future meals." "If I got the hang of it I would use it." Did not feel that it was difficult. Not complicated enough to need help, but did need time to play with the app to figure it out.

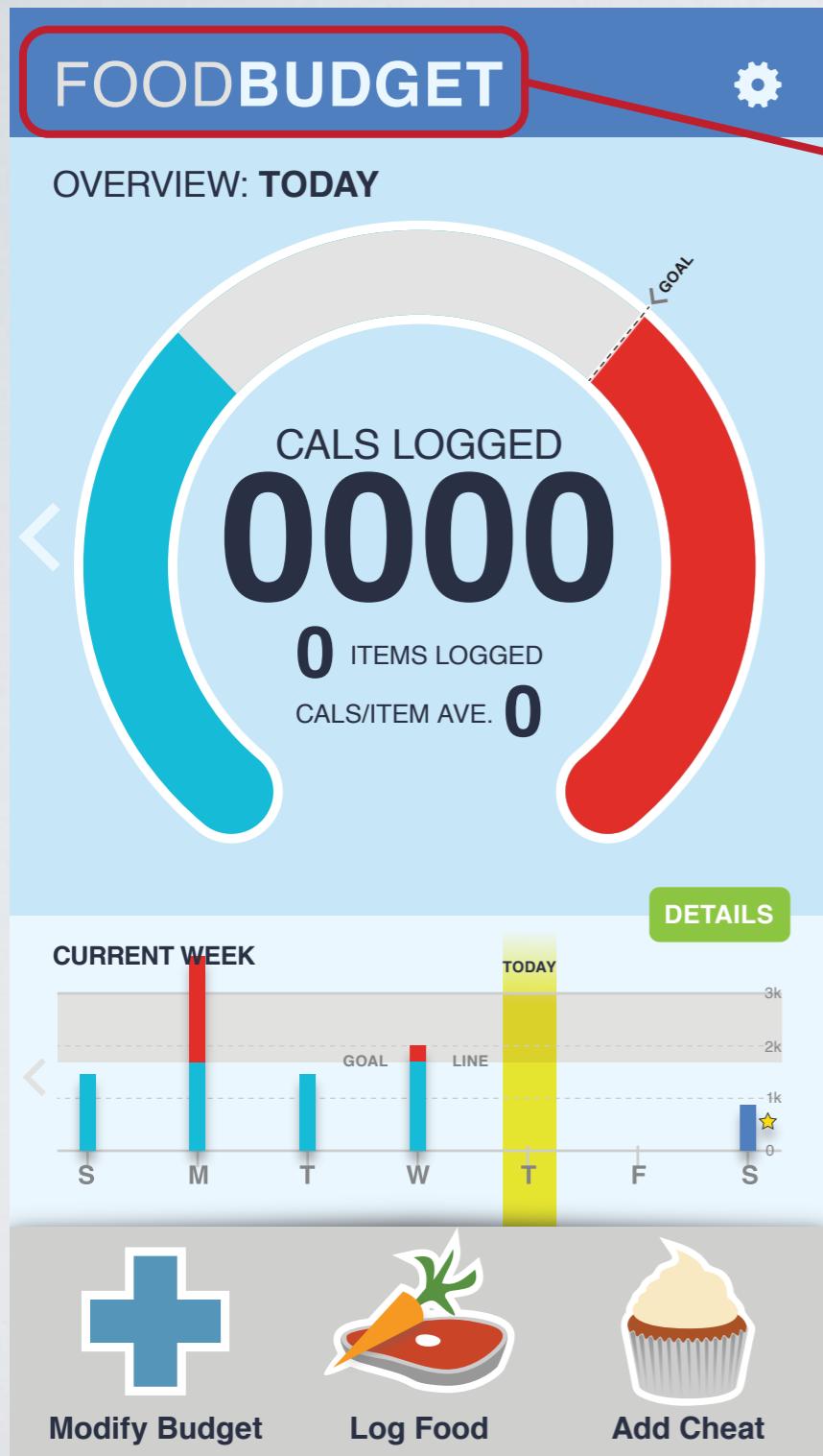
Con: Didn't equate 'ice cream' to cheating. Could be more intuitive, but would get easier with more use.

PARTICIPANT FEEDBACK

- 80% of participants said they would like to use this application in their everyday life

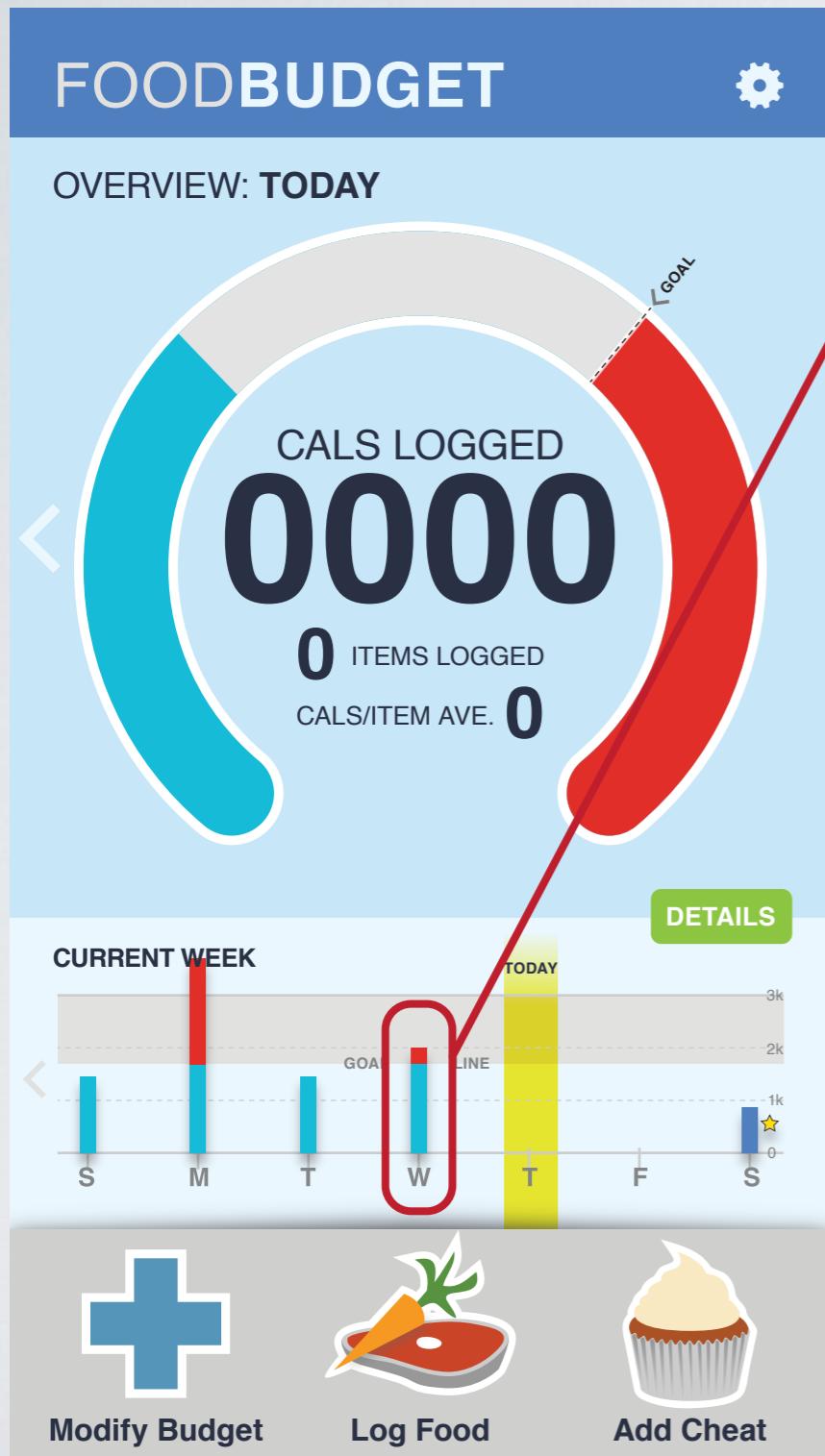


REFINEMENTS



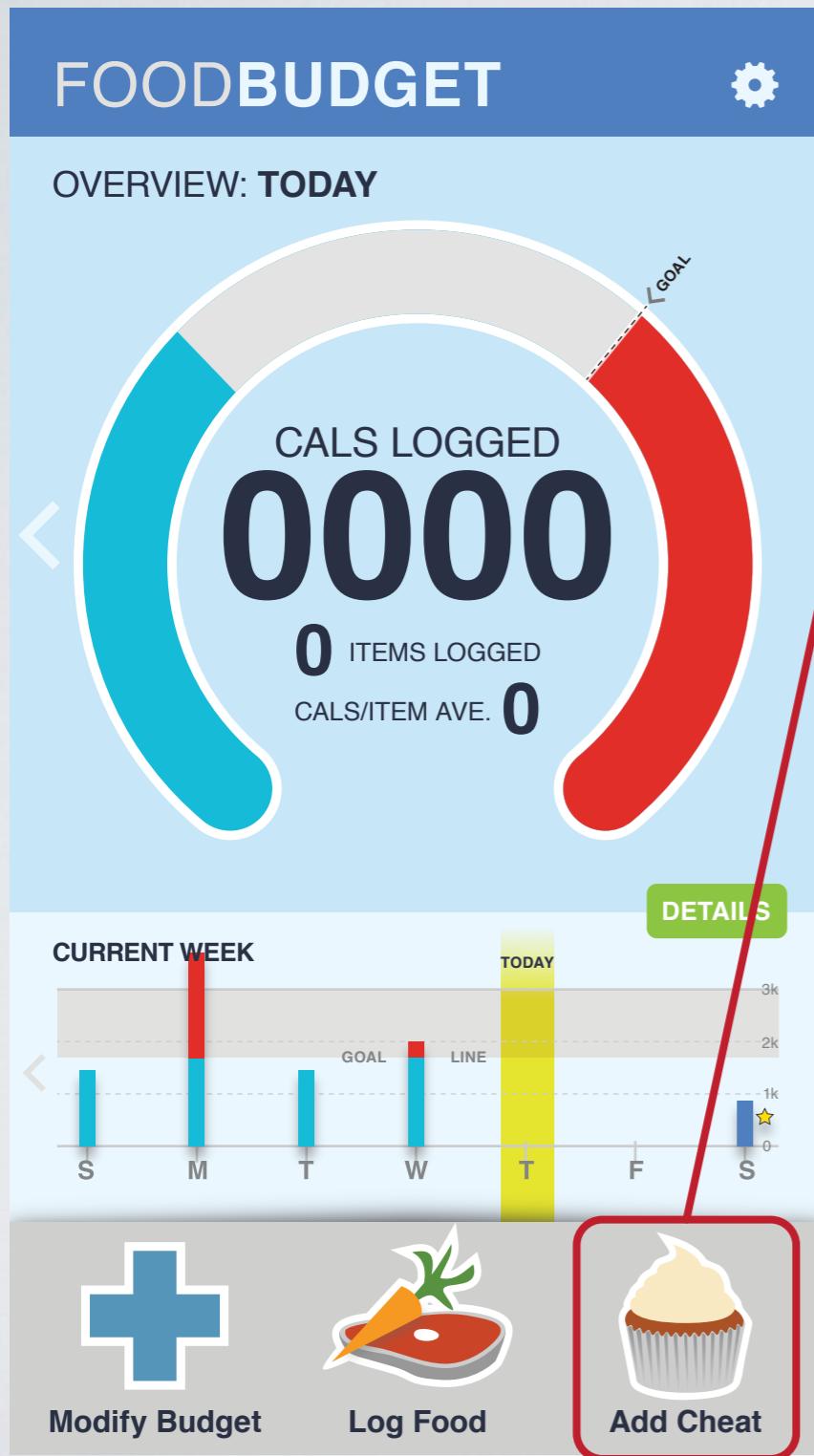
From my one non-native English speaker: “Change the name from ‘Food Budget’ to ‘Caloric Budget’ because ‘Food’ made the user think that we were making a grocery list and financially budgeting for items (also mimicked by Sung earlier in the semester).

REFINEMENTS



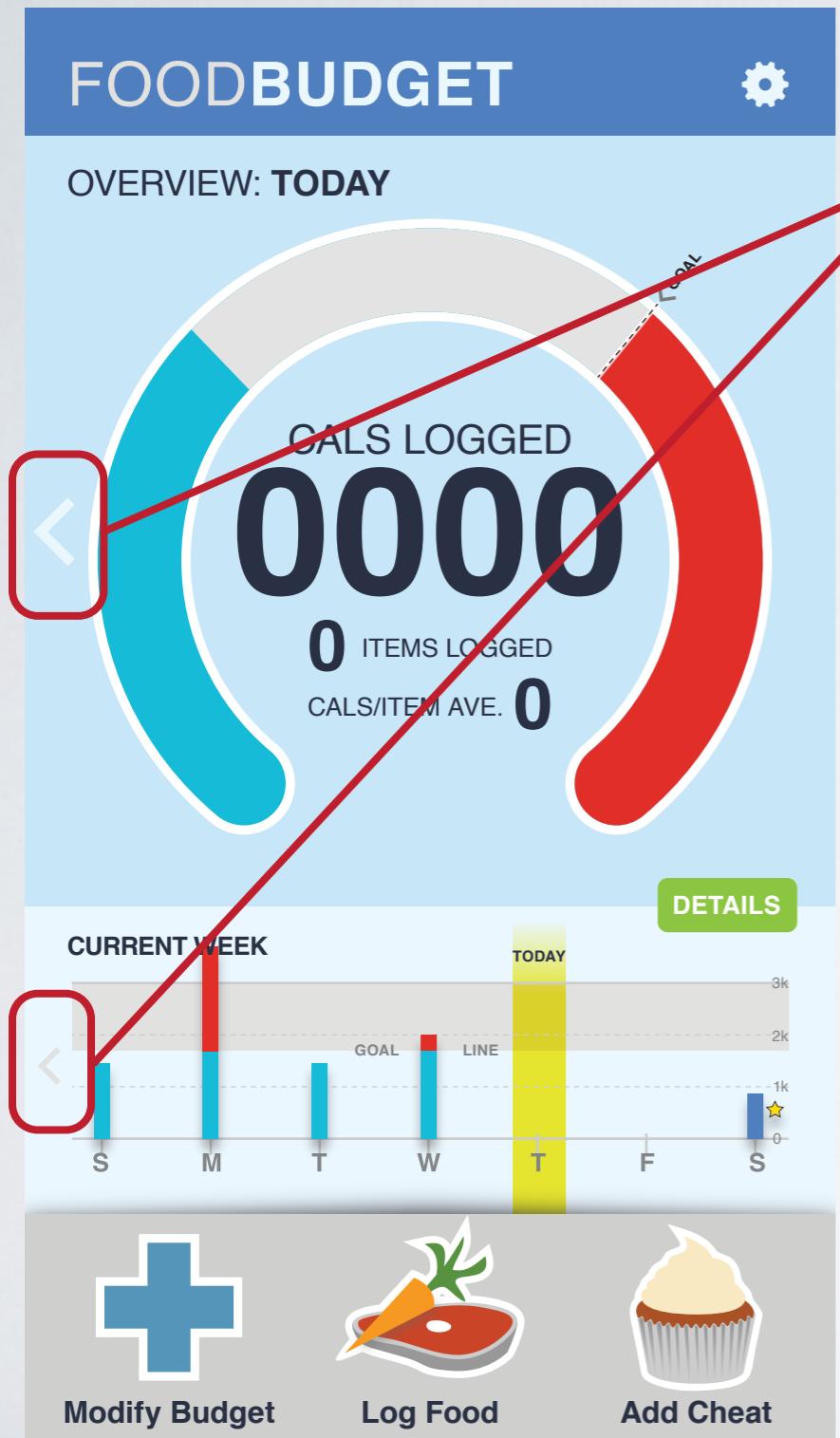
All users wanted to click on the days in the weekly overview to get to that day in the daily overview.

REFINEMENTS



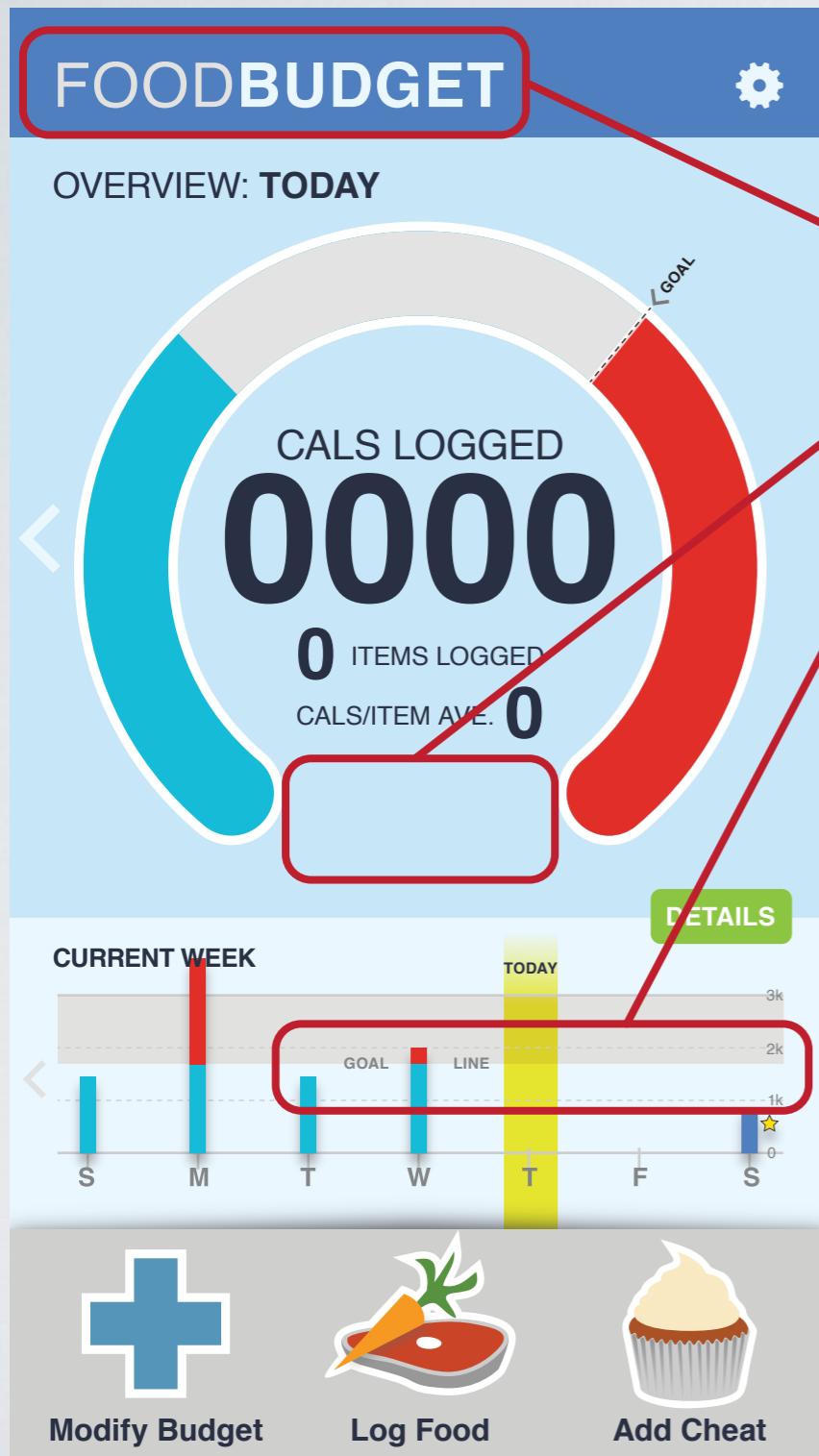
'Add Cheat' was commonly overlooked, but I think that with a tutorial that teaches first time users how to use the system this could be avoided. It is my belief that users did not find the 'Add Cheat' because there was no education or pre-existing information to point them to the purpose for 'Add Cheat'.

REFINEMENTS



Arrows to cue swiping did not seem prominent enough in the main overview screen. I think that this could be solved with the training system as proposed in my above statement.

REFINEMENTS



Feedback from Faculty Presentation – Oct. 15, 2013

Talk about the difference in the definition of 'budget' in the overview/tutorial of the application

Add a budget number for 'Remaining Calories' for the week

Change 'Goal Line' at the bottom to accommodate cheat

Sell differences from other applications. The difference in this app is the 'budget' part, thus making the user more in tune with their food intake and/or what they will be eating in the future

~FIN~

FOODBUDGET

Phase II: User Testing Report

Ryan G. Wilson, ArtGr 672, Fall 2013

The purpose of usability testing is to identify the usability deficiencies or design preferences in existing systems on web site/computer based electronic equipment. For Phase II, User Tests were conducted and recorded.

This report will discuss the following:

User Test Procedure:

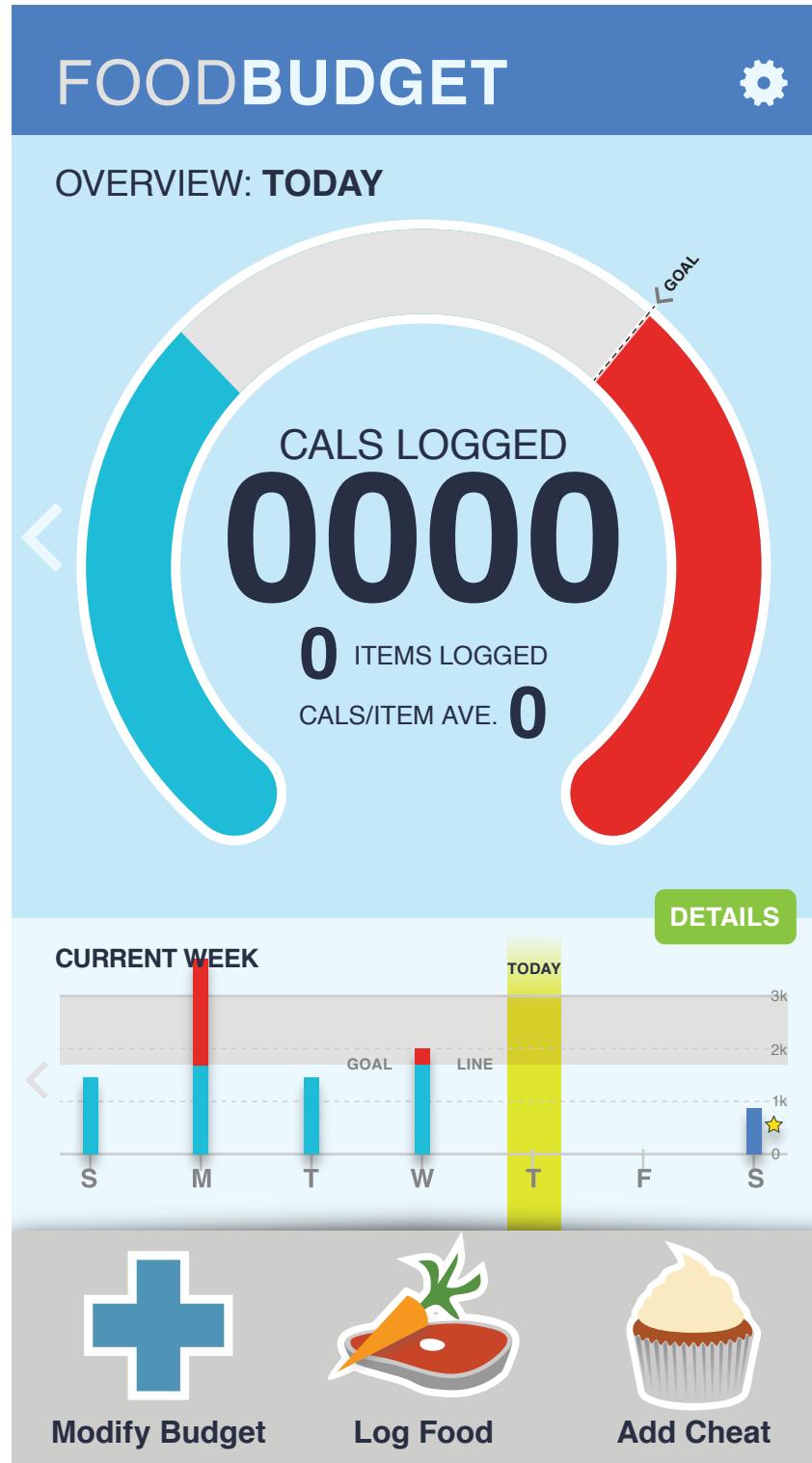
1. Five users were tested
2. Data was collected on each user in a pre-survey
3. User testing was performed and recorded
4. After the testing session, users were interviewed (in post survey and open-ended questions) about the application

Data Analysis:

1. Data was captured was analyzed
2. Data was then charted for ease of review
3. Recommendations for improvement of the system were made using the qualitative and quantitative data

FOODBUDGET

Phase II: Project Description



In the end of the first phase, based on my user reviews, before I began user testing I changed:

- The main screen 'i' information button was unclear and changed to be a simple 'details' / 'overview' toggle
- Added tap buttons to the main screen to have the same functionality as the current swipe functionality, in addition to keeping the swipe functionality. Swiping did not seem to be as intuitive in prior testing as I had thought it would be.
- Added a 'Back' button to the Create and Modify Budget screens – This was originally an oversight.
- To decrease prototype lag, I ran all of my background images through TinyPNG [<http://tinypng.org>] to reduce the file size as much as possible to speed up interactions through the Just In Mind prototype. A lag causes the user to think that nothing is happening when they touch a button. In all actuality, Just In Mind creates a web-based prototype, so, if the internet connection is slow or the image files are too large, the application will appear to lag, just like any non-optimized website would. This limited the lag, but did not remove it entirely.

I was unable to resolve the Just In Mind focus issue, where the input area loses focus when it is behind the iOS keyboard.

The current version of the prototype that I used in testing can be found here:

<https://www.justinmind.com/usernote/tests/10045389/11294154/11294156/index.html>

FOODBUDGET

Phase II: Prototype

Ryan G. Wilson, ArtGr 672, Fall 2013



Ryan Williams and I built user testing stands, or tripods with an extended arm to mount a camera. Our purpose for this was to create something that was unobtrusive so that during user testing the angle of the video was directly above the device that the user was testing on. It was important for the camera and the testing stand to be out of the way of the user, so to not cause an uncomfortable experience and still capture what was happening on the screen.



FOODBUDGET

Phase II: Pre-Testing

Ryan G. Wilson, ArtGr 672, Fall 2013

We wrote our IRB with our group. Chase Meusel had written IRBs before, so the group deferred to his knowledge. Our instructor, Sung Kang, helped us by making changes to aid in getting our IRB approved and to make our forms and surveys more functional.

After two rounds of changes from the IRB office, we were able to get out IRB approved.

FOOD BUDGET

Phase II: IRB Approval

Ryan G. Wilson, ArtGr 672, Fall 2013



I wanted to recruit users that resembled my personas from my Phase I report. My personas were representative of a wide audience, users aged 18 to 80, varying in technological proficiency. One of my assistantships on campus is for the Graduate College office. The employees there offer a wide range of users that fit my demographics. With the approval of William Graves, the Associate Dean of the Graduate College, I was able to recruit from that pool of employees.

Using our Word of Mouth script, I was able to get more than enough volunteers. The users that I chose to test were determined by availability during the periods that I was able to test. I tested five individuals in the afternoon of Wednesday, October 30th and the afternoon of Friday, November 1st.

Each of the user tests were recorded, capturing user's hands interacting with the application and audio of them responding to the task list and talking through the system. Due to the restrictions of the IRB, the videos will not be made available in this report.

Users were read the Introduction Script, asked to sign the Informed Consent Document, filled out the Pre-Survey (shown on next page). The recording was started, then the users were asked to perform the tasks laid out in the Task List (shown on next page) while speaking aloud their thoughts while proceeding through the tasks.

Upon completion of the task list, the recording was stopped and users were asked to fill out the Post-Survey and then asked a series of open-ended Interview Questions. After all the questions were answered, the user test was concluded.



FOODBUDGET

Phase II: Recruiting & Testing

Attachment 2. Word of Mouth Script

We are looking for participants for interface usability study on interface systems.

We are testing new interface designs for usability flaws. Testing may include both mobile (smartphone) and web based interfaces by completing simple tasks. The usability study can be done in 60 minutes at your convenience, in the User Experience Lab in Howe Hall or another similar quiet area for testing.

Participation is completely voluntary. All of the information participants provide will be kept strictly confidential and reported in summary form only. No individual will be identified, nor will participants' names be attached to any data. Participants must be 18 years or older to take part in this study.

If you know someone who may be interested in participating this study, please contact Ryan Williams at rgw@iastate.edu

Additional Investigators:

Laura Huisenga
Whitley Kemble
Chase Meusel
Jessica Palo
Hye Jeong Park
Ryan G. Wilson

Attachment 6.2: Food Budget

Task List

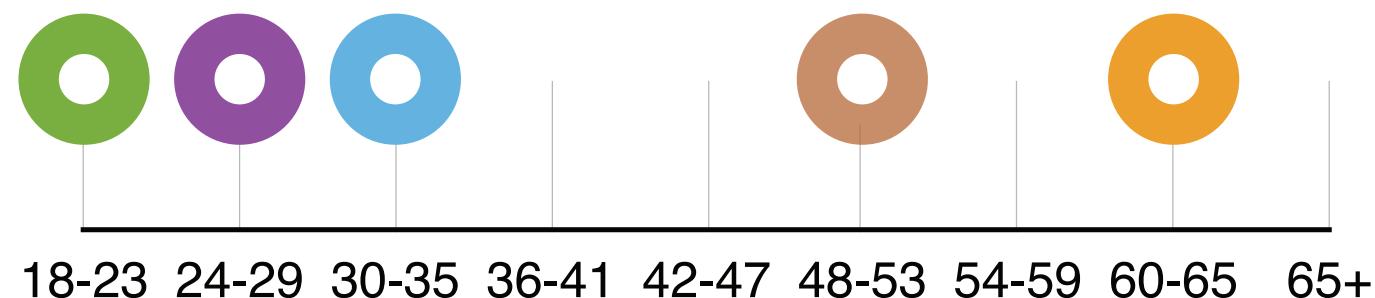
1. Create a Food Budget Account using any email and password –
NOTE This information does NOT need to be a real or valid email address: No data is stored in the user test.
You are welcome to use 'fake@email.com' as your username and '1234' as your password
2. Log in to Food Budget using the email and password you set in task No. 1
3. Create a budget based on maintaining your weight
4. Plan to have 2 scoops of Ice Cream this Saturday
5. View Yesterday's Budget Overview
6. View the Budget details for two days ago, October 1st
7. View Past Budget for the last 2 Weeks – NOTE: Past data has been simulated
8. Log that you ate a Banana
9. You have lost 10 pounds by eating right. Update your weight in the application

FOODBUDGET

Phase II: User Testing Docs

	18-23	24-29	30-35	36-41	42-47	48-53	54-59	60-65	65+
Age									
USER-001	1								
USER-002								1	
USER-003		1							
USER-004				1					
USER-005						1			

- USER-001 ● USER-002 ● USER-003
- USER-004 ● USER-005

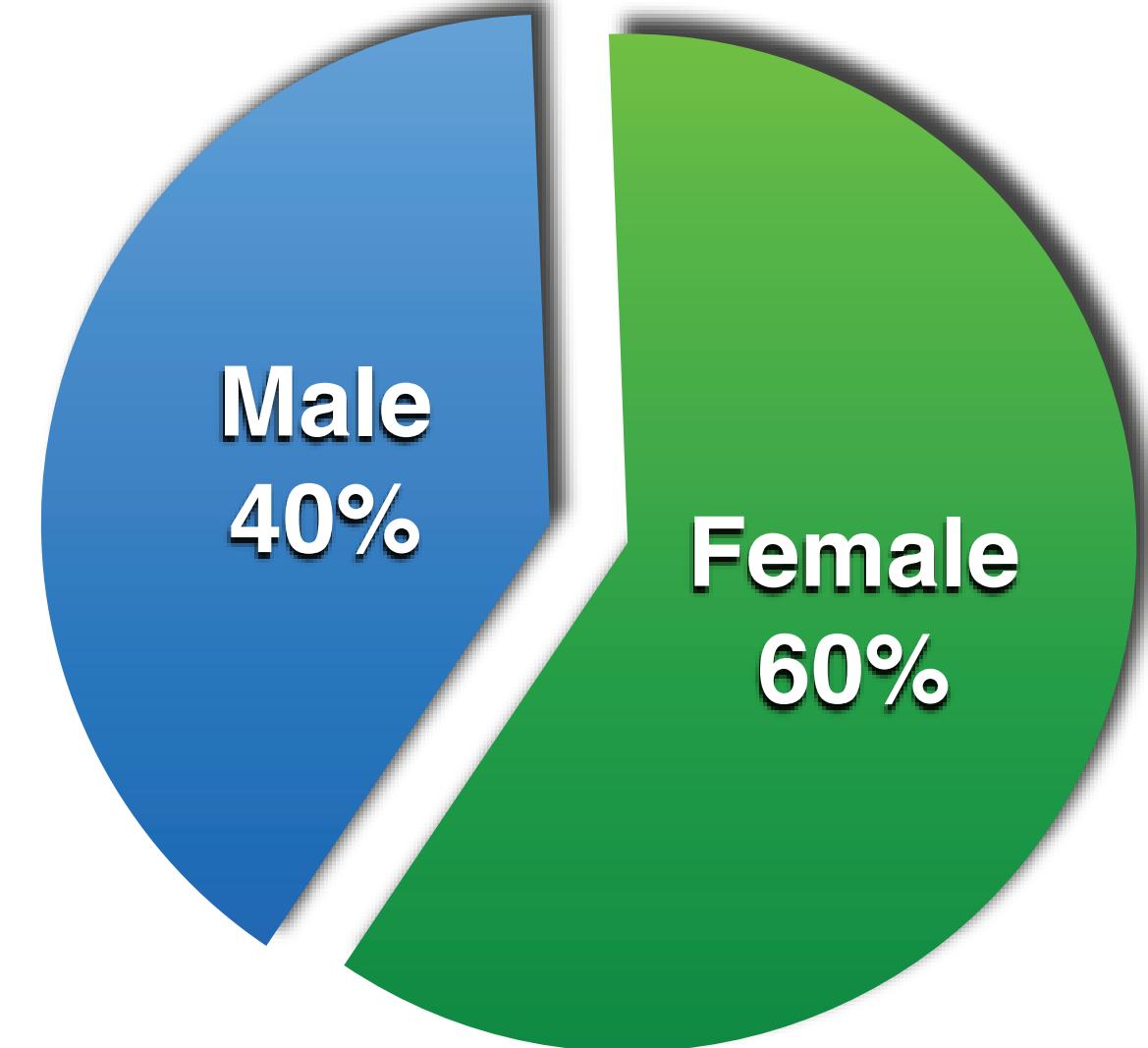
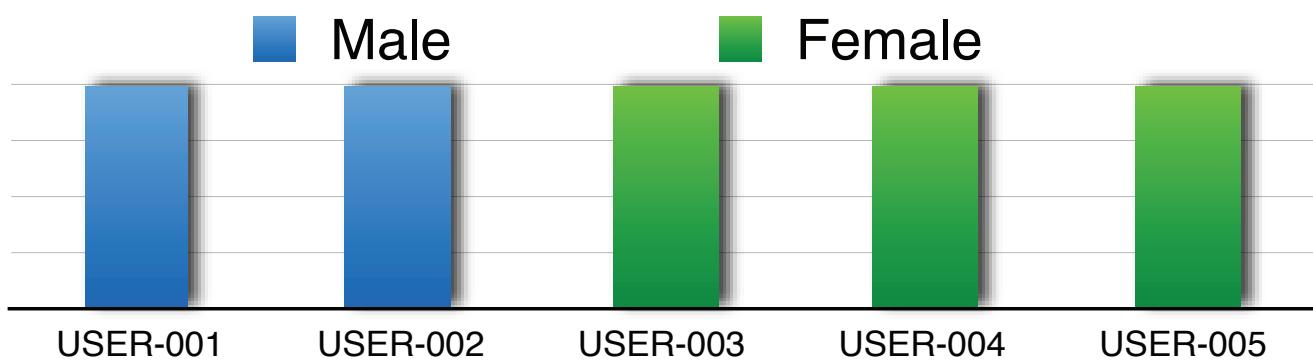


This table and graph represent the **age distribution** for the Food Budget user testing. In the table, '1' represents that the participant checked that box on the pre-survey. This directly relates to the graph; The dot is plotted in relation to the participant response.

FOODBUDGET

Phase II: User Data, Pre-survey

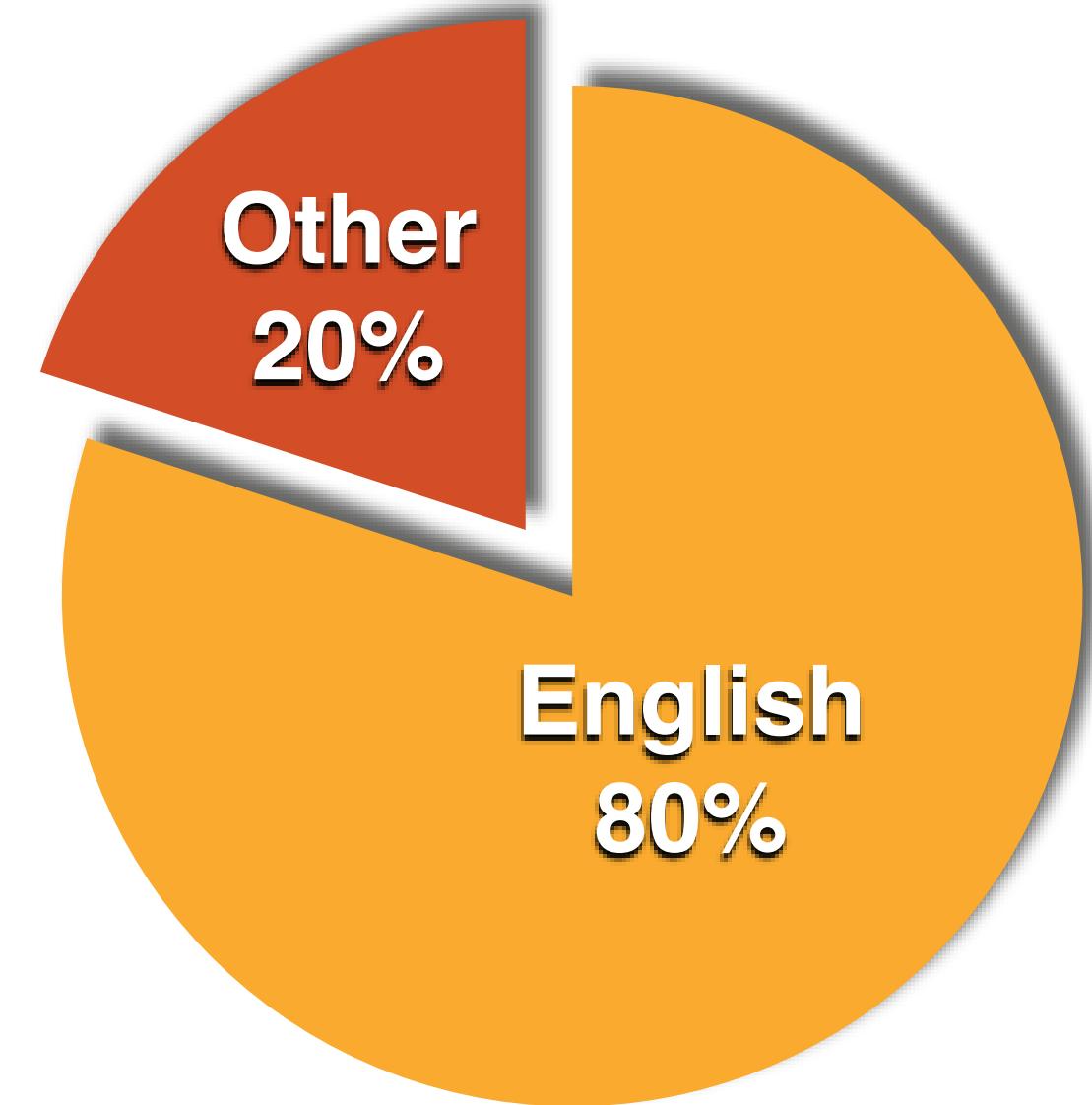
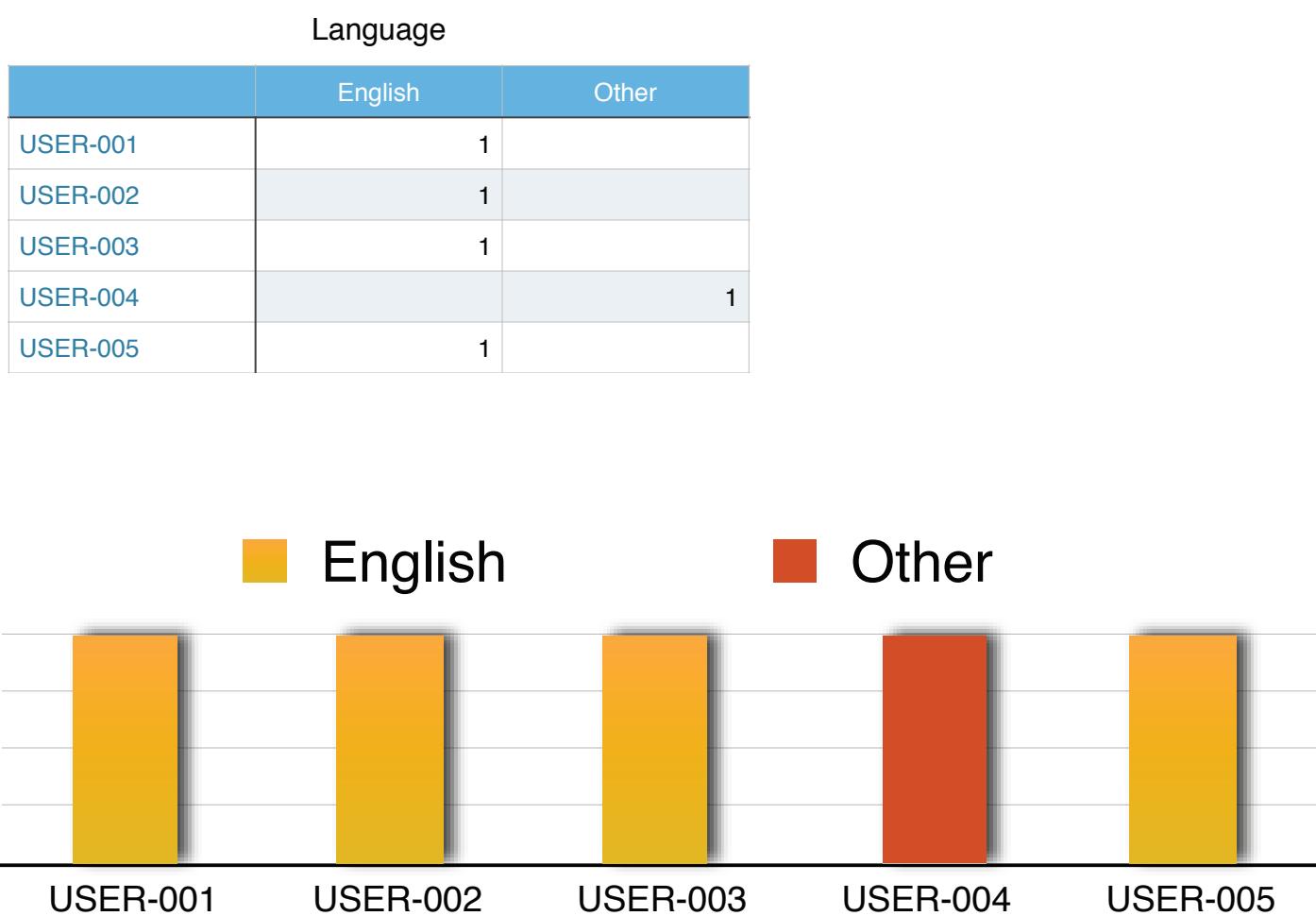
	Male	Female
USER-001	1	
USER-002	1	
USER-003		1
USER-004		1
USER-005		1



This table and graph represent the **gender distribution** for the Food Budget user testing. In the table, '1' represents that the participant checked that box on the pre-survey. This directly relates to the graph; The bars are plotted in relation to the participant response. The pie chart takes the same information and displays the information collected in relation to the overall distribution.

FOODBUDGET

Phase II: User Data, Pre-survey



This table and graph represent the **language distribution** for the Food Budget user testing. In the table, '1' represents that the participant checked that box on the pre-survey. This directly relates to the graph; The bars are plotted in relation to the participant response. The pie chart takes the same information and displays the information collected in relation to the overall distribution.

FOODBUDGET

Phase II: User Data, Pre-survey

Education

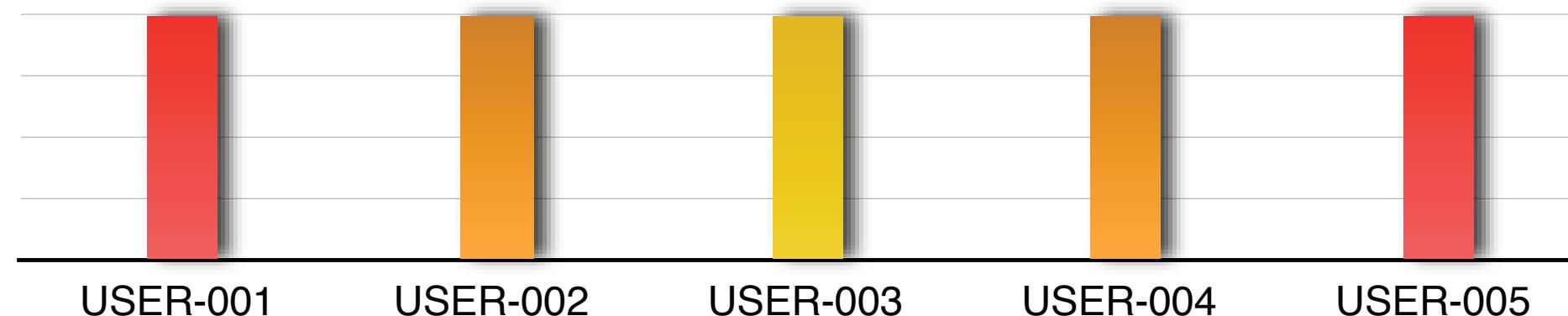
	High School	Some College	College Graduate	Advanced Degree
USER-001		1		
USER-002				1
USER-003			1	
USER-004				1
USER-005		1		

■ High School

■ College Graduate

■ Some College

■ Advanced Degree



This table and graph represent the **education distribution** for the Food Budget user testing. In the table, '1' represents that the participant checked that box on the pre-survey. This directly relates to the graph; The bars are plotted in relation to the participant response.

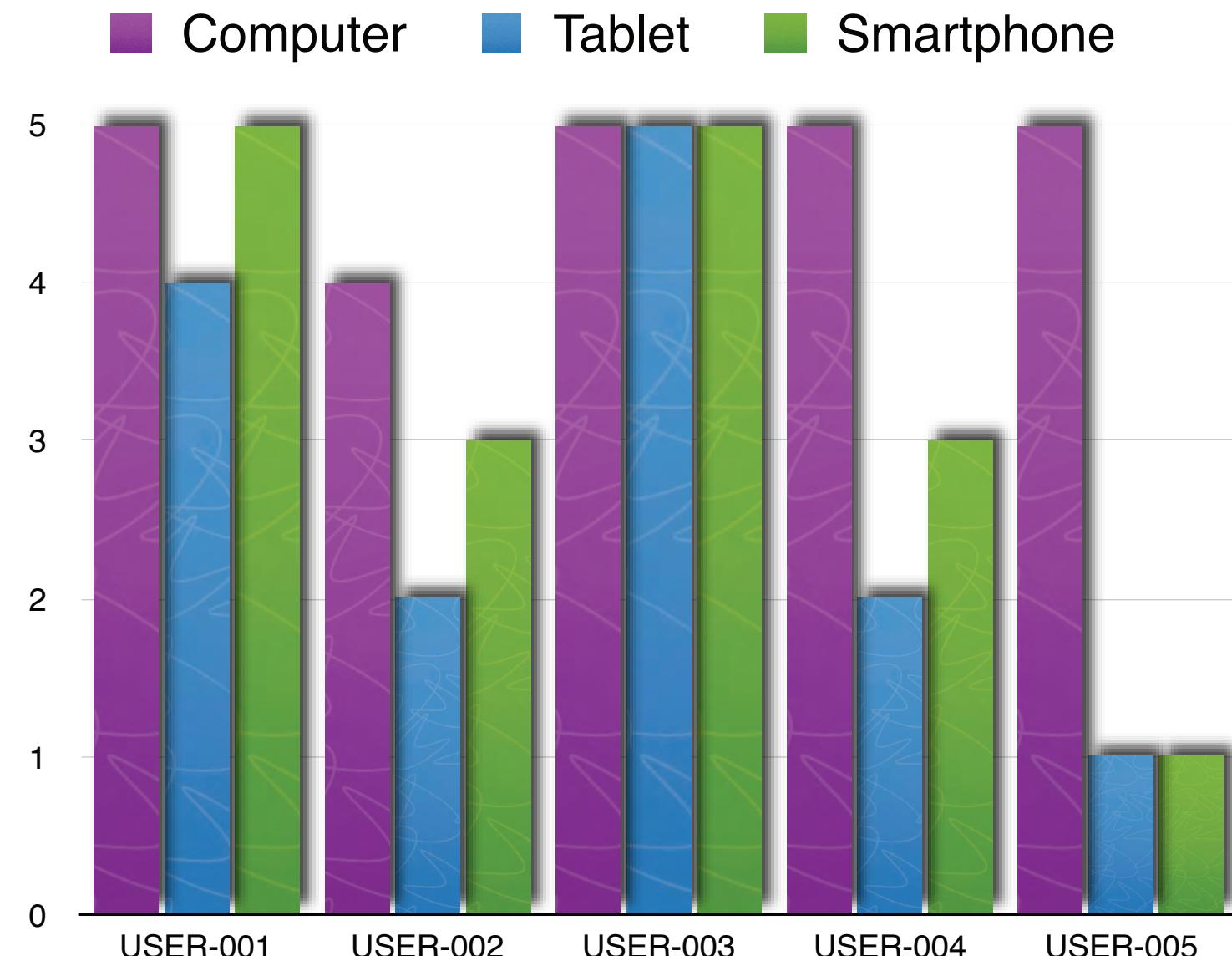
FOODBUDGET

Phase II: User Data, Pre-survey

Comfortable Using...

	Computer	Tablet	Smartphone
USER-001	5	4	5
USER-002	4	2	3
USER-003	5	5	5
USER-004	5	2	3
USER-005	5	1	1
AVERAGE	4.8	2.8	3.4

This table and graph represent the **technological comfort level distribution** for the Food Budget user testing. The number in the table corresponds to the value each participant checked in the pre-survey. This directly relates to the graph; The bars are plotted in relation to the participant response. Participants were more comfortable using stationary computing devices, 96%. Smartphones came in second at 68%, followed by Tablets at 56%.

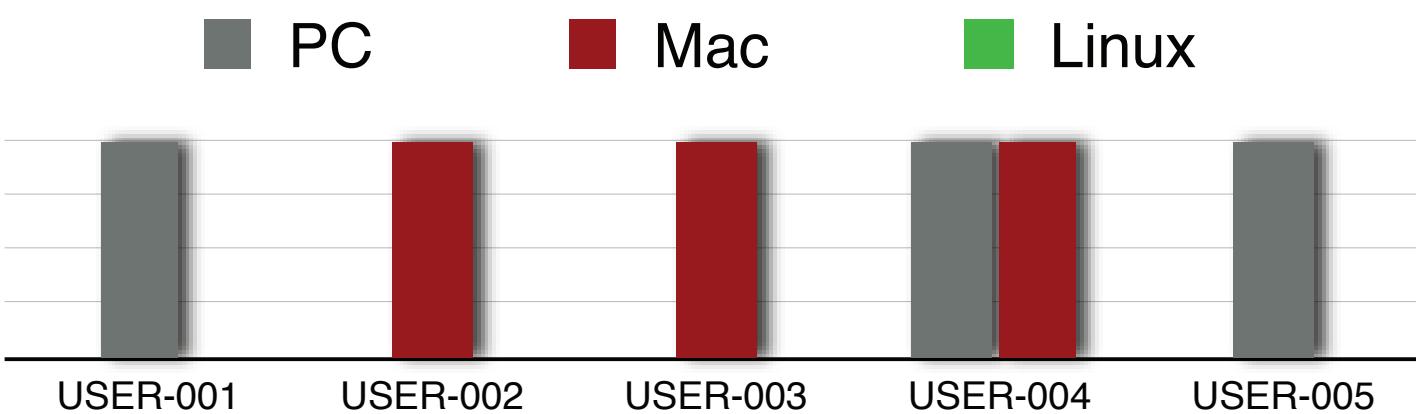


FOODBUDGET

Phase II: User Data, Pre-survey

Computer: Primary Use

	PC	Mac	Linux
USER-001	1		
USER-002		1	
USER-003		1	
USER-004	1	1	
USER-005	1		



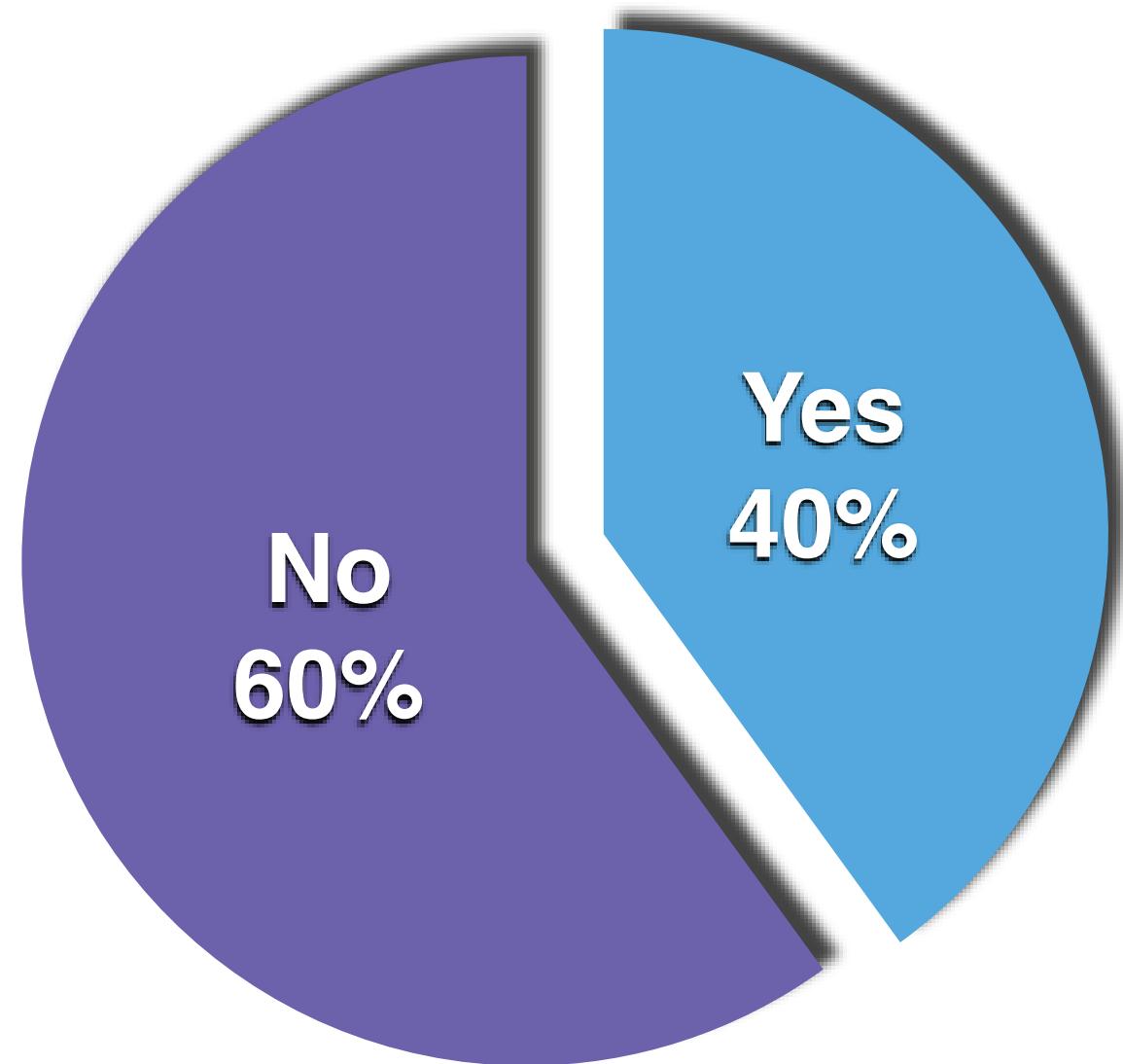
This table and graph represent the **operating system distribution** for the Food Budget user testing. In the table, '1' represents that the participant checked that box on the pre-survey. This directly relates to the graph; The bars are plotted in relation to the participant response. Participants were evenly distributed between Mac and PC. It should be noted that User-004 selected both Mac and PC.

FOODBUDGET

Phase II: User Data, Pre-survey

Currently Use Health & Wellness App?

	Yes	No
USER-001	1	
USER-002		1
USER-003	1	
USER-004		1
USER-005		1
AVERAGE	0.4	0.6

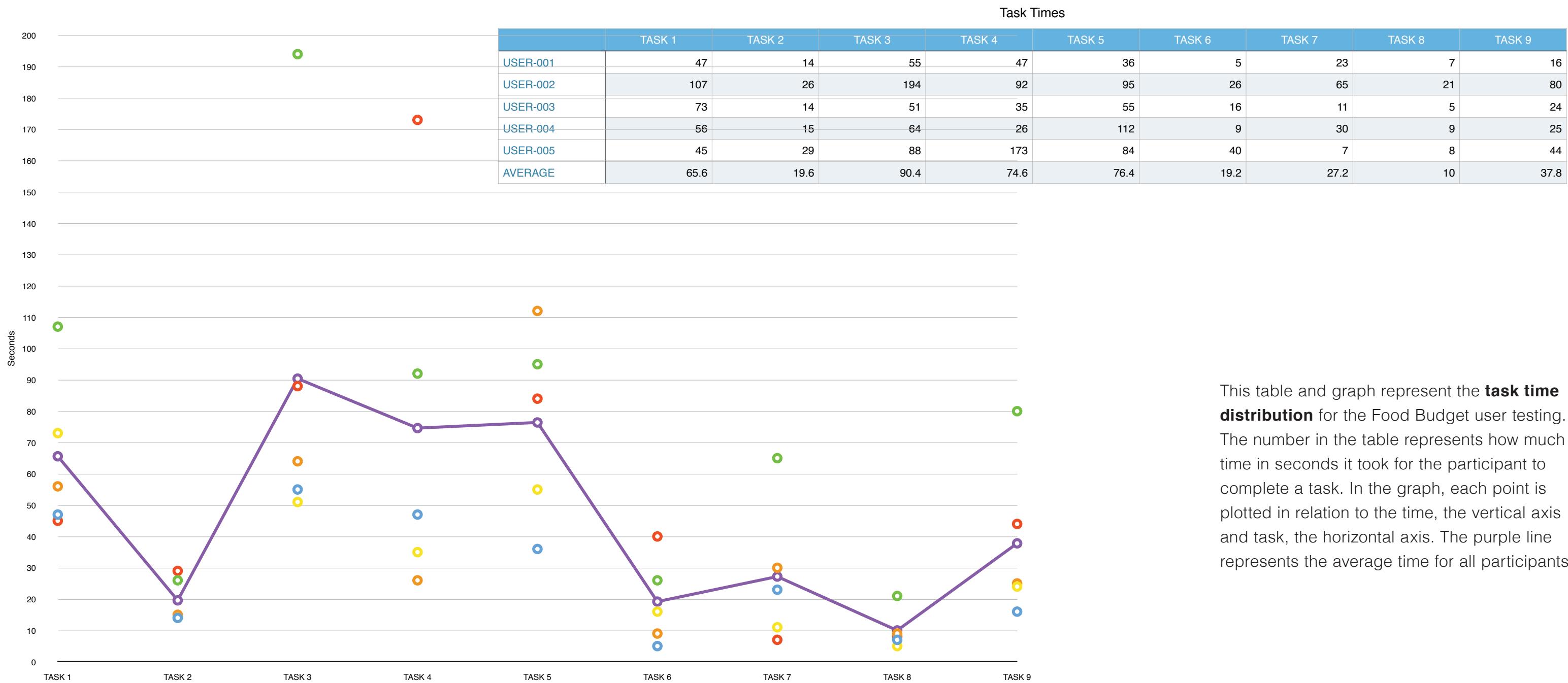


This table and graph represent the **current use of a health & wellness application distribution** for the Food Budget user testing. The number in the table corresponds to the value each participant checked in the pre-survey. This directly relates to the pie chart. More participants did not use a health & wellness app, 3 out of 5.

FOODBUDGET

Phase II: User Data, Pre-survey

● USER-001 ● USER-002 ● USER-003 ● USER-004 ● USER-005 ● AVERAGE



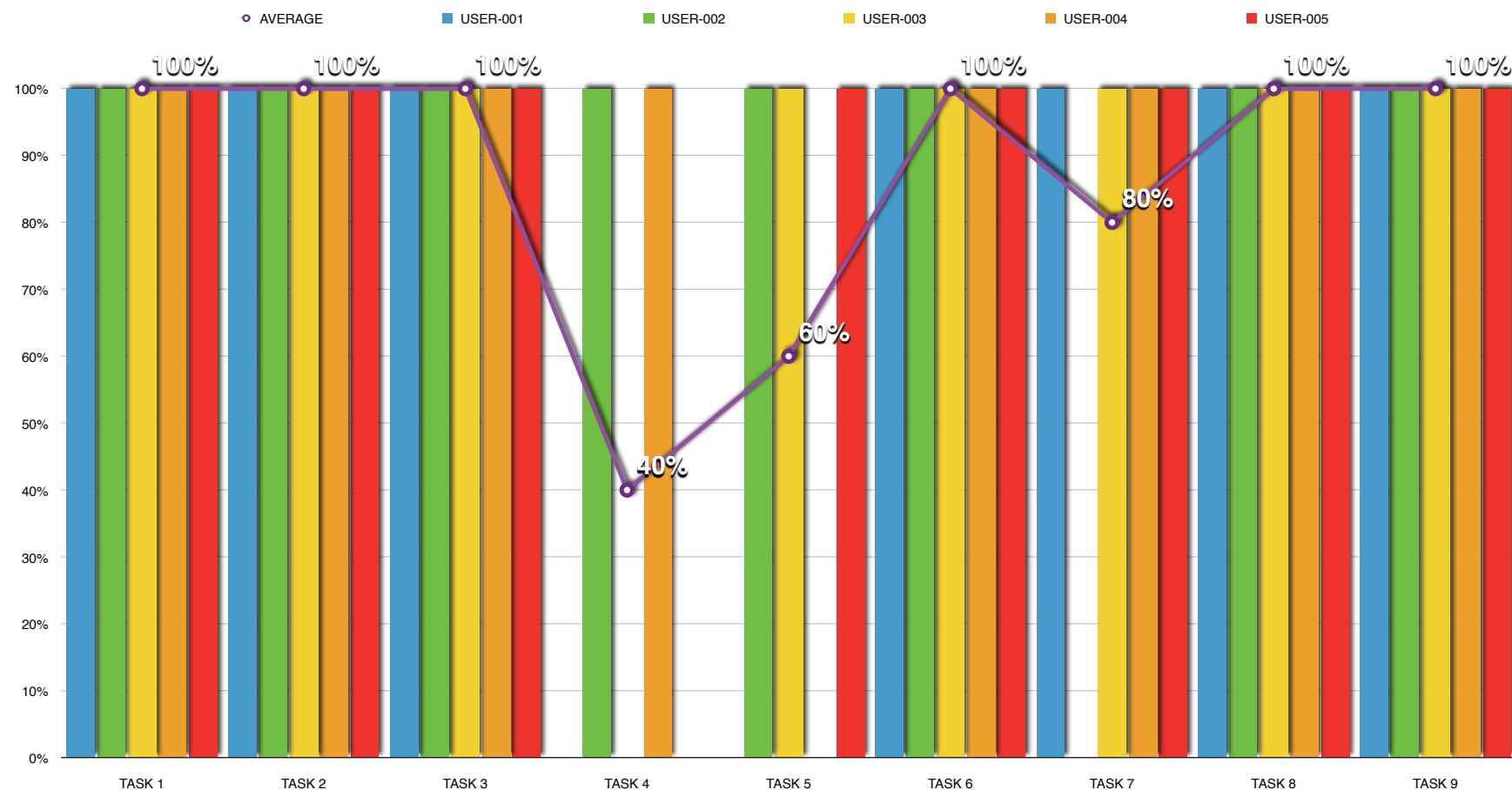
This table and graph represent the **task time distribution** for the Food Budget user testing. The number in the table represents how much time in seconds it took for the participant to complete a task. In the graph, each point is plotted in relation to the time, the vertical axis and task, the horizontal axis. The purple line represents the average time for all participants.

FOODBUDGET

Phase II: User Data, Task List

Task Completion

	TASK 1	TASK 2	TASK 3	TASK 4	TASK 5	TASK 6	TASK 7	TASK 8	TASK 9
AVERAGE	1	1	1	0.4	0.6	1	0.8	1	1
USER-001	1	1	1	0	0	1	1	1	1
USER-002	1	1	1	1	1	1	1	0	1
USER-003	1	1	1	0	1	1	1	1	1
USER-004	1	1	1	1	0	1	1	1	1
USER-005	1	1	1	1	0	1	1	1	1



This table and graph represent the **task completion distribution** for the Food Budget user testing. In the table, '1' represents that the participant completed that task. This directly relates to the graph; In the graph, each bar is plotted in relation to completion percentage, the vertical axis and task, the horizontal axis. The purple line represents the average completion for all participants in all tasks. It should be noted that completion is either 100%, the participant completed the task -or- 0% the participant do not complete the task. Tasks that were not completed were all failed tasks.

FOODBUDGET

Phase II: User Data, Task List

The following nine pages are task charts. These charts were created prior to running my user tests. Each page represents one task participants were asked to perform in the Food Budget user testing. The top section of the chart represents the expected path for each task. The bottom, completed after user testing, represents the actual path participants took in testing. The bottom section also notes errors (failed tasks) and, on Task 5, something interesting that all participants attempted in the application that was not considered before. The lower section of the chart also provides statistical information, such as Completion Rate, Average Time to complete a task and Best Time to complete a task. All tasks were completed as expected.

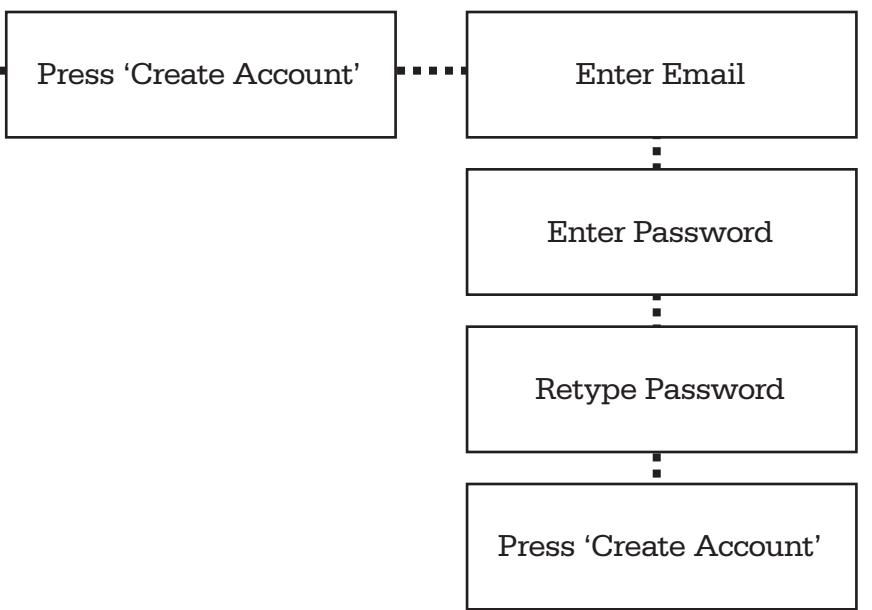
FOODBUDGET

Phase II: Task Charts, Expected/Average

TASK I: Create a Food Budget Account using any email and password -

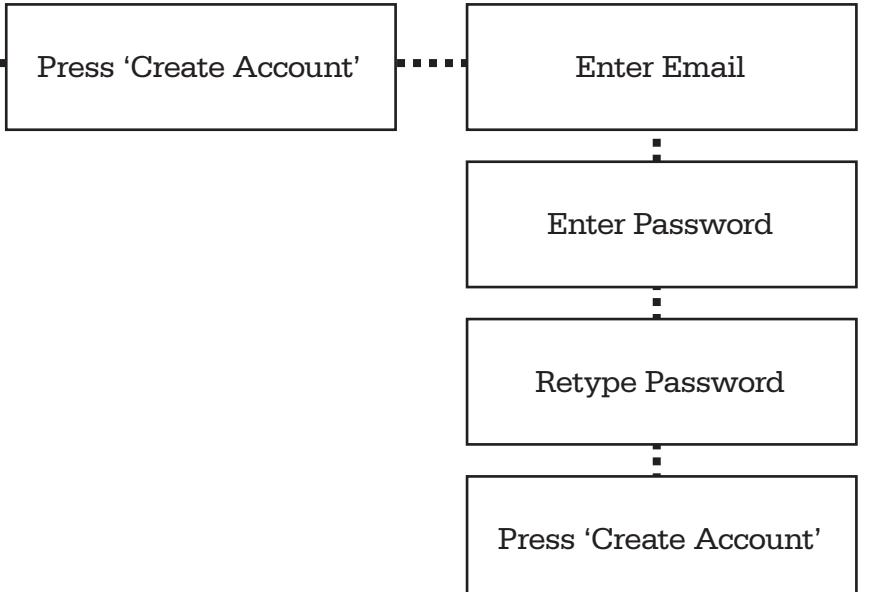
NOTE: No data is stored in the user test

Expected Path



2 Clicks

Actual Path - Averaged



2 Clicks

**100%
Completion
Rate**

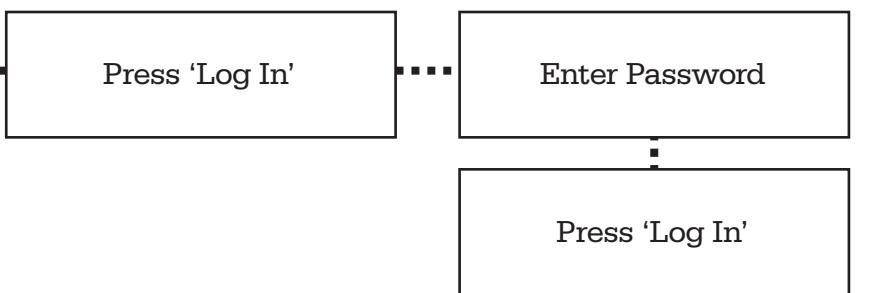
**Average
Time:
65.6 sec**

**Best
Time:
45 sec**



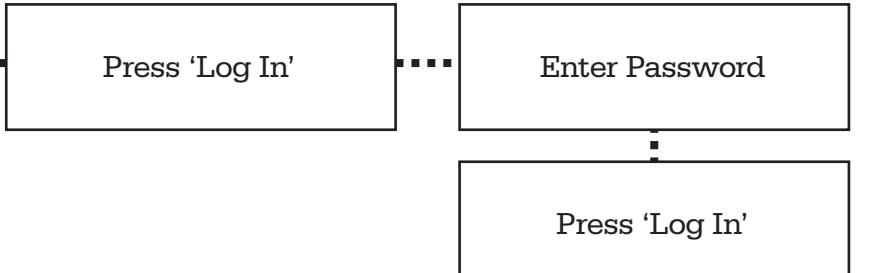
TASK 2: Log in to Food Budget using the email and password you set in task No. I

Expected Path



2 Clicks

Actual Path - Averaged



2 Clicks

**100%
Completion
Rate**

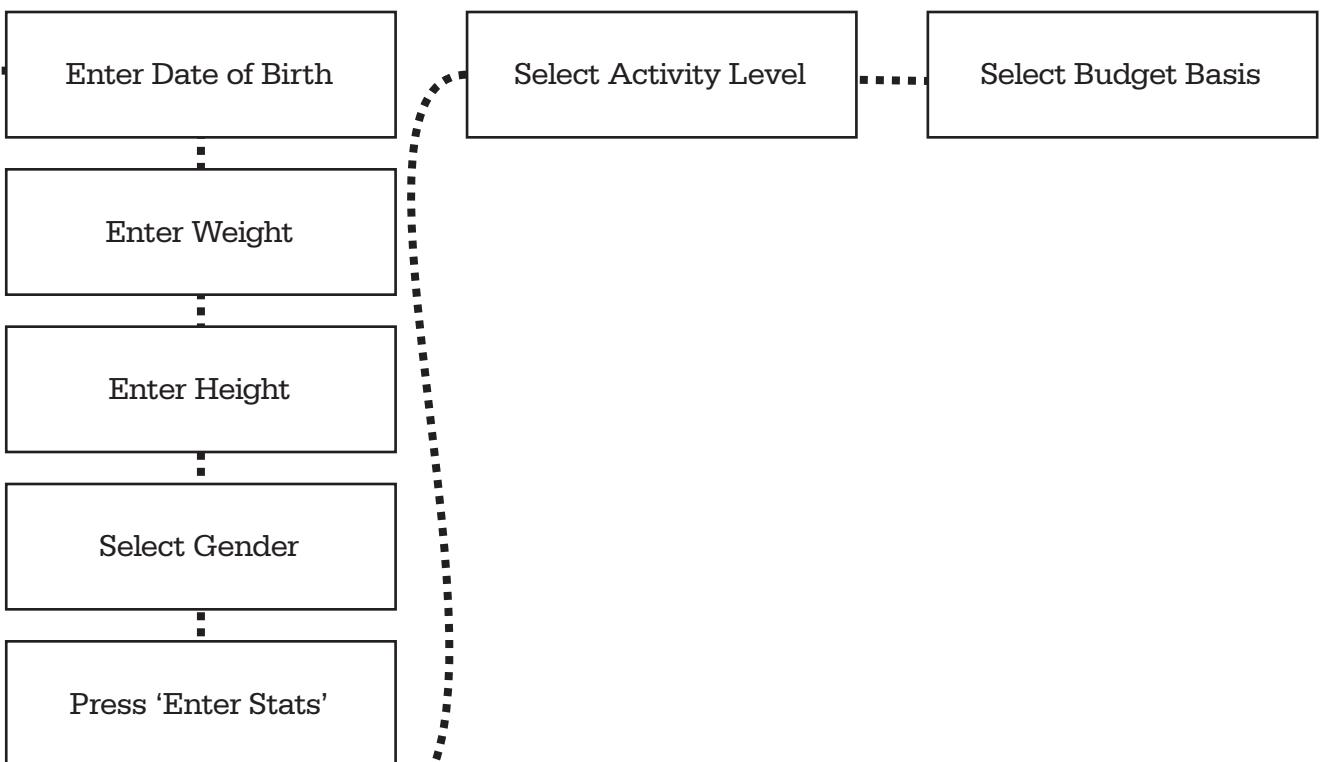
**Average
Time:
19.6 sec**

**Best
Time:
14 sec**



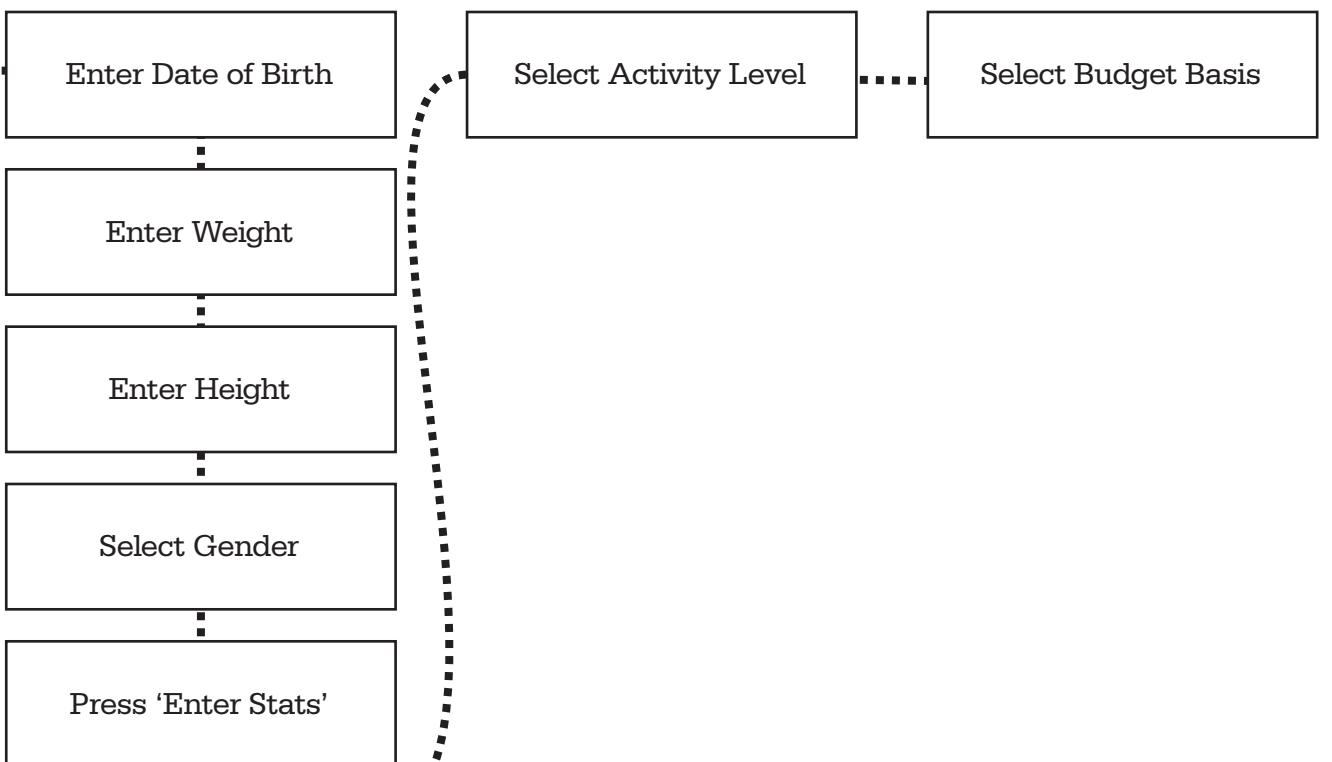
TASK 3: Create a budget based on maintaining your weight

Expected Path



3 Clicks

Actual Path - Averaged



3 Clicks

**100%
Completion
Rate**

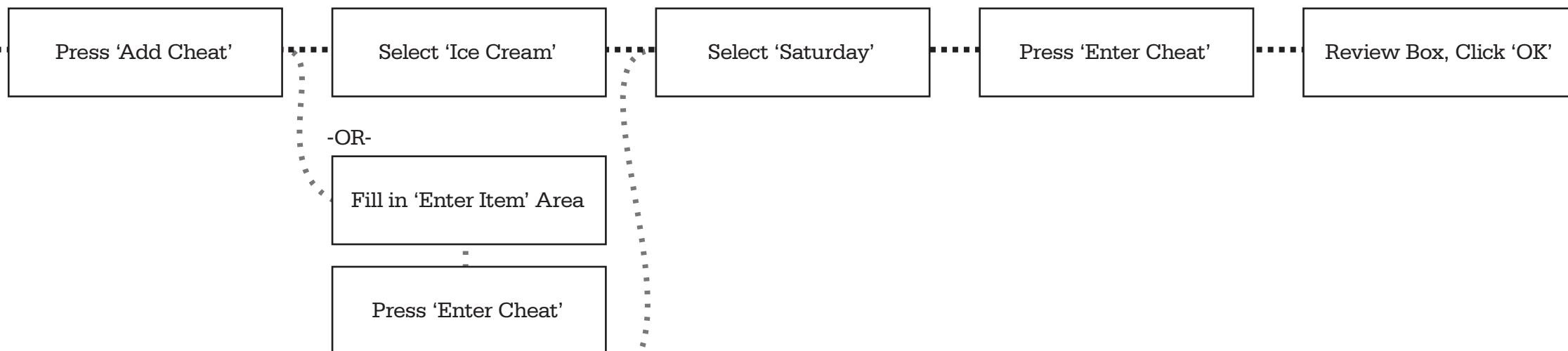
**Average
Time:
90.4 sec**

**Best
Time:
51 sec**



TASK 4: Plan to have 2 scoops of Ice Cream this Saturday

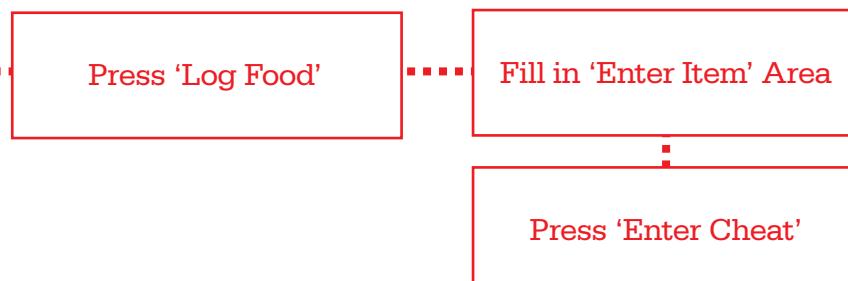
Expected Path



Actual Path - Averaged



Three Users (User-001, -003, -005):



**40%
Completion
Rate**

**Average
Time:
74.6 sec**

**Best
Time:
26 sec**



TASK 5: View Yesterday's Budget Overview

Expected Path

1 Click

Swipe L or Click L arrow
in Overview area
of Main Screen

Actual Path - Averaged

1 Click

Swipe L or Click L arrow
in Overview area
of Main Screen

ALL Users (User-001, -002, -003, -004, -005):

Wanted to click on
the prior day in
the weekly overview

One User (User-004):

Didn't find the
swipes/buttons

One User (User-001):

Failed to click the
'Overview' button

60%
Completion
Rate

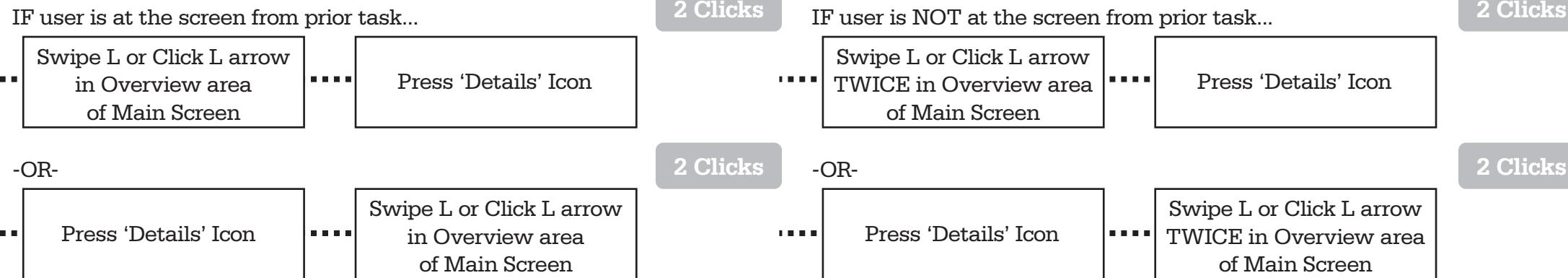
Average
Time:
76.4 sec

Best
Time:
36 sec

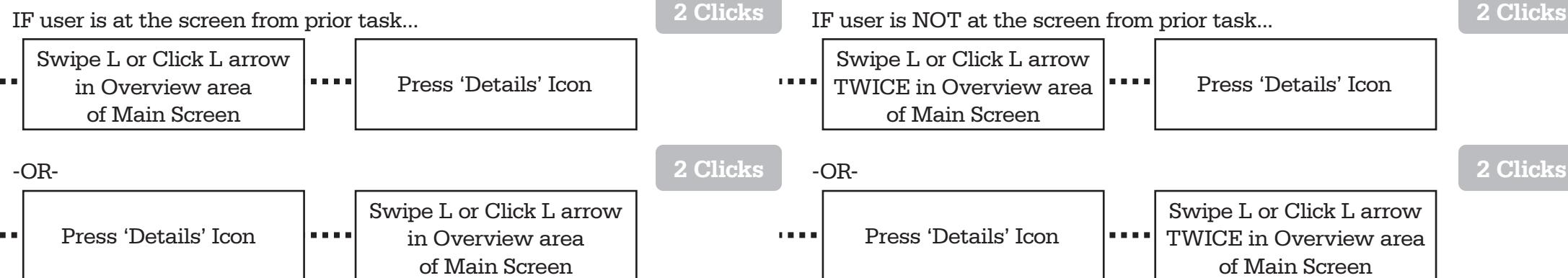


TASK 6: View the Budget details for two days ago, October 1st

Expected Path



Actual Path - Averaged



**100%
Completion
Rate**

**Average
Time:
19.2 sec**

**Best
Time:
5 sec**



TASK 7: View Past Budget for the last 2 Weeks - *Past data has been simulated*

Expected Path

1 Click

Swipe L or Click L arrow
twice in Graph area
of Main Screen

Actual Path - Averaged

1 Click

Swipe L or Click L arrow
twice in Graph area
of Main Screen

One User (User-002):

Did not find

80%
Completion
Rate

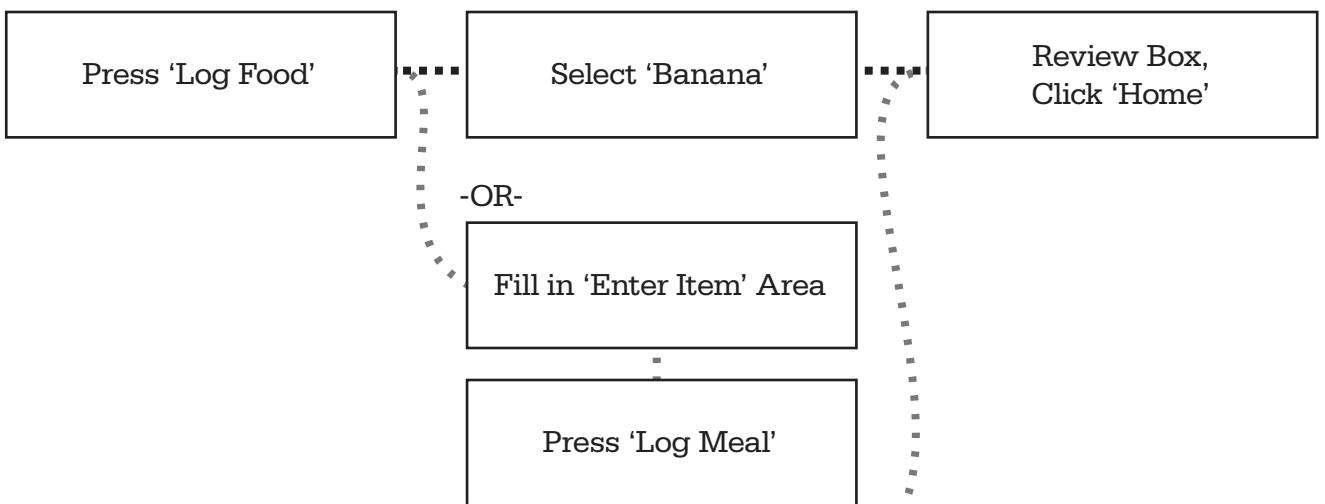
Average
Time:
27.2 sec

Best
Time:
7 sec



TASK 8: Log that you ate a Banana

Expected Path



3 Clicks

Actual Path - Averaged



3 Clicks

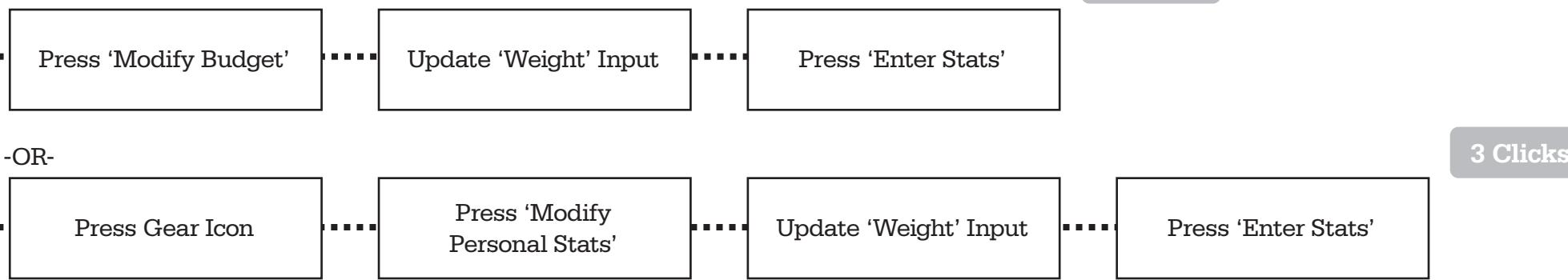
**100%
Completion
Rate**

**Average
Time:
10 sec**

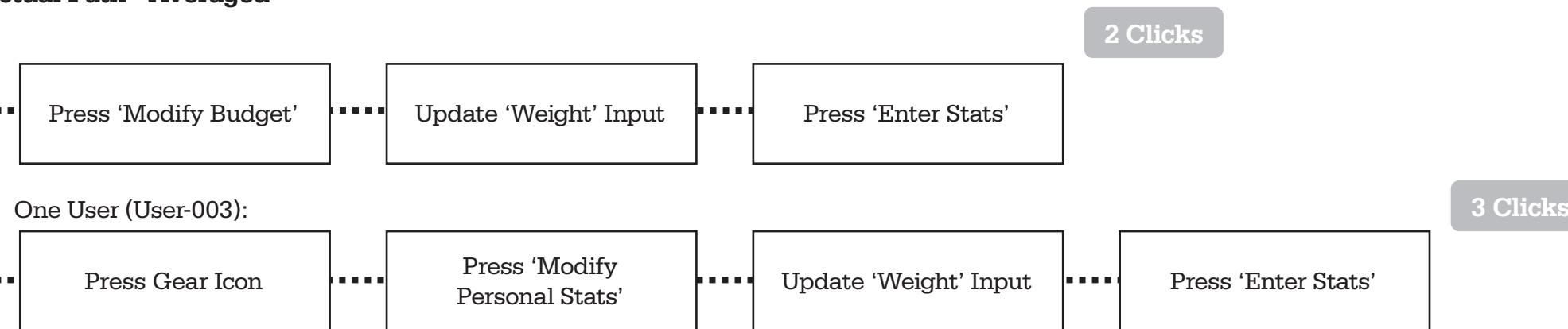
**Best
Time:
5 sec**

TASK 9: You have lost weight by eating right. Update your weight in the application

Expected Path



Actual Path - Averaged



**100%
Completion
Rate**

**Average
Time:
37.8 sec**

**Best
Time:
16 sec**

	1	2	3	4	5	6	7
	Q1 Usability						
	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
Q1	I find the display easy to learn to operate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q2	My interaction with the display is clear	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q3	My interaction with the display is understandable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q4	I find the display easy to navigate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q5	I find the display easy to use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q6	The display has an attractive appearance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q7	The display is appropriate to the type of site	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q8	The display conveys a sense of competency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q9	The display creates a positive experience for me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q2 Information Quality

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
	Q2 Information Quality						
Q10	Provides accurate information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q11	Provides believable information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q12	Provides timely information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q13	Provides relevant information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q14	Provides easy to understand information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q15	Provides information at the right level of detail	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q16	Presents the information in an appropriate format	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Q3 Interaction Quality						
Q17	Has a good reputation	<input type="radio"/>					
Q18	It feels safe to use this display	<input type="radio"/>					
Q19	My personal information feels secure	<input type="radio"/>					
Q20	Creates a sense of personalization	<input type="radio"/>					
Q21	Conveys a sense of community	<input type="radio"/>					
Q22	Makes it easy to communicate with the display	<input type="radio"/>					
Q23	I feel confident that information will be delivered as promised	<input type="radio"/>					

To capture the data from the **participant Post-Survey Q1-Q23**, I assigned question numbers (Q#) to each of the questions and a 1 through 7 value to each response (for the first 23 questions). The table with the entered values is on the following page, broken into two tables for readability.

FOODBUDGET

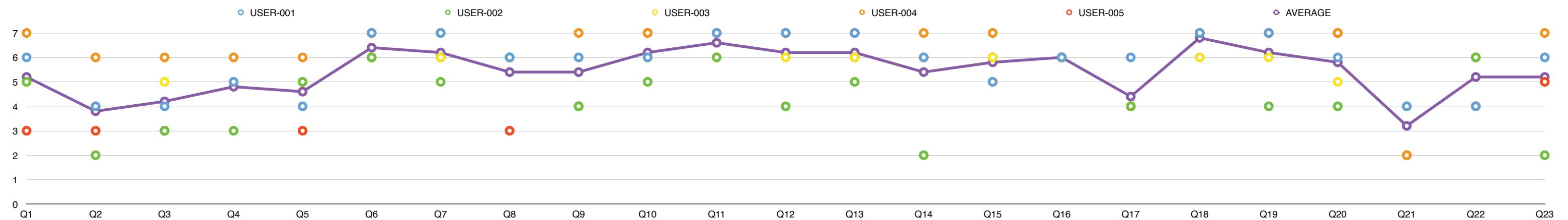
Phase II: Post Survey, 1 – 23

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
USER-001	6	4	4	5	4	7	7	6	6	6	7	7
USER-002	5	2	3	3	5	6	5	6	4	5	6	4
USER-003	5	4	5	5	5	6	6	6	6	6	6	6
USER-004	7	6	6	6	6	7	7	6	7	7	7	7
USER-005	3	3	3	5	3	6	6	3	4	7	7	7
AVERAGE	5.2	3.8	4.2	4.8	4.6	6.4	6.2	5.4	5.4	6.2	6.6	6.2

	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23
USER-001	7	6	5	6	6	7	7	6	4	4	6
USER-002	5	2	5	6	4	7	4	4	4	6	2
USER-003	6	6	6	6	4	6	6	5	4	6	6
USER-004	6	7	7	6	4	7	7	7	2	6	7
USER-005	7	6	6	6	4	7	7	7	2	4	5
AVERAGE	6.2	5.4	5.8	6	4.4	6.8	6.2	5.8	3.2	5.2	5.2

FOOD BUDGET

Phase II: Post Survey, 1 – 23



This is the data chart for the **participant Post-Survey Q1-Q23**. For readability, the table is on the previous page. Question values (1 to 7) are on the vertical axis and the questions are on the horizontal axis. Each point is plotted for each user response. Where there is overlap, please refer to the table on the prior page.

FOODBUDGET

Phase II: Post Survey, 1 – 23

	1	2	3	4	5
	1 (negative)	2	3	4	5 (positive)
Q24	<input type="radio"/>				

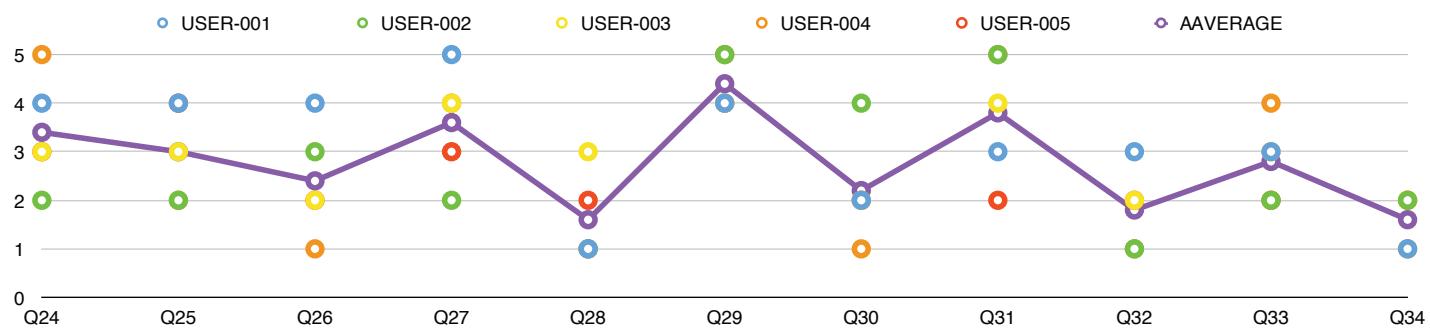
	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Q25	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q26	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q27	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q28	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q29	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q30	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q31	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q32	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q33	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q34	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

To capture the data from the **participant Post-Survey Q24-Q34**, I assigned question numbers (Q#) to each of the questions and a 1 through 5 value to each response (for questions 24 through 34). The table and chart with the entered values are on the following page.

FOODBUDGET

Phase II: Post Survey, 24 – 34

	Q24	Q25	Q26	Q27	Q28	Q29	Q30	Q31	Q32	Q33	Q34
USER-001	4	4	4	5	1	4	2	3	3	3	1
USER-002	2	2	3	2	1	5	4	5	1	2	2
USER-003	3	3	2	4	3	4	2	4	2	3	2
USER-004	5	2	1	4	1	5	1	5	1	4	1
USER-005	3	4	2	3	2	4	2	2	2	2	2
AVERAGE	3.4	3	2.4	3.6	1.6	4.4	2.2	3.8	1.8	2.8	1.6



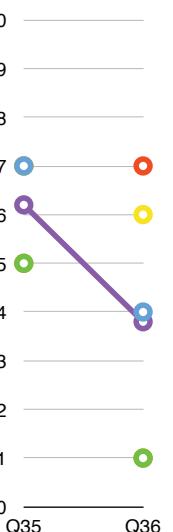
This is the table and data chart for the **participant Post-Survey Q24-Q34**. Question values (1 to 5) are on the vertical axis and the questions are on the horizontal axis. Each point is plotted for each user response. Where there is overlap, please refer to the table on the prior page.

FOODBUDGET

Phase II: Post Survey, 24 – 34

	1	2	3	4	5	6	7	8	9	10
Q6 How likely is it that you would...1 being not at all likely, 10 being the most likely										
	○	○	○	○	○	○	○	○	○	○
	○	○	○	○	○	○	○	○	○	○

- USER-001
- USER-002
- USER-003
- USER-004
- USER-005
- AVERAGE



	Q35	Q36
USER-001	7	4
USER-002	5	1
USER-003	7	6
USER-004	5	1
USER-005	7	7
AVERAGE	6.2	3.8

To capture the data from the **participant Post-Survey Q35-Q36**, I assigned question numbers (Q#) to each of the questions and a 1 through 10 value to each response (for questions 35 through 36).

FOODBUDGET

Phase II: Post Survey, 35 – 36

User-001 Feedback:

Pro: Well laid out. Nice graphics. Easy to read.

Con: Desires a more customized budget. Adding foods would be cumbersome until a library is built up.

User-002 Feedback:

Pro: Fairly simple to use. Not a tough learning curve.

Con: Input unresponsive at times. Took a while to use - their typical app usage is under 2 minutes.

User-003 Feedback:

Pro: Not a steep learning curve, didn't know what they were doing at first, but picked it up quickly.

Con:

User-004 Feedback:

Pro: App was fun and pretty. Felt like playing with something. Easy to use - took a few seconds to figure out.

Con: Unless it does something new, they would get bored of using app after a while. Needs a 'kick'.

User-005 Feedback:

Pro: Like the ability to reviewing and planning intake. "Helps plan more of what you are eating for future meals." "If I got the hang of it I would use it." Did not feel that it was difficult. Not complicated enough to need help, but did need time to play with the app to figure it out.

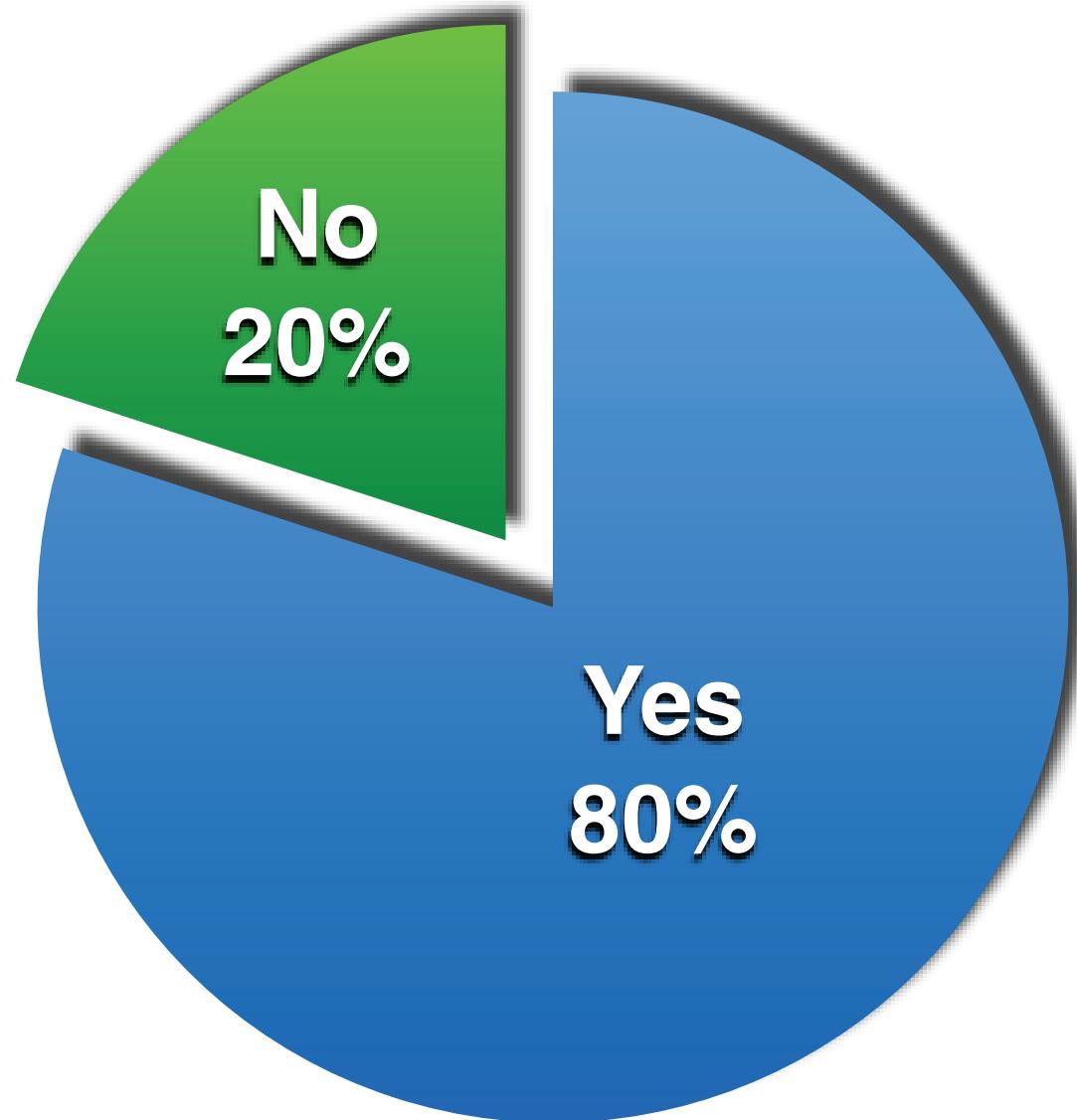
Con: Didn't equate 'ice cream' to cheating. Could be more intuitive, but would get easier with more use.

FOODBUDGET

Phase II: Qualitative Data

Would You Use This App in Your Everyday Life?

	Yes	No
USER-001	1	
USER-002		1
USER-003	1	
USER-004	1	
USER-005	1	
AVERAGE	0.8	0.2



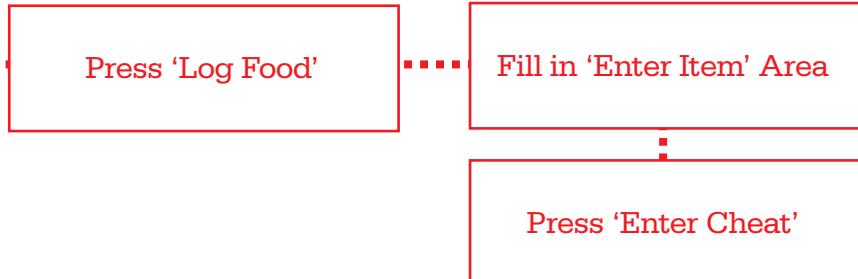
This table and graph represent the post interview question, **Would you use this app in your everyday life?** for the Food Budget user testing. The number in the table corresponds to the answer given by each participant; '1' for a positive response, nothing entered for a negative response. This directly relates to the pie chart. All but one of the participants said they would use this app if made available to them in their everyday life.

FOODBUDGET

Phase II: Qualitative Data

Task 4

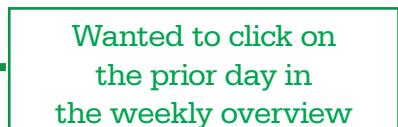
Three Users (User-001, -003, -005):



After my user testing, I feel that my system is effective and productive. Users did experience issues with Task 4, Task 5 and Task 7. I feel that each of these errors could have been/can be resolved by adding in a user help system. I feel that in the user testing, users did not have enough time to familiarize themselves with the system before being asked to interact with it. While this is contradictory to what user testing provides, I feel that an introductory tutorial/help system would help alleviate these errors.

Task 5

ALL Users (User-001, -002, -003, -004, -005):



One User (User-004):



One User (User-001):



Task 7

One User (User-002):

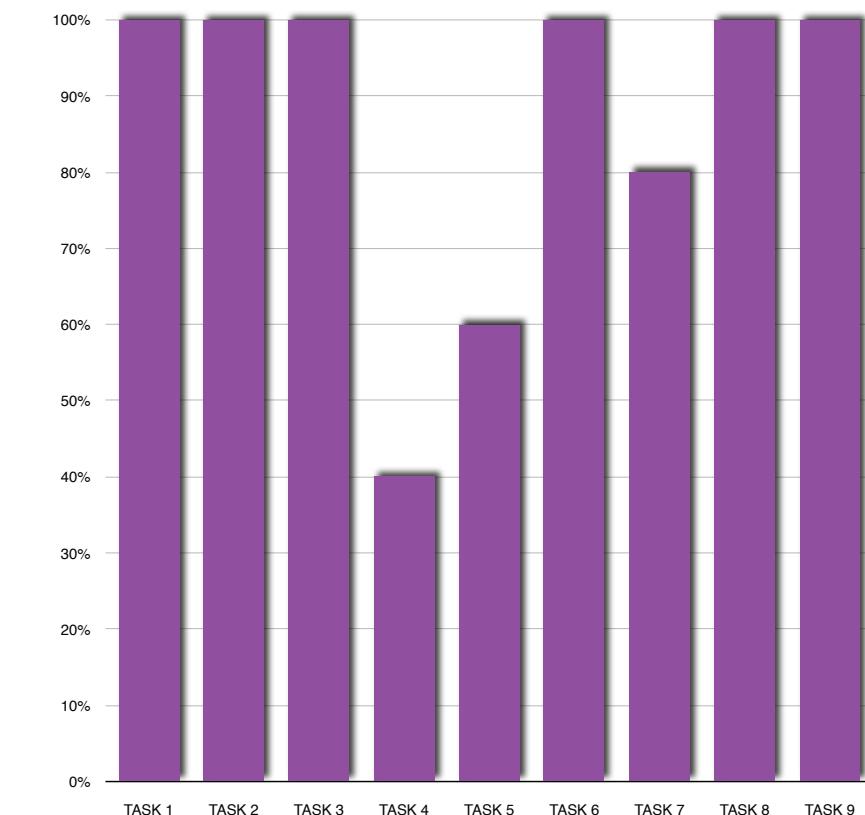


Users were only able to complete Task 4 with 40% reliability. This is a **severe** issue and needs to be addressed. As I stated above, I believe that offering a tutorial system for new users, Task 4, asking users to log that they plan to have two scoops of ice cream on Saturday, essentially, to use the Add a Cheat' section of the app, would offer a more understandable path. The icon itself is a cupcake, associated with sweets. In addition, my SME for this project noted in my Phase I report that, "I think the concept of allowing a caloric budget to factor in what may be deemed as "cheat" foods is very relevant at this time." She goes on to say, "The detractors of this type of thought state we shouldn't be viewing food as "rewards" at all because it starts eliciting some emotional response/component & can lead to difficulty in dieting in the long run."

Task 5 was only a **moderate** issue, coming in at a 60% success rate. I believe that making the arrows more prominent will help to call users attention to them.

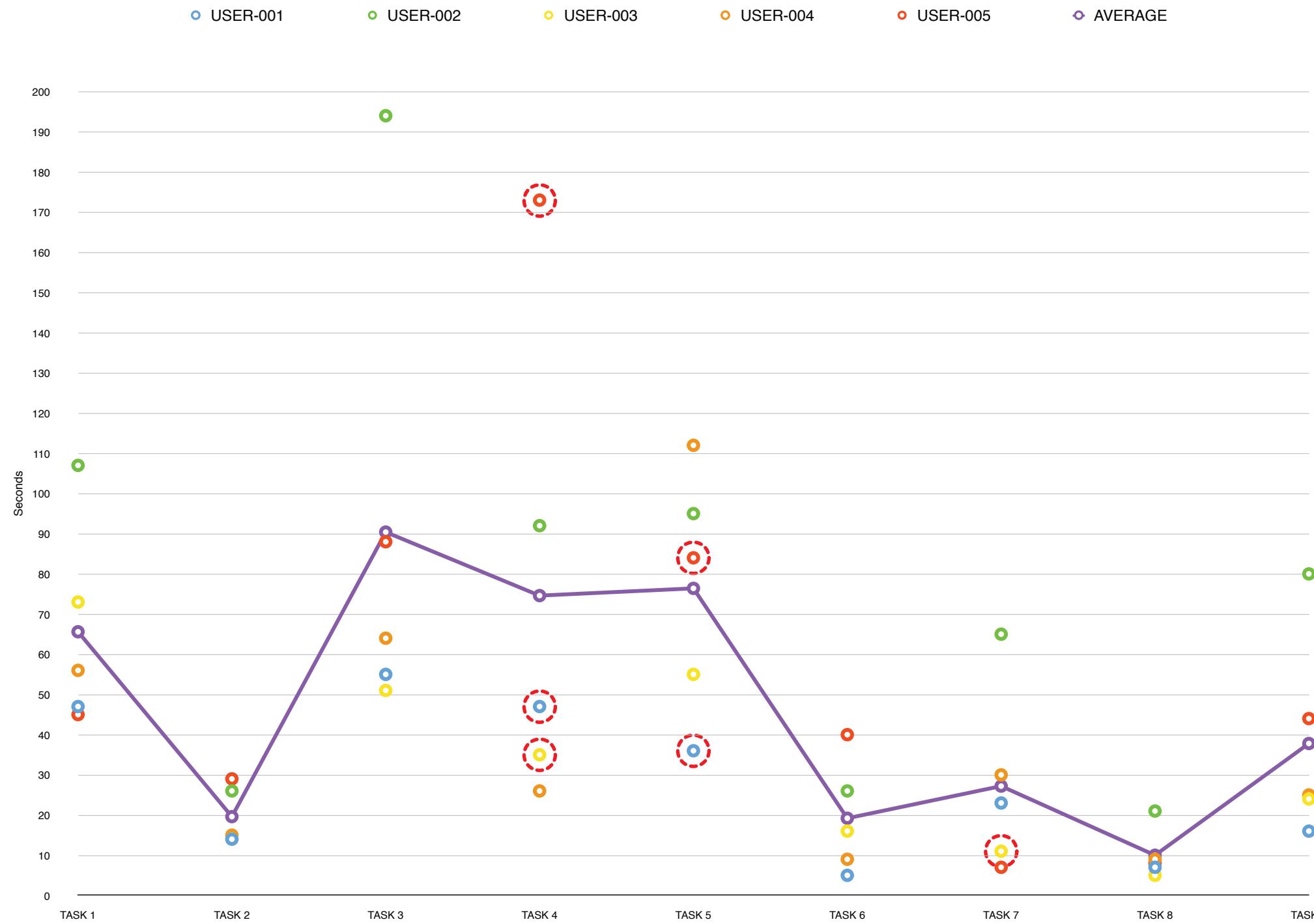
Task 7 is also only a **moderate** issue, with only one user not able to complete the task. This again deals with the arrows that I mentioned above, but also an **irritant** in the form of prototype issues with Just In Mind prototyper. Images do not load fast enough, causing lags in interaction. In addition to that issue, there is also a text box focus issue that cause problems in user testing.

AVERAGE TASK COMPLETION



FOODBUDGET

Phase II: Effectiveness & Rank



Average Task Completion Time and **Average Time on Task** is represented by the purple line. While tasks were failed, they were completed, with the exception of User 3 on Task 7.

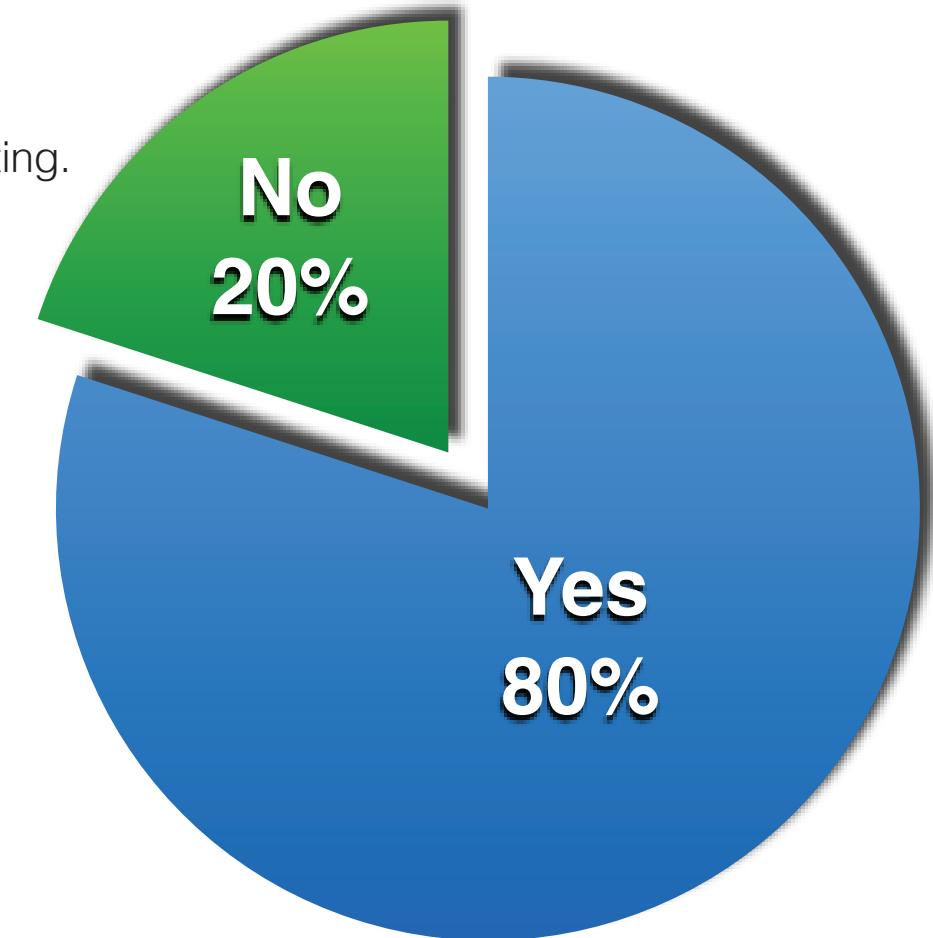
Time to Failure is represented by the red dotted circles, showing where there was a failure.

FOODBUDGET

Phase II: Efficiency

Satisfaction of the system is best represented by the qualitative data that I collected in my user testing.

When asked if the user would use this application in their everyday life, 80% responded positively.



User-001 Feedback:

Pro: Well laid out. Nice graphics. Easy to read.

User-002 Feedback:

Pro: Fairly simple to use. Not a tough learning curve.

User-003 Feedback:

Pro: Not a steep learning curve, didn't know what they were doing at first, but picked it up quickly.

User-004 Feedback:

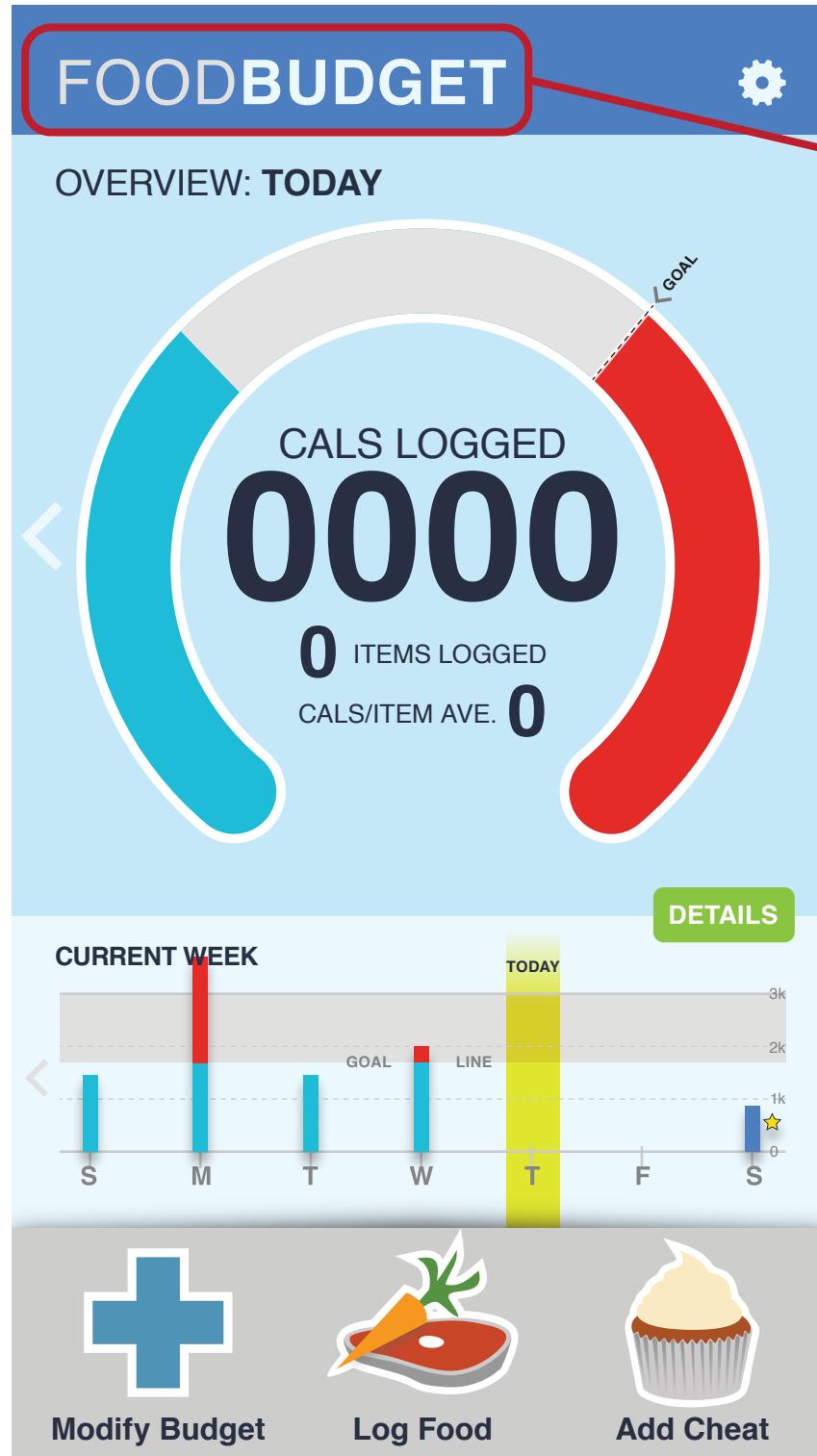
Pro: App was fun and pretty. Felt like playing with something. Easy to use - took a few seconds to figure out.

User-005 Feedback:

Pro: Like the ability to reviewing and planning intake. "Helps plan more of what you are eating for future meals." "If I got the hang of it I would use it." Did not feel that it was difficult. Not complicated enough to need help, but did need time to play with the app to figure it out.

FOODBUDGET

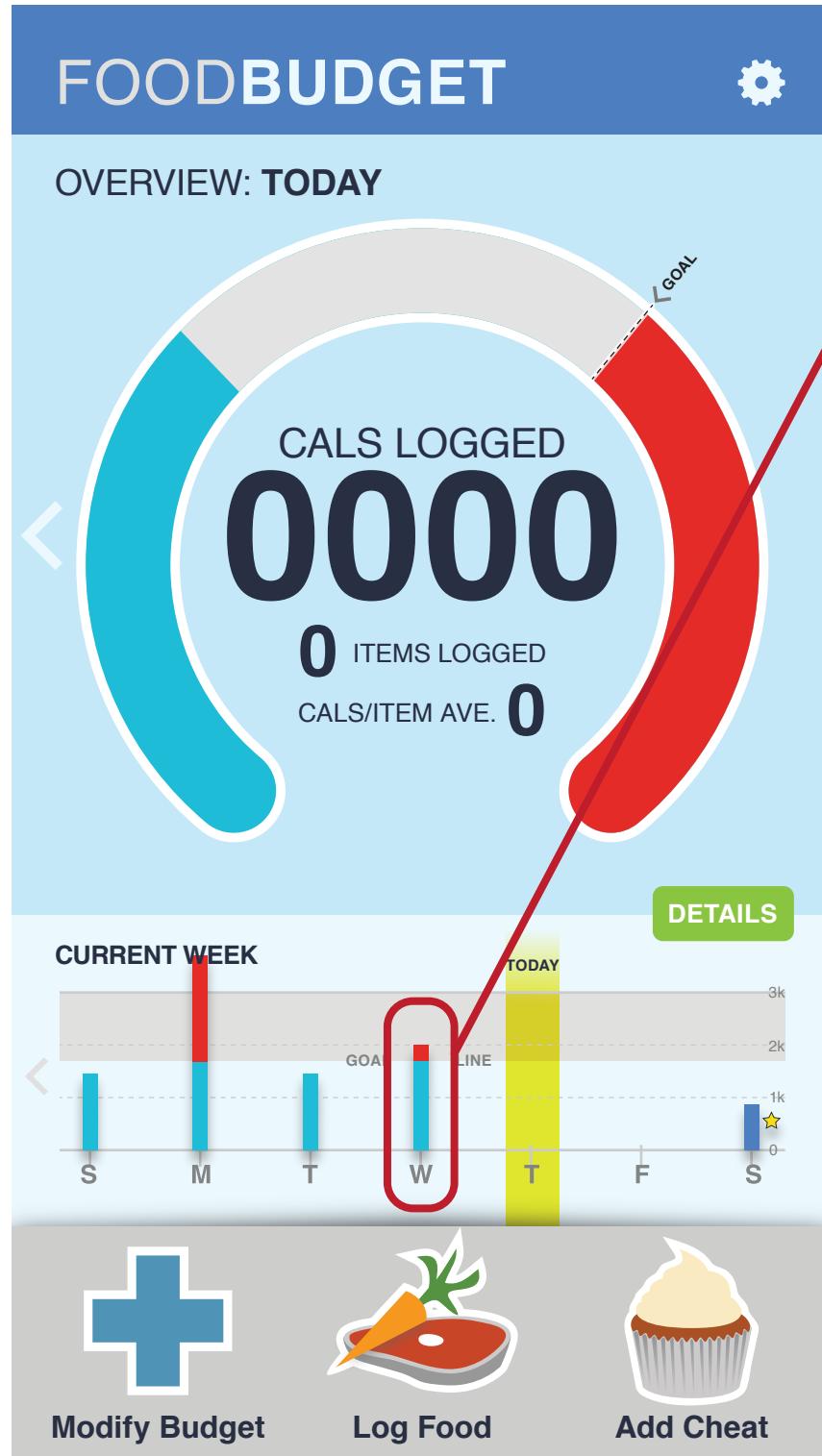
Phase II: Satisfaction



From my one non-native English speaker: "Change the name from 'Food Budget' to 'Caloric Budget' because 'Food' made the user think that we were making a grocery list and financially budgeting for items (also mimicked by Sung earlier in the semester).

FOODBUDGET

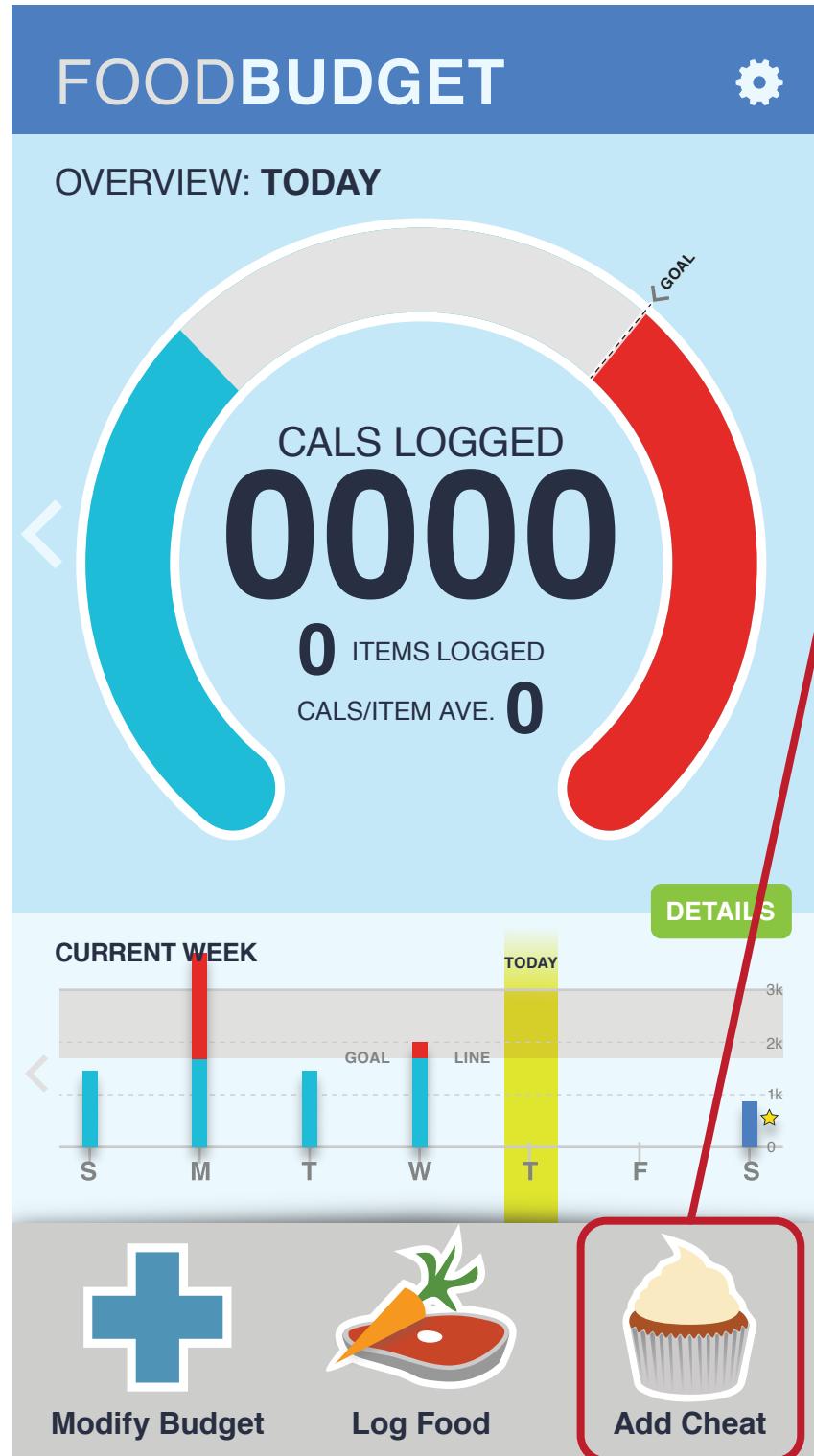
Phase II: System Evaluation



All users wanted to click on the days in the weekly overview to get to that day in the daily overview.

FOODBUDGET

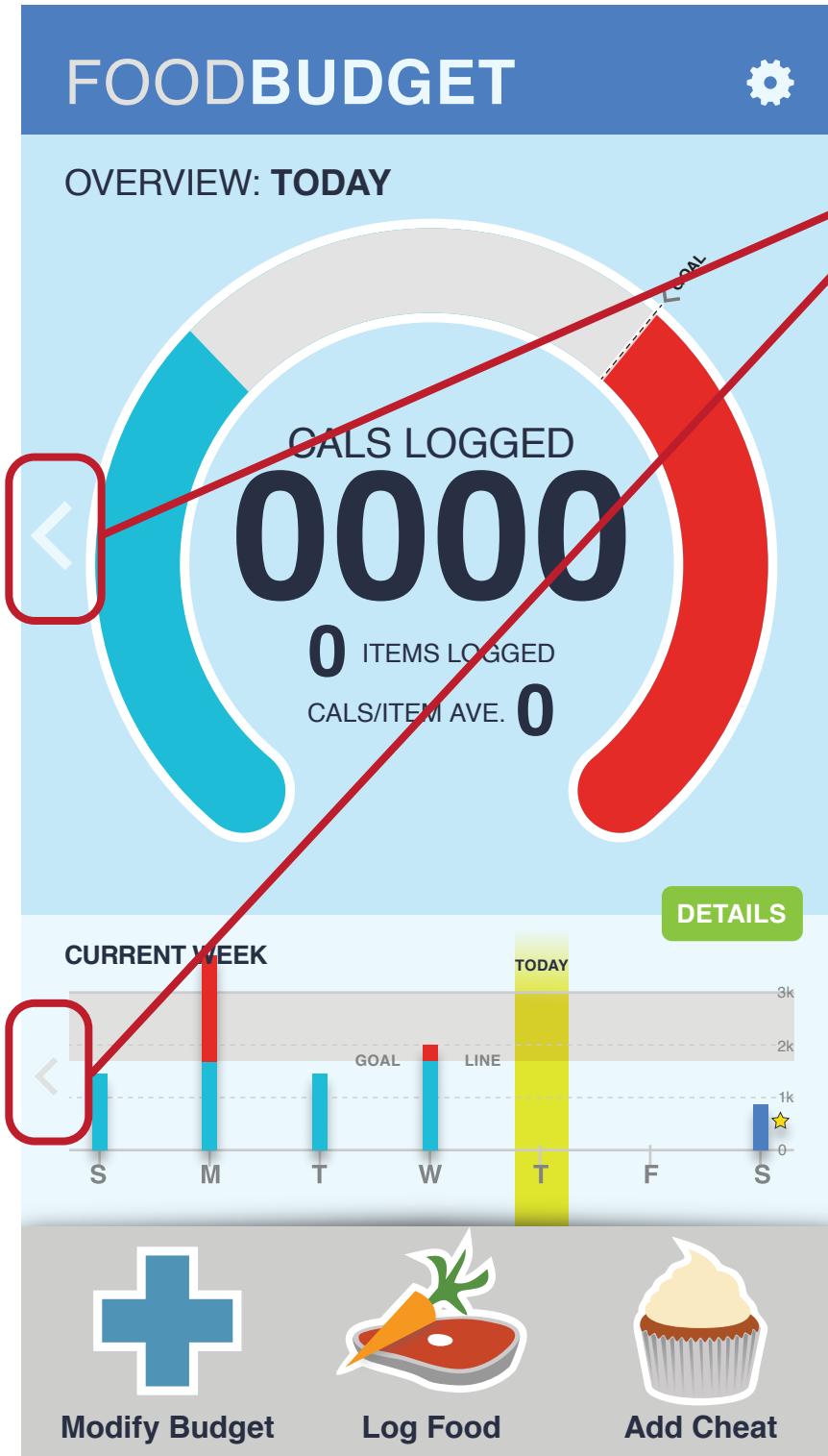
Phase II: System Evaluation



'Add Cheat' was commonly overlooked, but I think that with a tutorial that teaches first time users how to use the system this could be avoided. It is my belief that users did not find the 'Add Cheat' because there was no education or pre-existing information to point them to the purpose for 'Add Cheat'.

FOODBUDGET

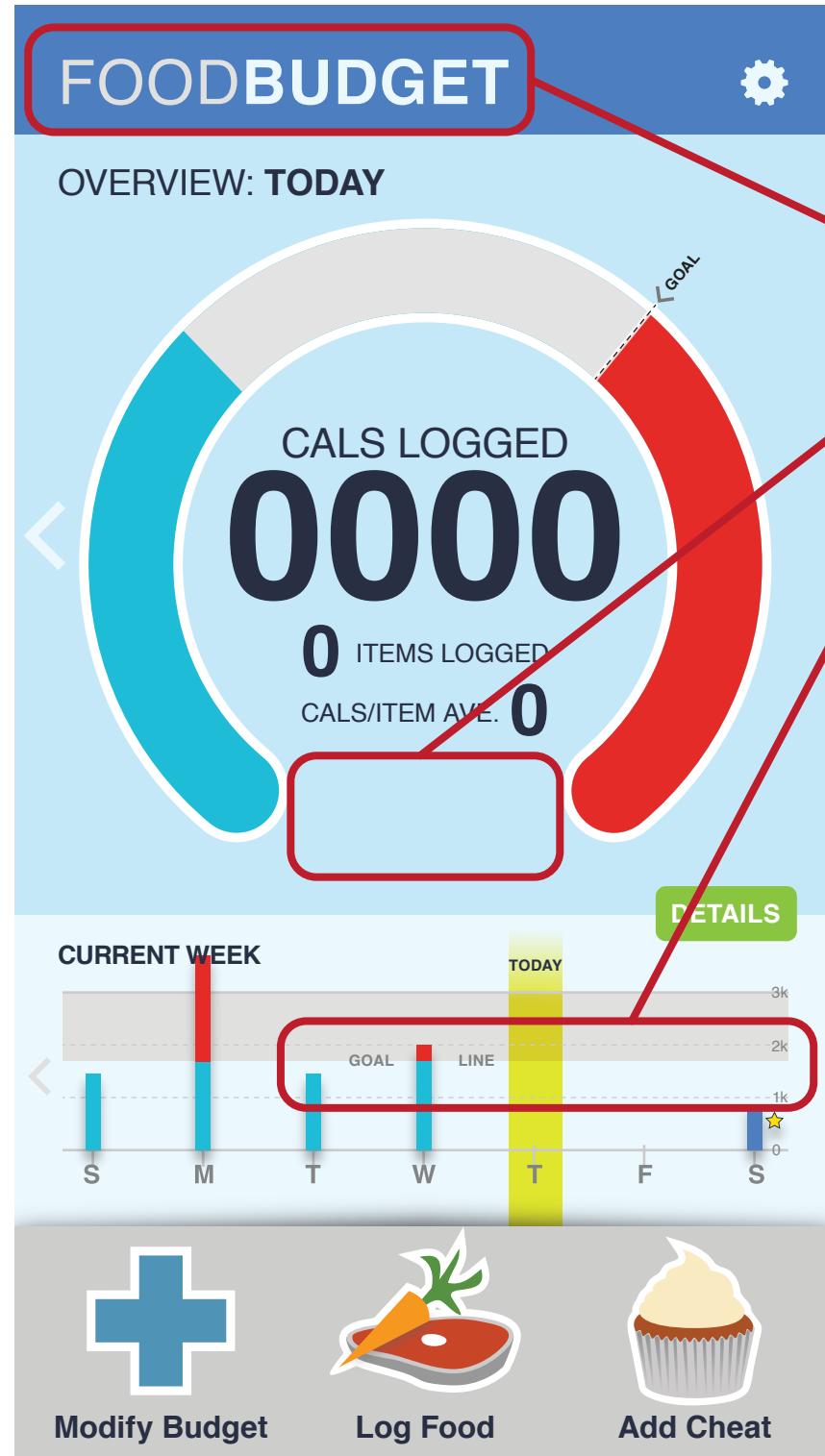
Phase II: System Evaluation



Arrows to cue swiping did not seem prominent enough in the main overview screen. I think that this could be solved with the training system as proposed in my above statement.

FOODBUDGET

Phase II: System Evaluation



Feedback from Faculty Presentation – October 15, 2013

Talk about the difference in the definition of 'budget' in the overview/tutorial of the application

Add a budget number for 'Remaining Calories' for the week

Change 'Goal Line' at the bottom to accommodate cheat

Sell differences from other applications. The difference in this app is the 'budget' part, thus making the user more in tune with their food intake and/or what they will be eating in the future

FOODBUDGET

Phase II: System Evaluation

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FOODBUDGET

Phase II: Final Page

Ryan G. Wilson, ArtGr 672, Fall 2013



CALORIC**BUDGET**

Phase III: Revision and Future Aims

Ryan G. Wilson, ArtGr 672, Fall 2013

The intent of this report is to explore the design solutions for the proposed mobile application, Food Budget (to be renamed Caloric Budget). The report will explore the Prospective Changes and potential Design Concepts as discovered in Phase II, User Testing and through the October 15th, faculty review.

CALORIC**BUDGET**

Phase III: Report Scope

Prospective Changes are listed in order of importance, as defined by user testing results and feedback and for betterment of the interactivity of the system:

1. Change name from 'Food Budget' to 'Caloric Budget'
2. Add tutorial to application for first-time users and as a 'Help' system
3. Make arrows/swipes more noticeable
4. Add interactivity to weekly overview
5. Add 'Remaining Calories' to the overview screen

CALORIC **BUDGET**

Phase III: Prospective Changes

Design concepts that will be tested in this report are (1) preference for flat or glossy design and (2) layout for information display. These will be tested through A/B testing through IntuitionHQ (www.intuitionhq.com). I created these designs in Illustrator, changing only one aspect per page, such as color, typography and flat/glossy. There were some designs, specifically color choices that I did not include in the A/B testing because I did not feel that they were strong enough to continue forward with.

CALORIC**BUDGET**

Phase III: Design Concepts

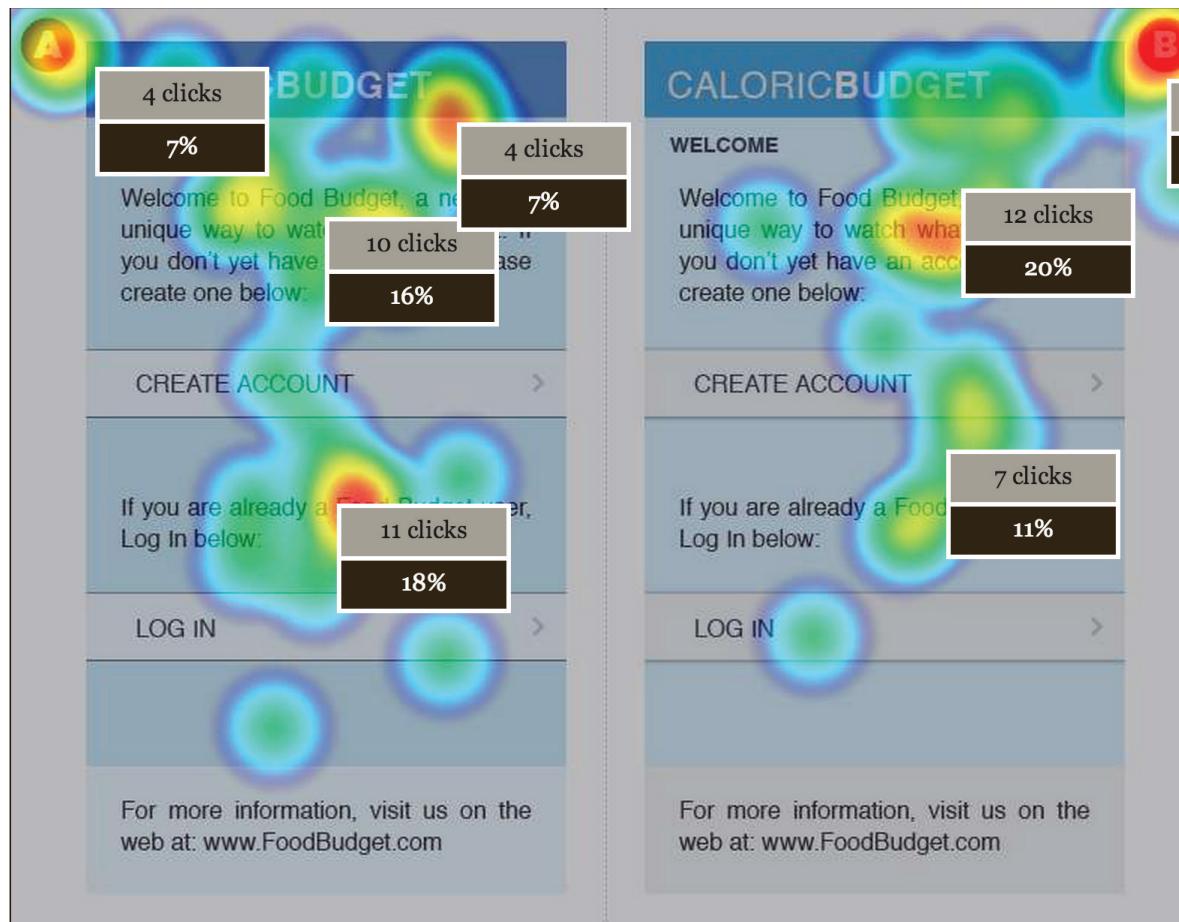
I sent out an IntuitionHQ A/B test survey to approximately 160 people from varying backgrounds (age, financial, gender, location, etc.) over email. I had 64 respondents. One respondent dropped out on question 4 and one additional dropped out on question 5. The purpose for this preference testing was to help direct the refinement for my design and decide which method to show my daily scale.

CALORIC**BUDGET**

Phase III: A/B Testing

Question 1, Which background color do you prefer?

The left color design was preferred slightly over the right. The numbers show 48% for the left and 42% for the right, leaving an unknown 10%. However, it appears that there are more clicks to the left, not producing numbers through IntuitionHQ. I would consider this to be a close even distribution.

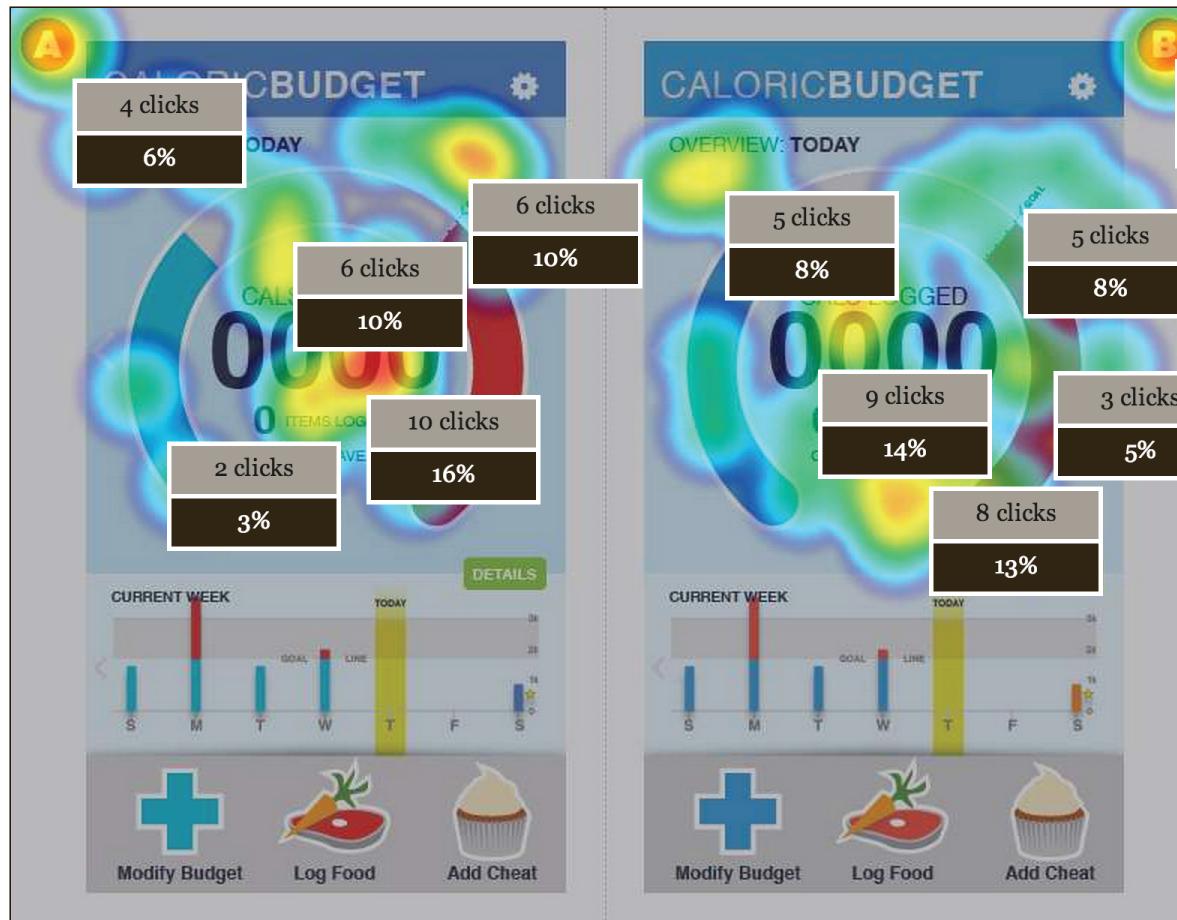


CALORICBUDGET

Phase III: A/B Testing

Question 2, Which background color do you prefer?

The left color design was preferred slightly over the right. The numbers show 49% for the left and 43% for the right, leaving an unknown 8%. However, it appears that there are more clicks to the left, not producing numbers through IntuitionHQ. I would consider this to be a close even distribution.

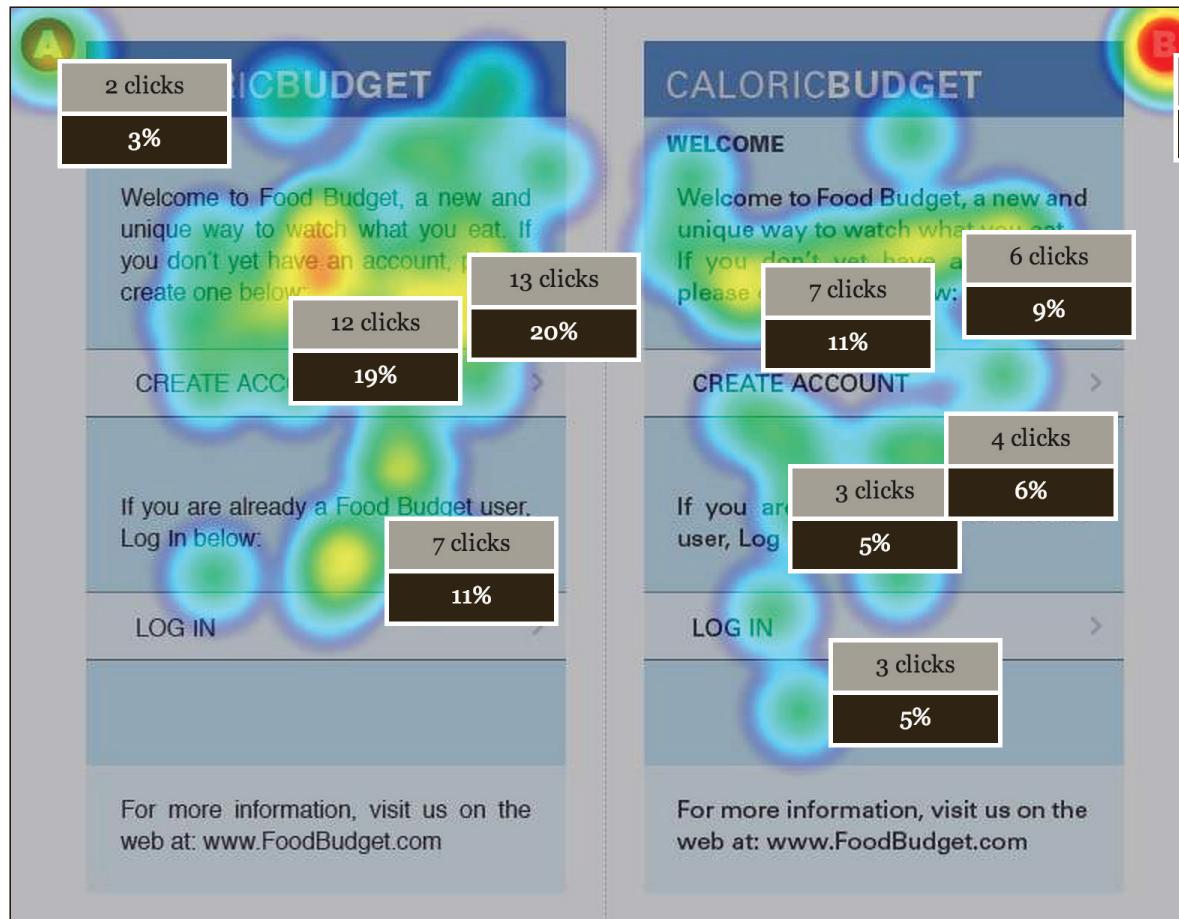


CALORICBUDGET

Phase III: A/B Testing

Question 3, Which typeface do you prefer (left,Helvetica Regular, right, Univers Roman 55)?

The left typeface was preferred slightly over the right. The numbers show 53% for the left and 44% for the right, leaving an unknown 3%. However, it appears that there are more clicks to the left, not producing numbers through IntuitionHQ.

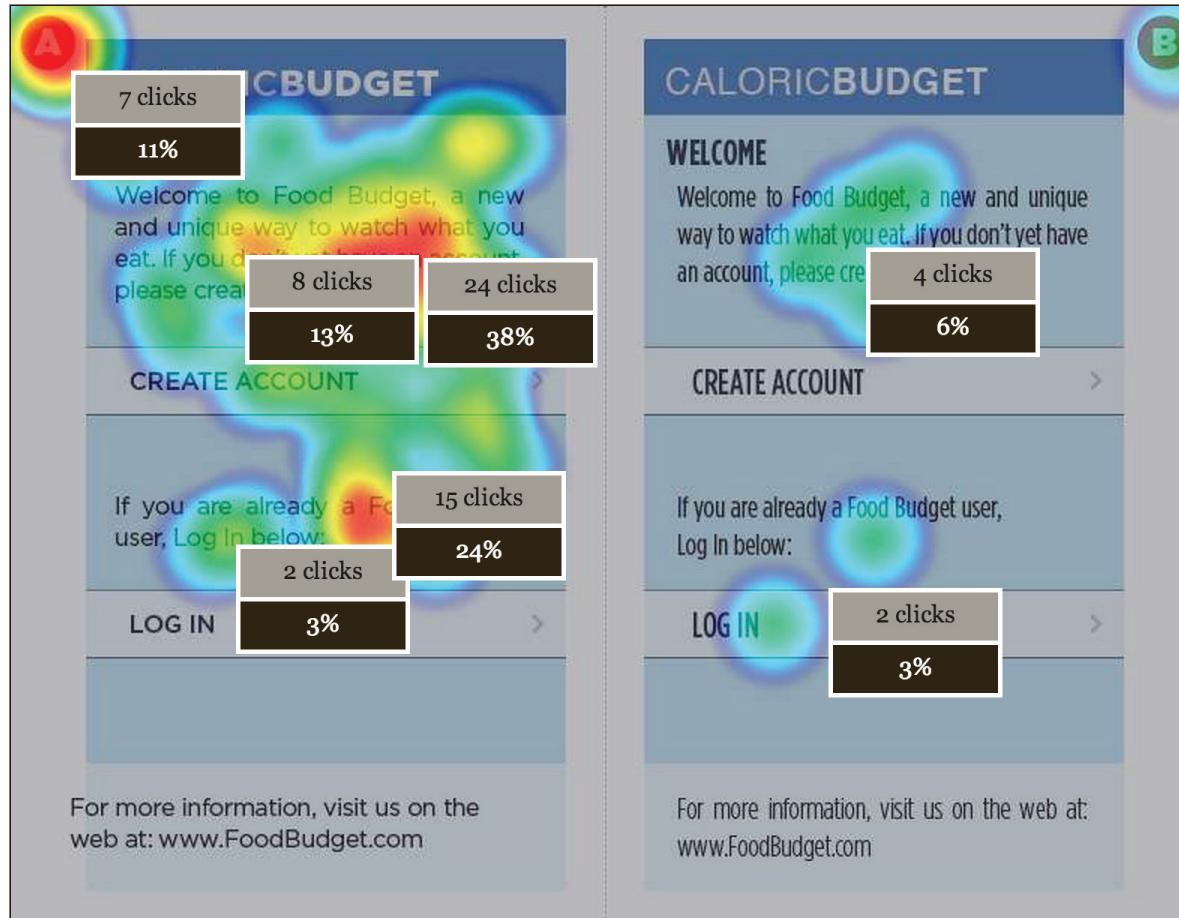


CALORIC**BUDGET**

Phase III: A/B Testing

Question 4, Which typeface do you prefer (left, Gotham Book, right, Gotham Book Condensed)?

The left typeface was preferred overwhelmingly over the right. The numbers show 88% for the left and 9% for the right, leaving an unknown 3%.

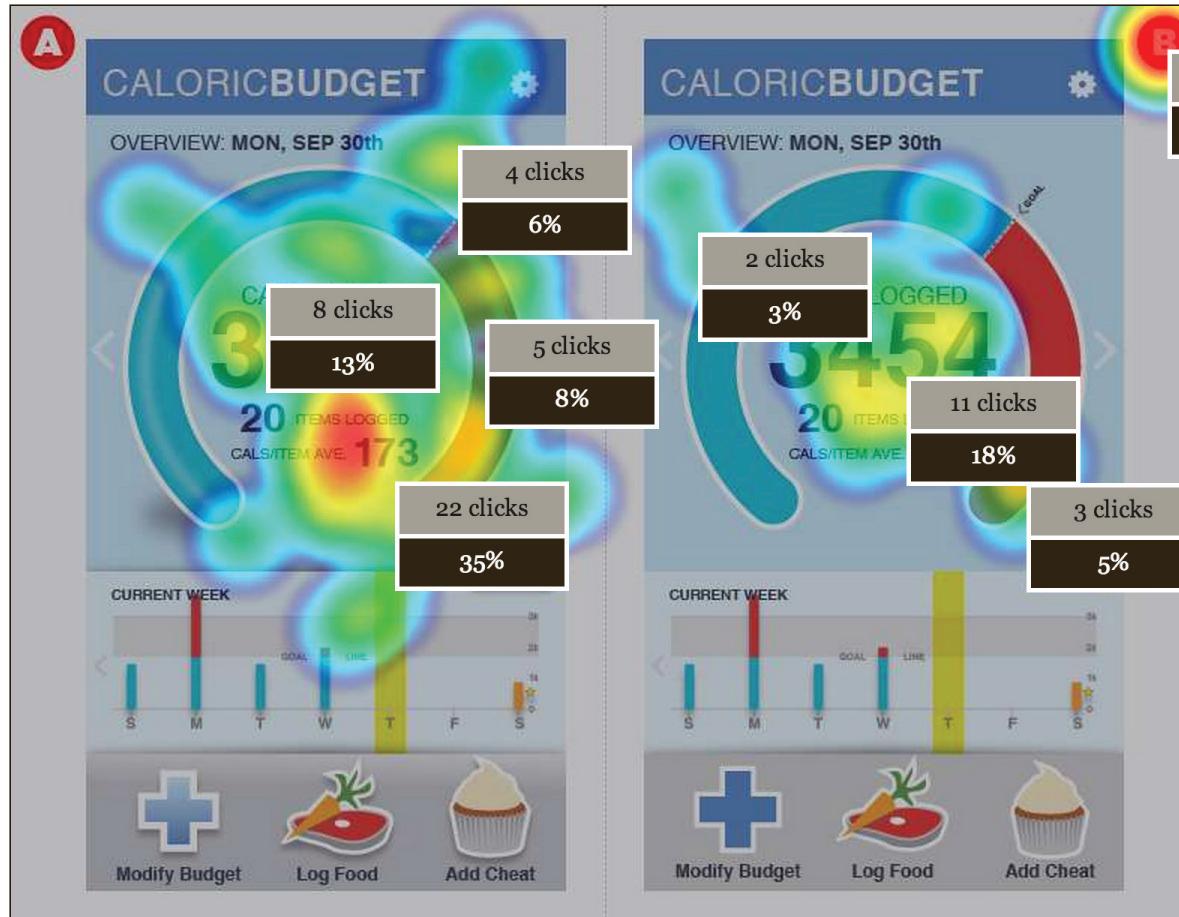


CALORIC**BUDGET**

Phase III: A/B Testing

Question 5, Which design do you prefer?

The left design glossy was preferred over the right flat. The numbers show 62% for the left and 36% for the right, leaving an unknown 2%.

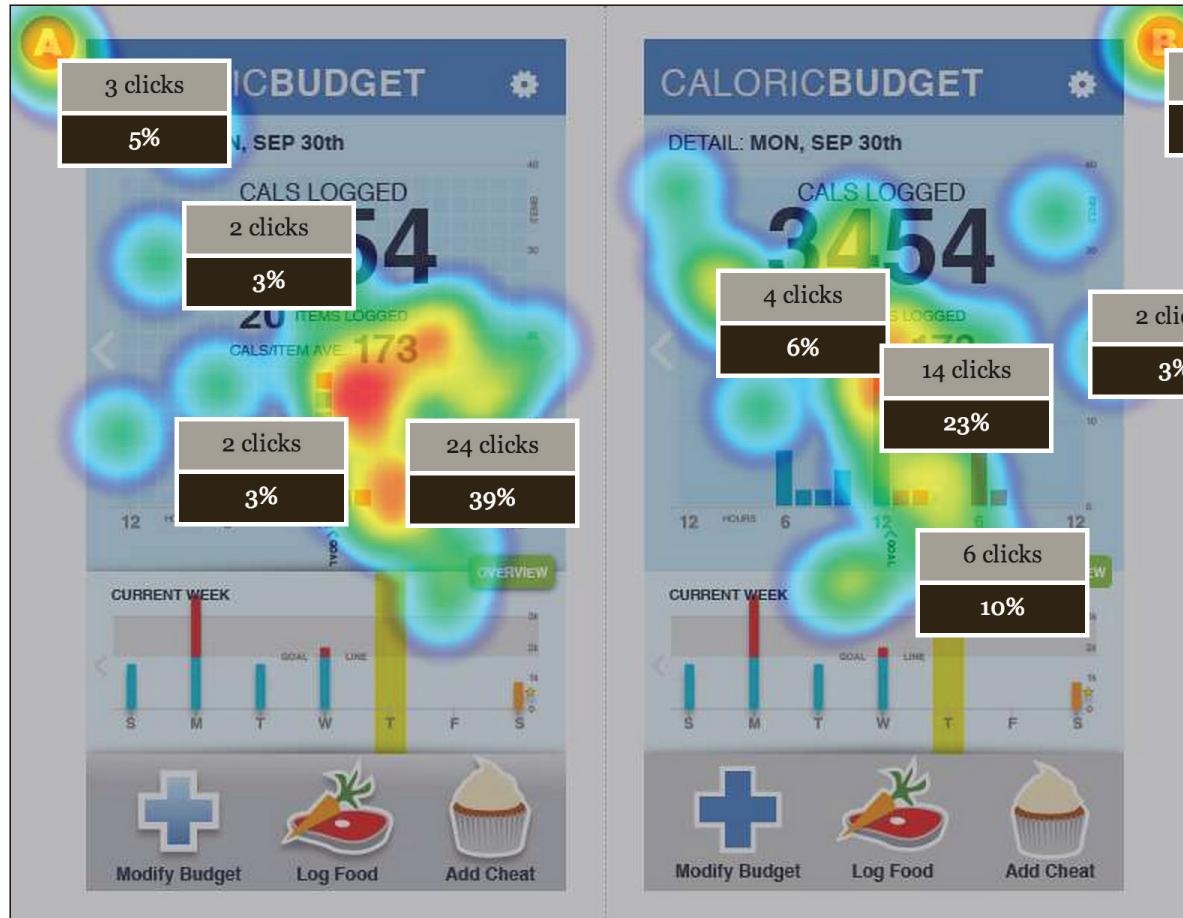


CALORICBUDGET

Phase III: A/B Testing

Question 6, Which design do you prefer?

The left boxed chart design was slightly preferred over the right conventional chart design. The numbers show 50% for the left and 47% for the right, leaving an unknown 3%. I would consider this an even distribution.

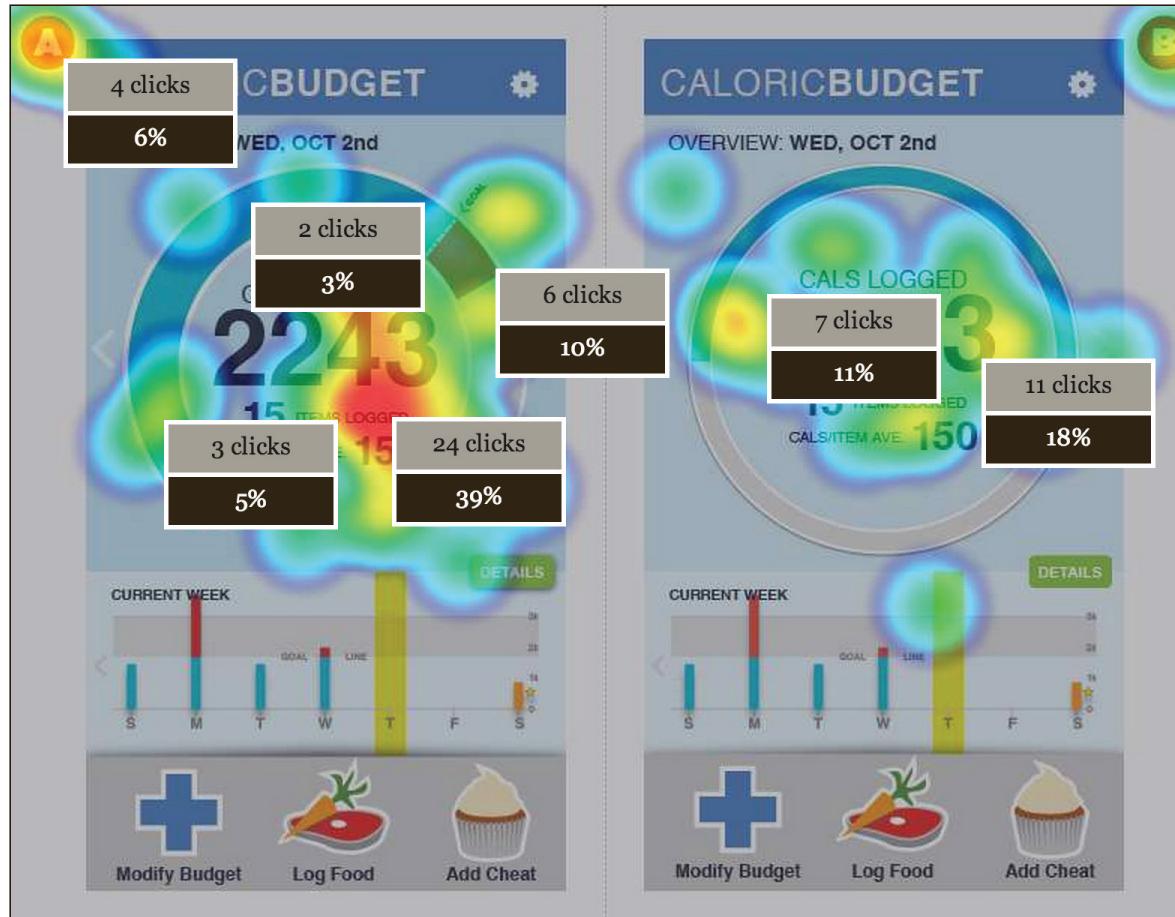


CALORICBUDGET

Phase III: A/B Testing

Question 7, Which design do you prefer?

The left semicircle chart design was overwhelmingly preferred over the modern circular chart design. The numbers show 53% for the left and 32% for the right, leaving an unknown 13%.

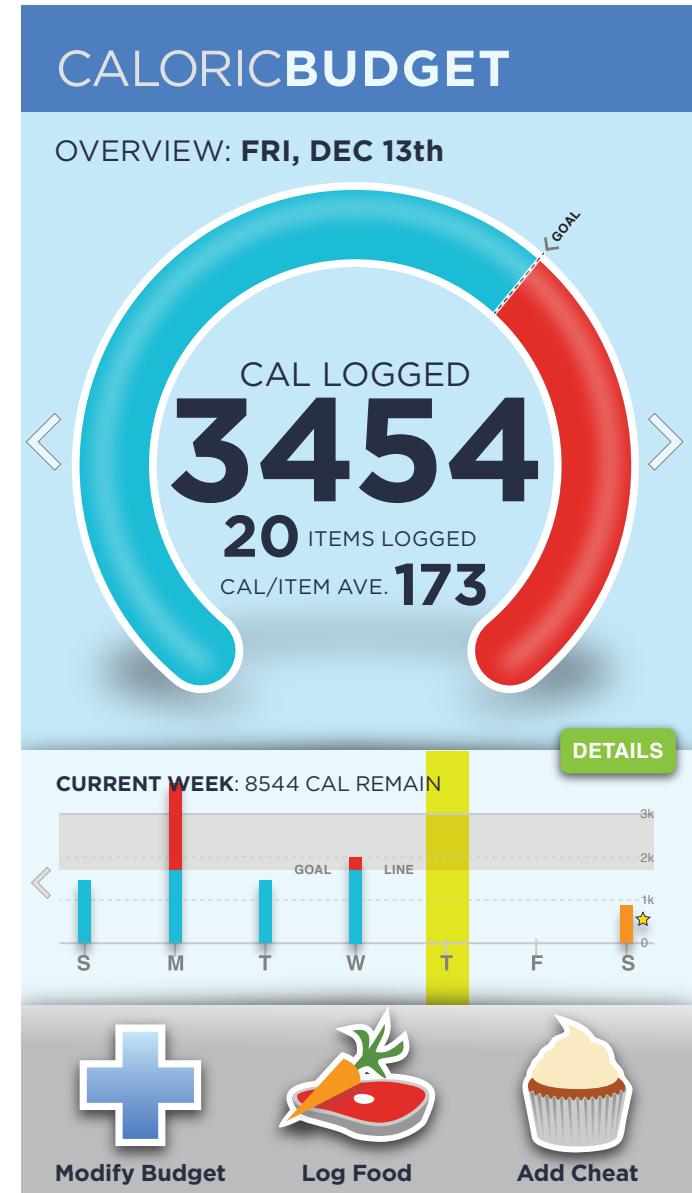


CALORICBUDGET

Phase III: A/B Testing

A/B Testing Conclusions

From my user preference results, I will be keeping my original colors that I tested with. There was a preference to that color palette over the slightly refined 'flat' color design that I created for the secondary choice. There was an overwhelming preference for Gotham Book, however, if I were continuing to refine my design I would rested comparing Helvetica Regular to Gotham Book. There was an overwhelming preference to my glossy design. This was disappointing to me, because I was interested in creating a modernly fashionable 'flat' design for my application. Lastly, the charts that I tested with where prefered or evenly considered - I will continue with the original design of my charts.



CALORIC BUDGET

Phase III: Revision and Future Aims

I updated my Information Architecture to reflect the one time task of viewing the tutorial system; to be viewed after creating the initial caloric budget. The tutorial is accessible (to be viewed again) after the first use through the Settings menu.

CALORIC **BUDGET**

Phase III: Refined Information Architecture

Food Budget - Mobile Application Concept, V7

One Time Task

Create Account



Full App Only

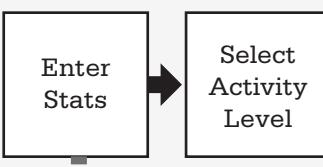
Confirmation Email

Click Link

Success

CALORIC BUDGET

Create (1st time)
-else-
Modify Budget



Based on Stats

Weight Loss
Maintain

TUTORIAL

View Budget

Budget Overview

Daily (back 7 days)

Weekly (back 1 month)

Toggle between Day & Week Overview

Success

Log Food

Saved

Add New

Fhodo

IF

Cal High

Suggest Healthy Alternative

Cal Low

Affirm User

Allows user to photograph food - algorithm analyzes image & registers calories

Full App Only

Add Cheat

Saved

Add New

Select Day

Success

Suggest Ways to Achieve Budget

App Settings

Modify Personal Stats

Manage Notifications

Update Password

Update Email

Show Tutorial

Email / Text / In-App

Confirm

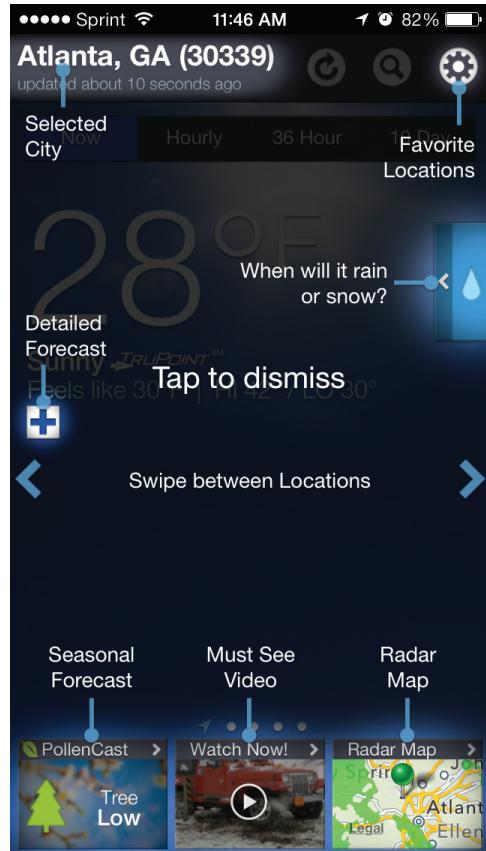
Success

I researched applications that I was familiar with that have tutorials for first-time users. For this research I used the iOS applications, The Weather Channel (TWC) and AP Mobile. Below, you can see screenshots from both applications; a single overview panel from TWC and three overviews from AP News. Both are very similar in design, a darkened, translucent background allowing for users to see through to the application, while highlighting usable sections of the application with white (on black) text and call-outs directing the users to specific locations in the interface. The TWC application fades the black background out to show buttons underneath. The AP Mobile application repeats those assets above the black overlay. The TWC application uses arrows and text to educate the user how to “Swipe between locations”. The AP Mobile application uses a pointer hand icon and an elongated arrow to show swiping; the movement created by the elongated arrow. When the user is ready to move past the application training, the TWC application prompts users to ‘Tap to dismiss” in larger text centered in the screen, while the AP Mobile application offers no prompt, just the ‘X’ in the top left of the screen, a learned behavior in computing and mobile interaction.

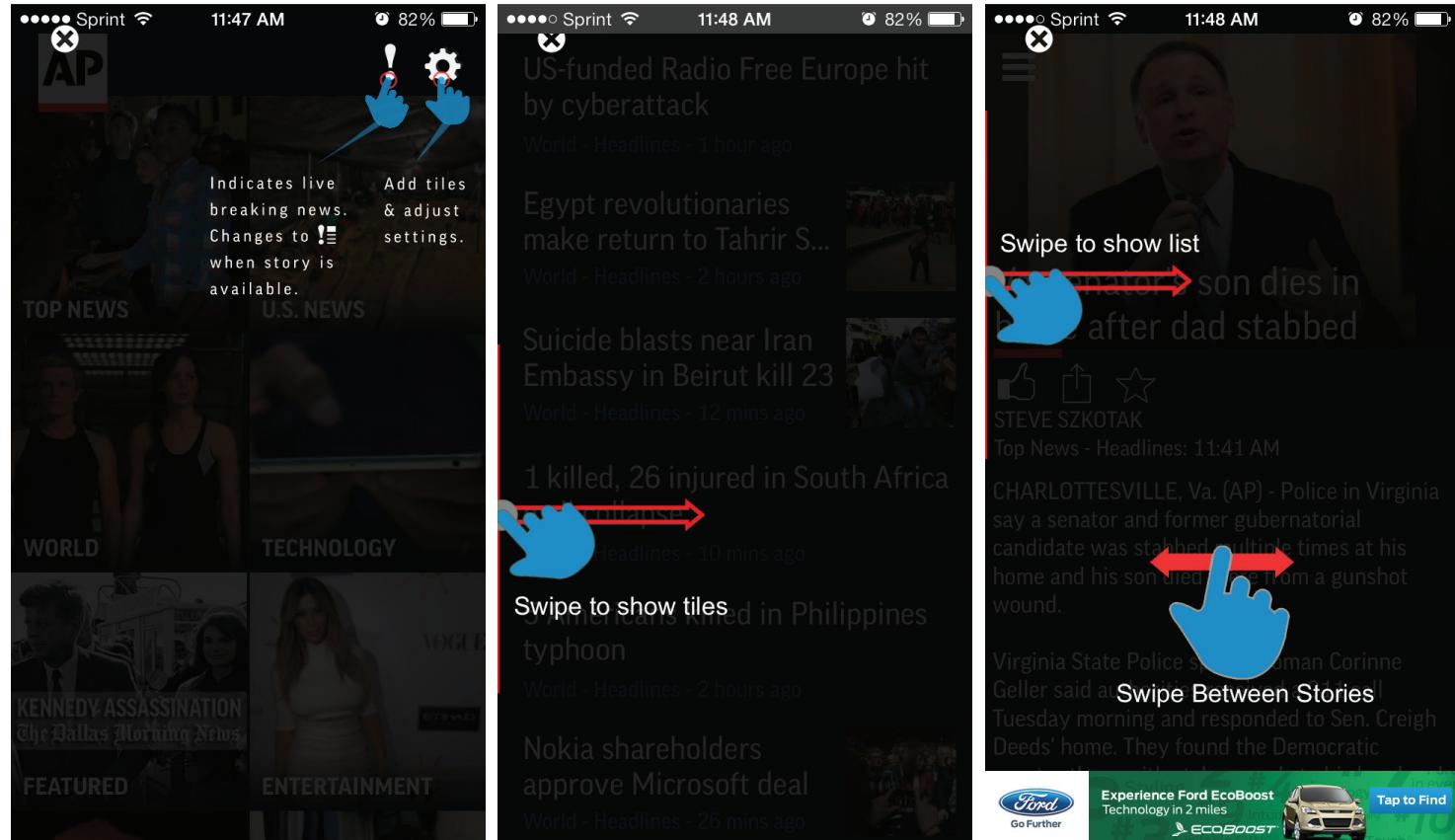
CALORIC BUDGET

Phase III: Tutorial/Overview Research

The Weather Channel



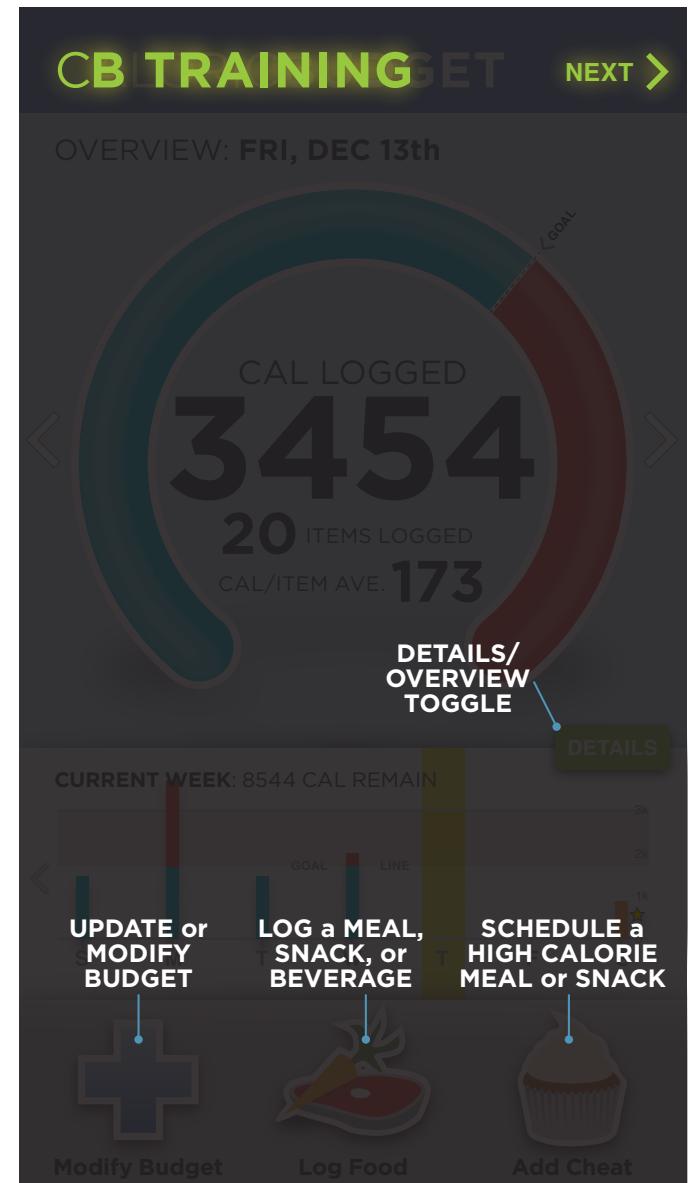
AP News



CALORIC BUDGET

Phase III: Tutorial/Overview Research

Ryan G. Wilson, ArtGr 672, Fall 2013



For my tutorial is used a similar design to both of the above mentioned applications. I created a translucent black overlay, allowing for users to see the application below the overlay. Then, I place white (on black) text over top with call-outs to connect concepts and draw users attention to certain sections/interactions. I found the AP Mobile application's use of showing the swipe interaction more informative to a general audience. I used a similar tactic when designing my tutorial. You can find my tutorial screens located where they appear within the application under the 'Refined Design' section of my report.

CALORIC BUDGET

Phase III: Tutorial/Overview Research

CALORIC BUDGET

Ryan G. Wilson, 2013

CALORIC BUDGET

WELCOME

Welcome to Caloric Budget, a new and unique way to watch what you eat. If you don't yet have an account, please create one below:

CREATE ACCOUNT >

If you are already have a Caloric Budget account, Log In below:

LOG IN >

For more information, visit us at:
www.CaloricBudget.com

CALORIC BUDGET

< BACK

CREATE ACCOUNT

Creating your Caloric Budget account is easy; just enter your email address and set a password

Email

Password

Retype Password

CREATE ACCOUNT >

CALORIC BUDGET

Phase III: Refined Design

Ryan G. Wilson, ArtGr 672, Fall 2013

CALORICBUDGET

CREATE ACCOUNT

Thank you for creating a Caloric Budget account! You are minutes away from using your account.

Please check your email for your account confirmation. Click the link within the email and you are ready to start your budget!

Once that is done, Log In below:

LOG IN



CALORICBUDGET

[BACK](#)

LOG IN

To log in, enter your email and password below:

Email

Password

LOG IN



CALORICBUDGET

[BACK](#)

CREATE BUDGET

Enter your Date of Birth, Weight, Height & Gender below:

Date of Birth (e.g. 09/30/1978)

Weight (e.g. 180lbs)

Height (e.g. 5'11")

MALE



FEMALE

ENTER STATS



CALORICBUDGET

Phase III: Refined Design

CALORIC BUDGET < BACK

CREATE BUDGET

Select your current average Activity Level:

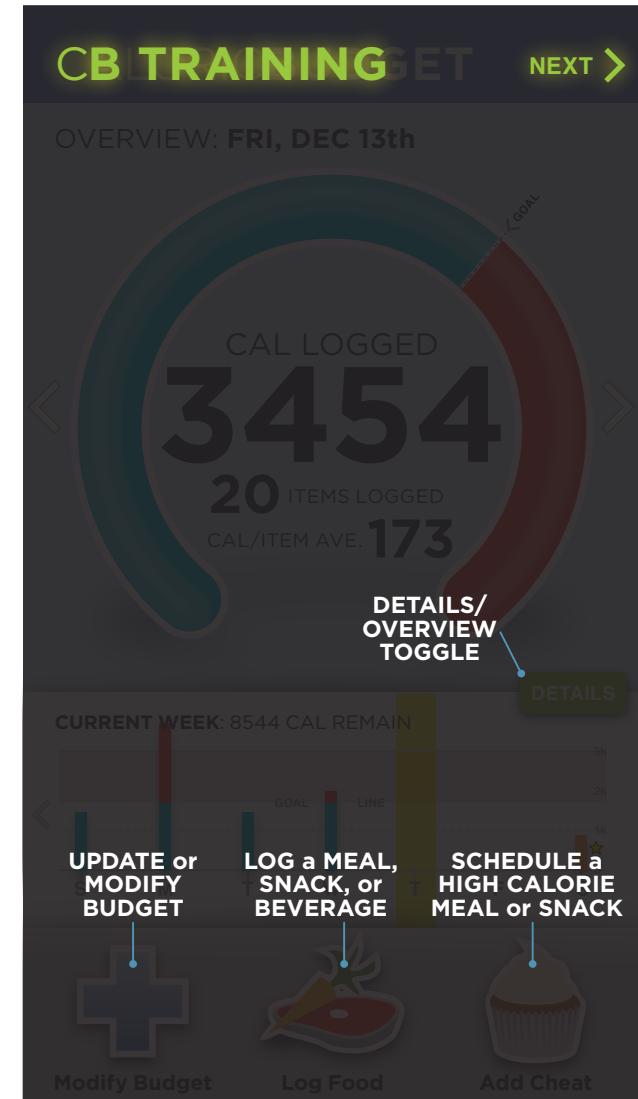
- SEDENTARY** (Don't move much) >
- LIGHT** (Sit most of the day) >
- MEDIUM** (Light Exercise) >
- HEAVY** (Athlete) >

CALORIC BUDGET < BACK

CREATE BUDGET

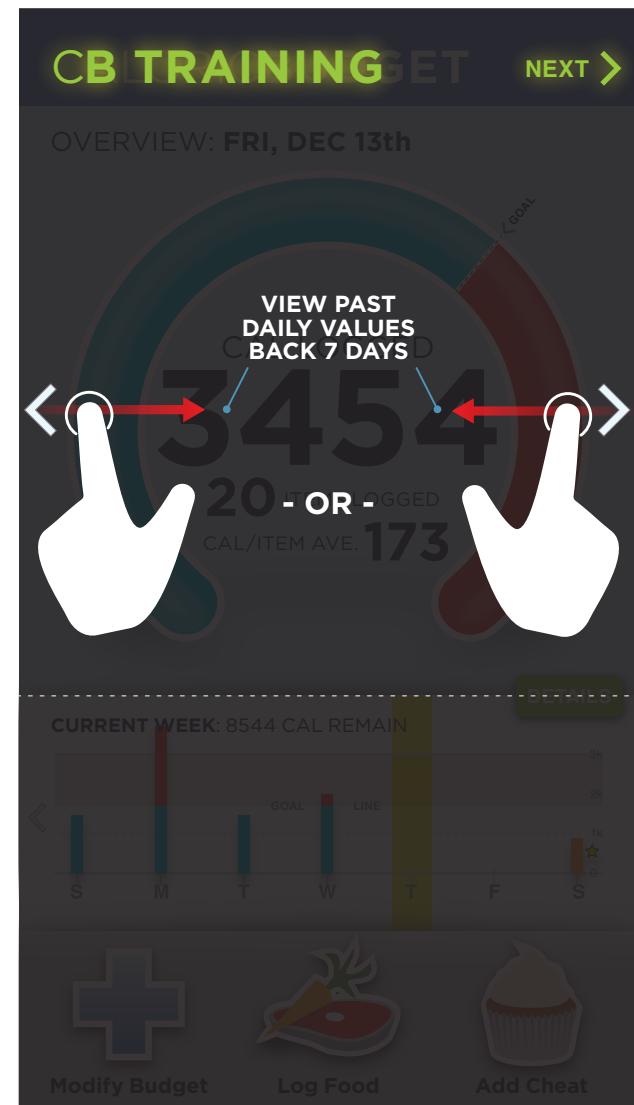
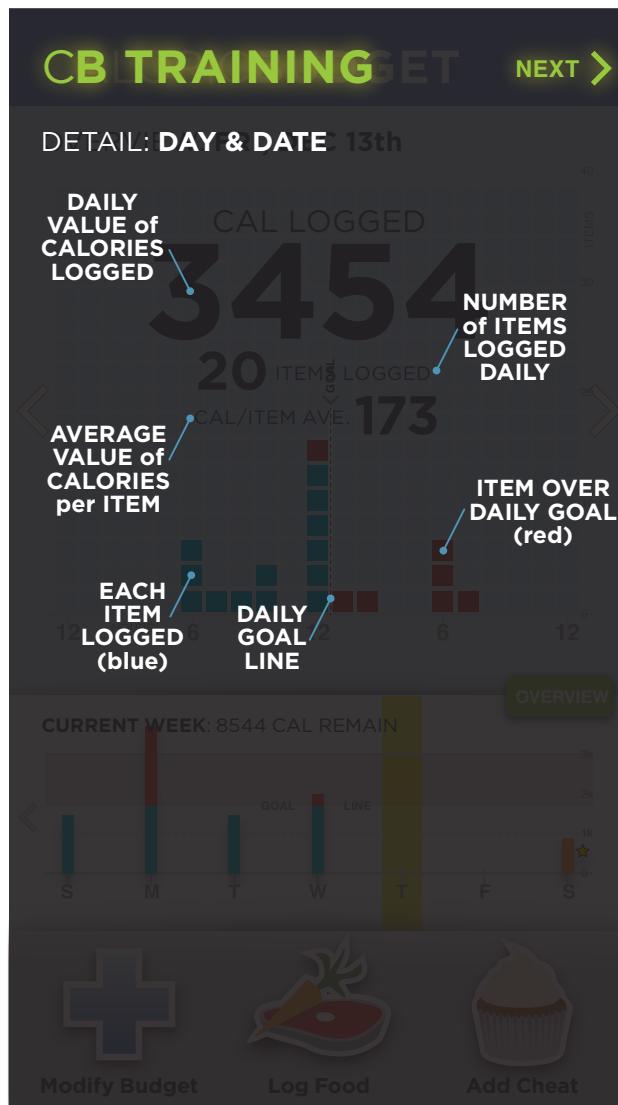
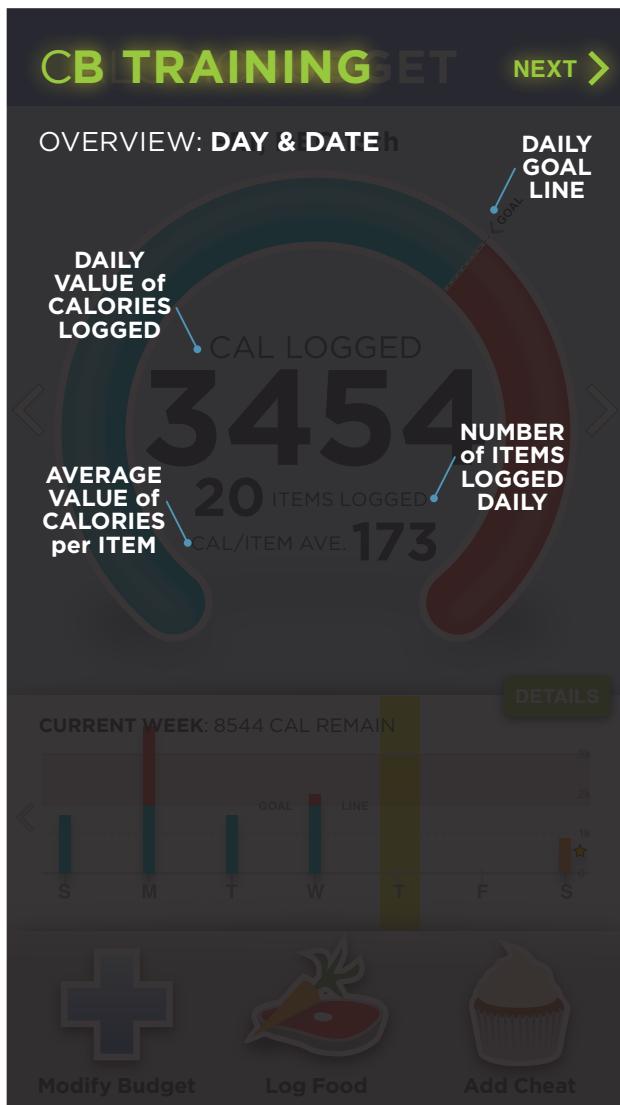
Select a budget based on:

- WEIGHT LOSS** (14,000 cal/week) >
- MAINTENANCE** (16,000 cal/week) >



CALORIC BUDGET

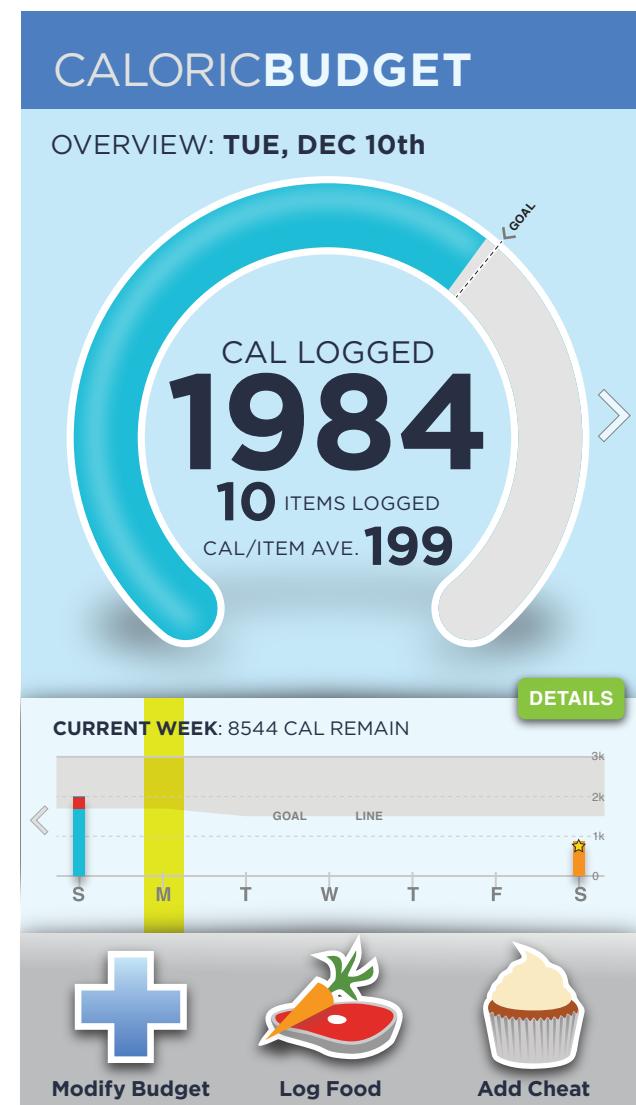
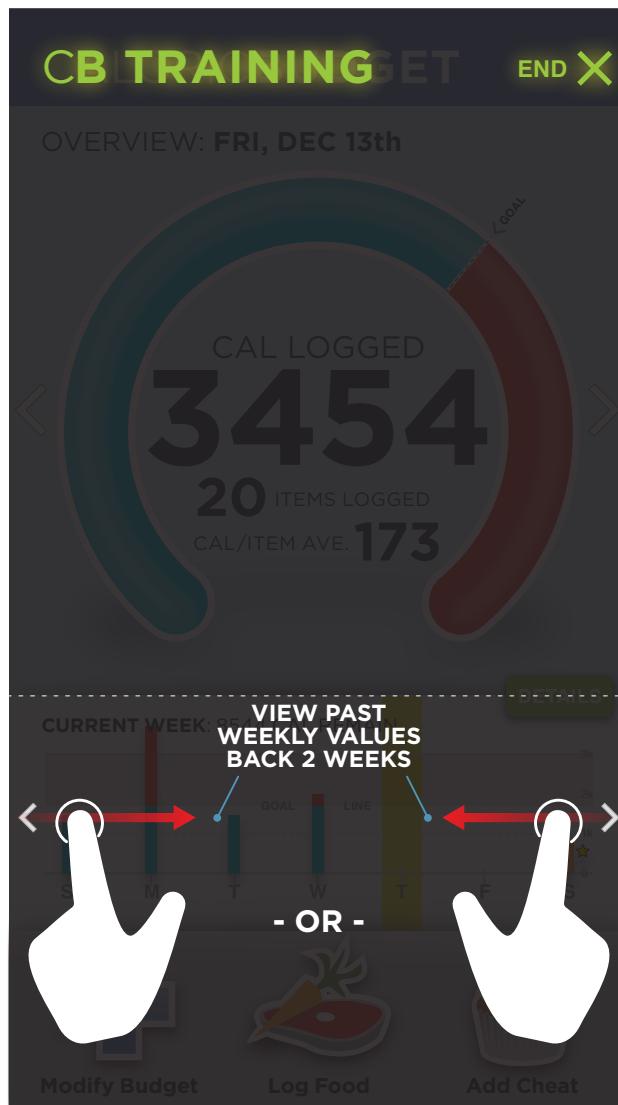
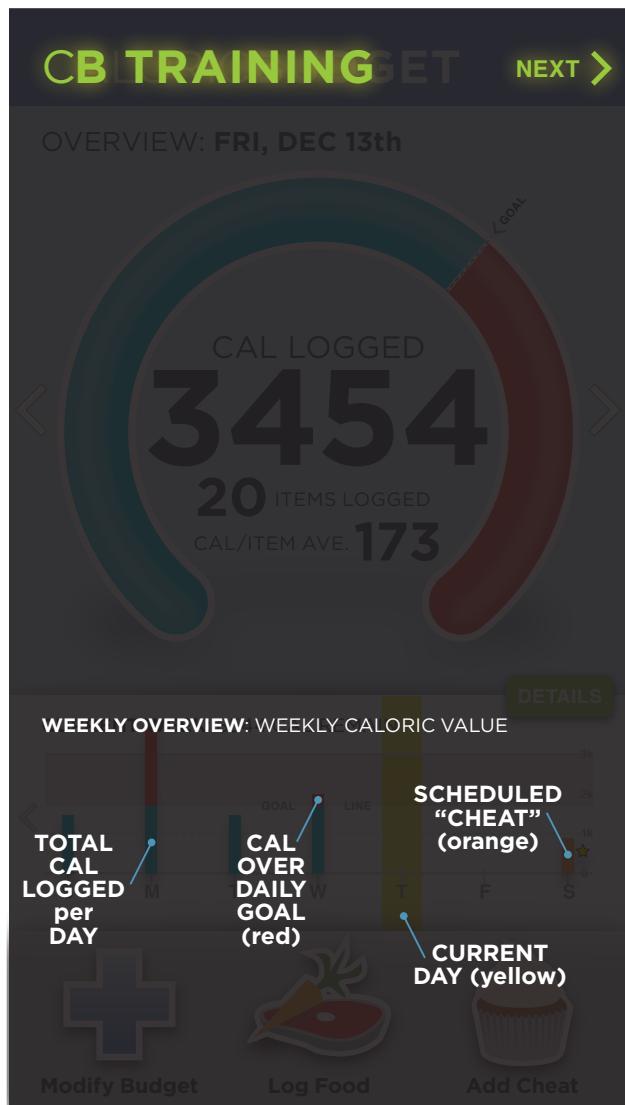
Phase III: Refined Design



CALORIC BUDGET

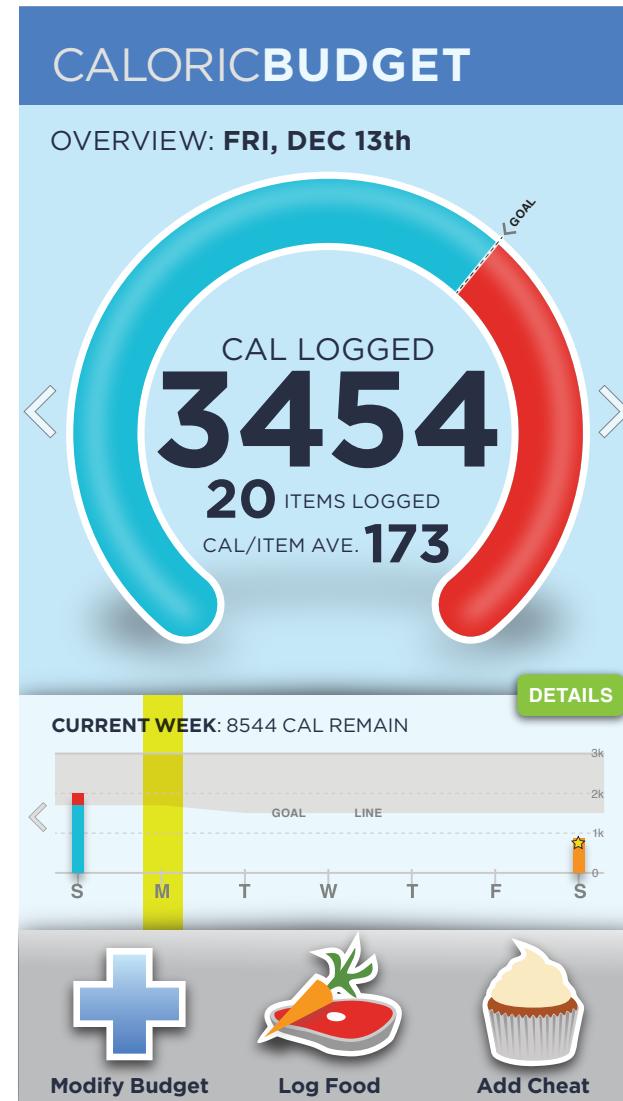
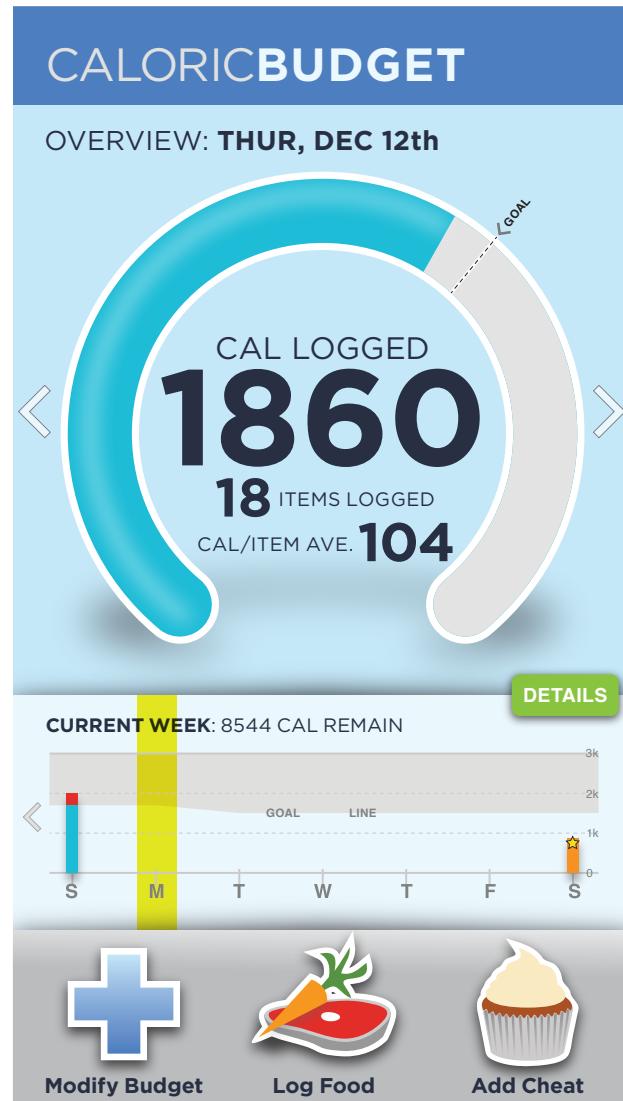
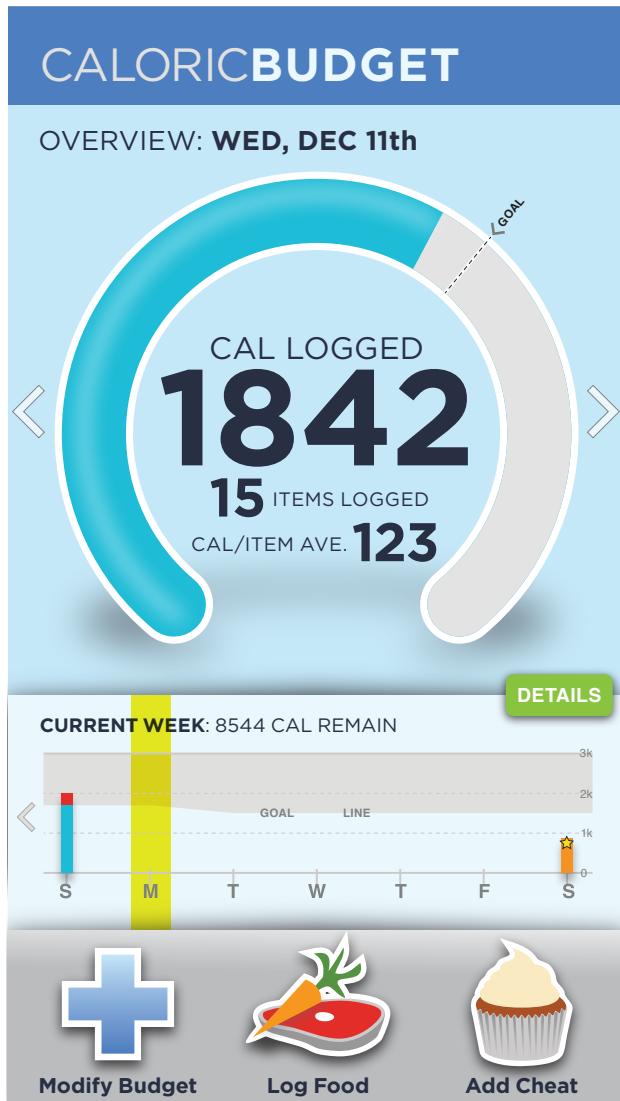
Phase III: Refined Design

Ryan G. Wilson, ArtGr 672, Fall 2013



CALORIC BUDGET

Phase III: Refined Design



CALORIC BUDGET

Phase III: Refined Design



CALORIC BUDGET

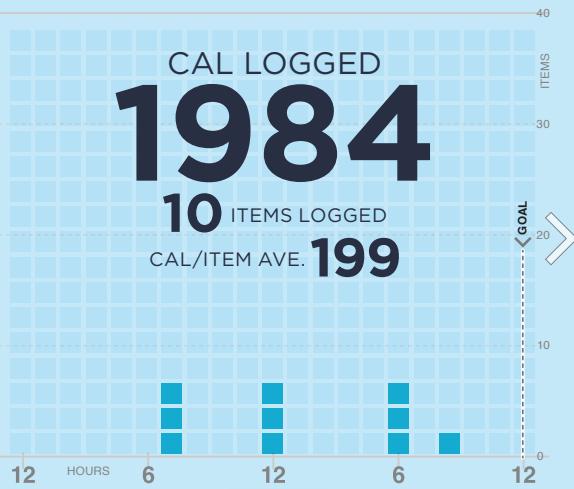
Phase III: Refined Design

Ryan G. Wilson, ArtGr 672, Fall 2013

CALORIC BUDGET

DETAIL: TUE, DEC 10th

CAL LOGGED
1984
10 ITEMS LOGGED
CAL/ITEM AVE. 199



CALORIC BUDGET

DETAIL: WED, DEC 11th

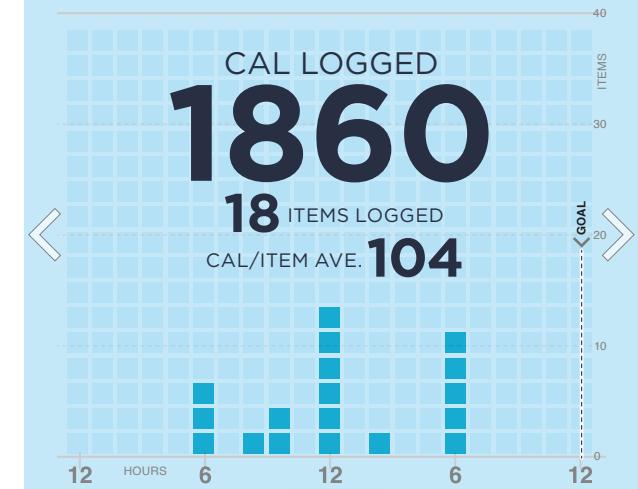
CAL LOGGED
1842
15 ITEMS LOGGED
CAL/ITEM AVE. 123



CALORIC BUDGET

DETAIL: THUR, DEC 12th

CAL LOGGED
1860
18 ITEMS LOGGED
CAL/ITEM AVE. 104



CALORIC BUDGET

Phase III: Refined Design

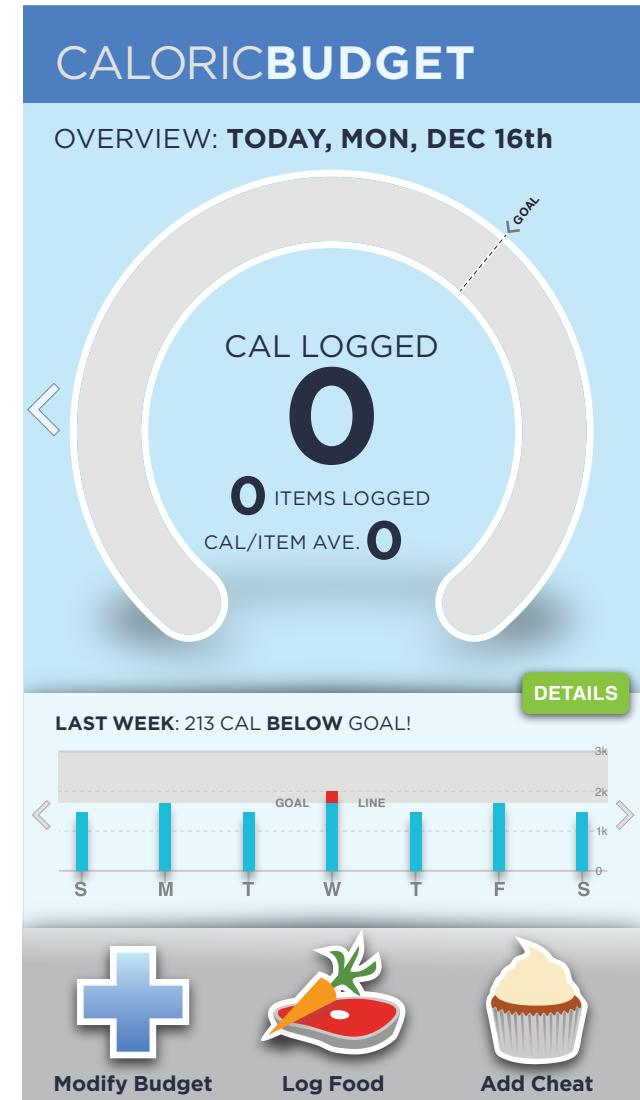
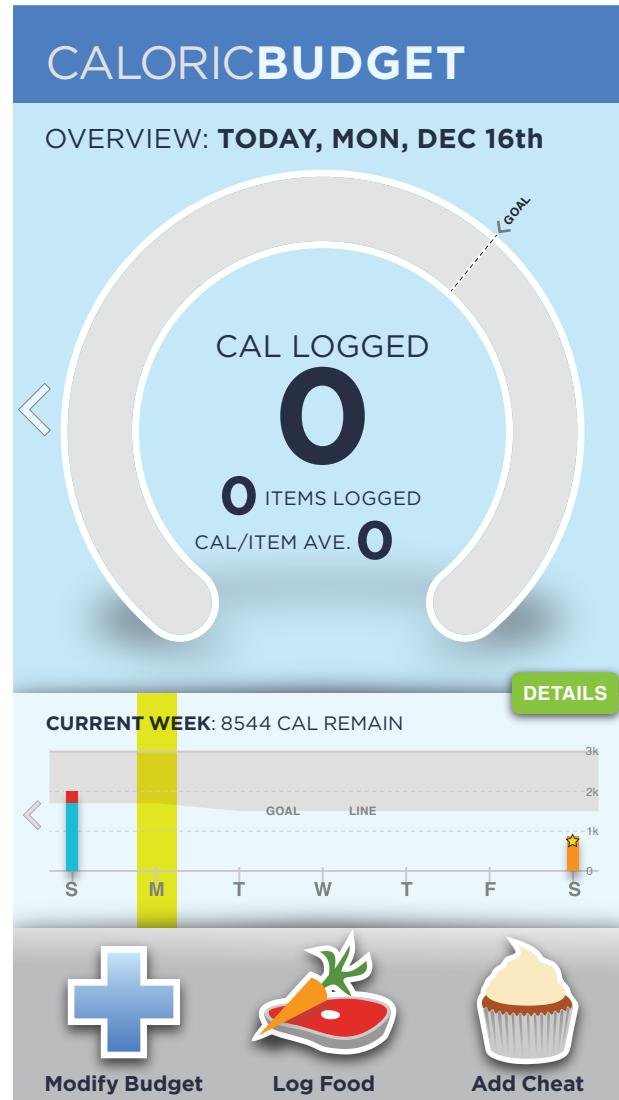
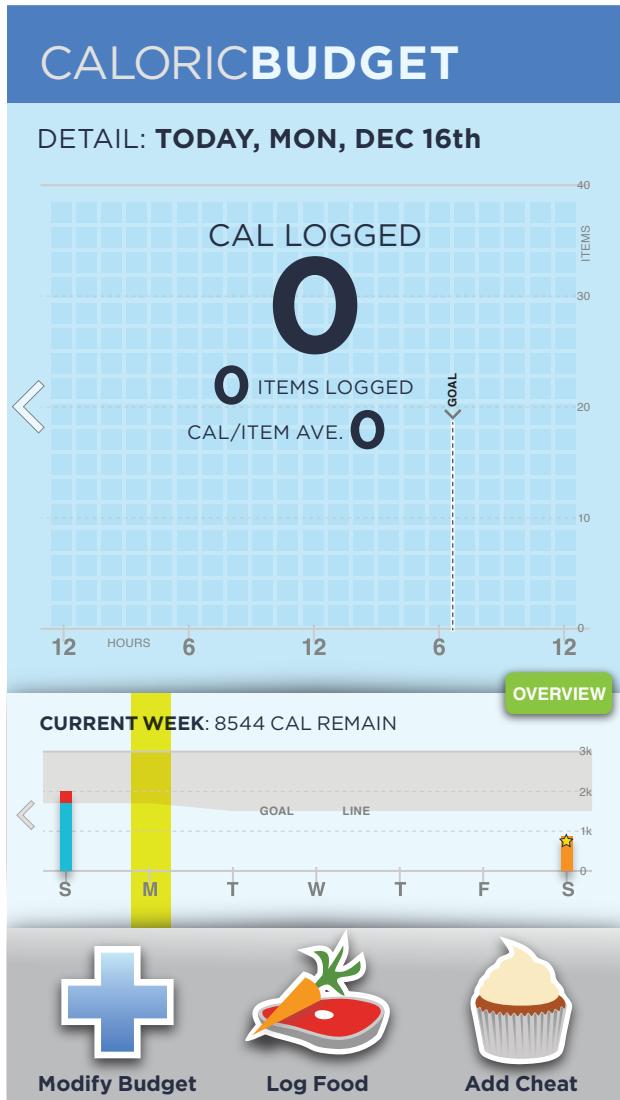
Ryan G. Wilson, ArtGr 672, Fall 2013



CALORIC BUDGET

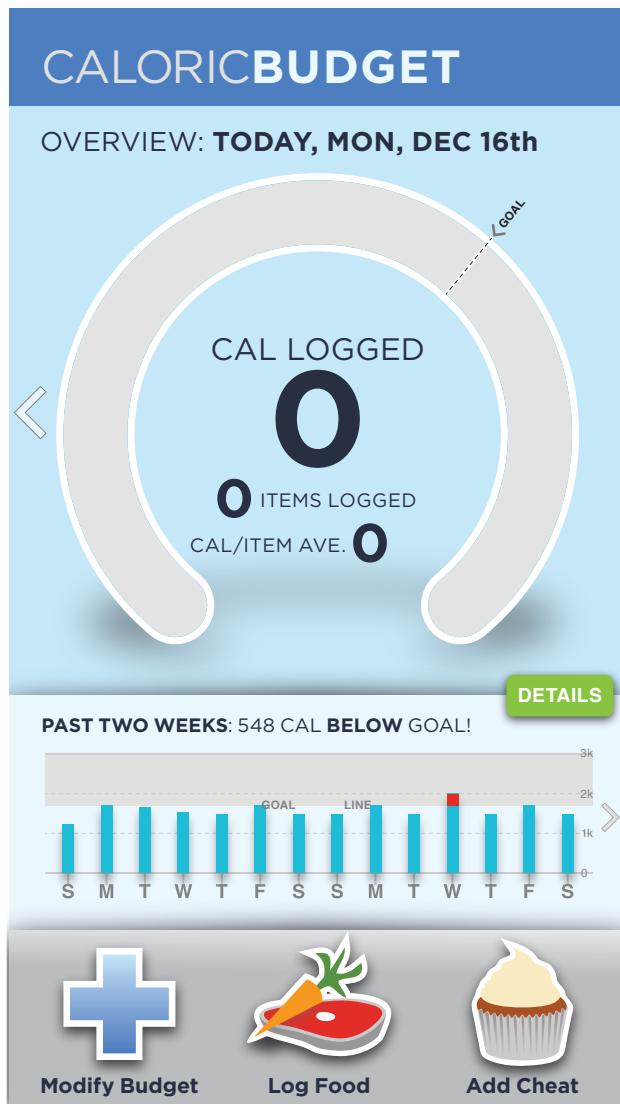
Phase III: Refined Design

Ryan G. Wilson, ArtGr 672, Fall 2013



CALORIC BUDGET

Phase III: Refined Design



CALORICBUDGET

LOG FOOD

Select an item from your saved meals or enter an item.

Saved Meals

● Banana	## cals
● Cereal	## cals
● Buffalo Wings	###
● Water	cals
● Soda	# cals

Enter Item Take Fhoodo

LOG MEAL >

Modify Budget **Home** **Add Cheat**

CALORICBUDGET

LOG FOOD

Select an item from your saved meals or enter an item.

Saved Meals

● Banana	## cals
● Cereal	## cals

Buffalo **Item Added** ## cals
There are ## calories in a _____. To meet your budget you might want to have _____ next time.

LOG MORE **HOME**

LOG MEAL >

Modify Budget **Home** **Add Cheat**

CALORICBUDGET

Phase III: Refined Design

CALORICBUDGET



LOG FOOD

Select an item from your saved meals or enter an item.

Saved Meals

• Banana	## cals
• Cereal	## cals
• Soda	## cals

Item Added ##
You have made a healthy choice!
Good job!

LOG MORE **HOME**

Take Phoodo

LOG MEAL >

Modify Budget Home Add Cheat

CALORICBUDGET



ADD CHEAT

Select a prior cheat or search for a cheat in our database.

Past Rewards

• Cupcake (1)	###
• Candy Bar	cals
• Ice Cream (2 scoops)	###
• Pizza (2 slices)	cals
• Steak (12 oz.)	###

Enter Item

SELECT CHEAT DAY >

Modify Budget Log Food Home

CALORICBUDGET



ADD CHEAT

Select which day you are planning to have your cheat:

SUNDAY >

MONDAY >

TUESDAY >

WEDNESDAY >

THURSDAY >

FRIDAY >

SATURDAY >

Modify Budget Log Food Home

CALORICBUDGET

Phase III: Refined Design

CALORICBUDGET

ADD CHEAT
Select which day you are planning to have your cheat:

- SUNDAY >
- MONDAY >
- Cheat Scheduled**
Your cheat has been scheduled.
Your daily calorie intake will be adjusted to allow for your cheat.
- THURSDAY >
- OK >
- FRIDAY >
- SATURDAY >

 Modify Budget  Log Food  Home

CALORICBUDGET

APPLICATION SETTINGS
Select which day you are planning to have your cheat:

- MODIFY PERSONAL STATS** >
- MANAGE NOTIFICATIONS** >
- UPDATE EMAIL** >
- UPDATE PASSWORD** >
- VIEW TUTORIAL** >

 Modify Budget  Log Food  Add Cheat

CALORICBUDGET

APPLICATION SETTINGS
Modify Personal Stats:

Date of Birth (e.g. 09/30/1978)

Weight (e.g. 180lbs)

Height (e.g. 5'11")

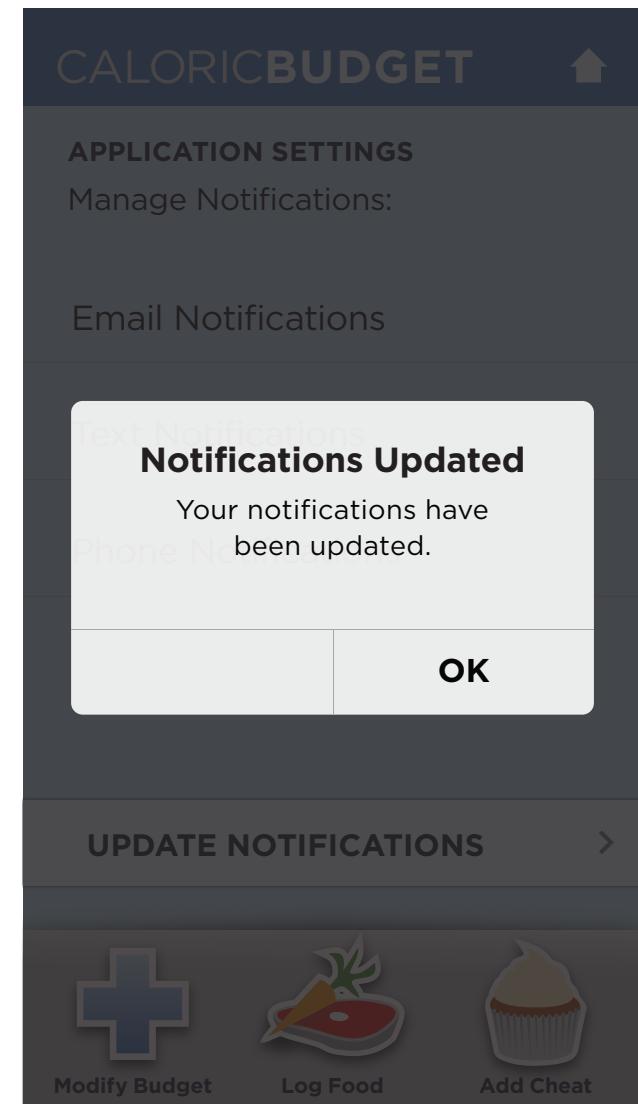
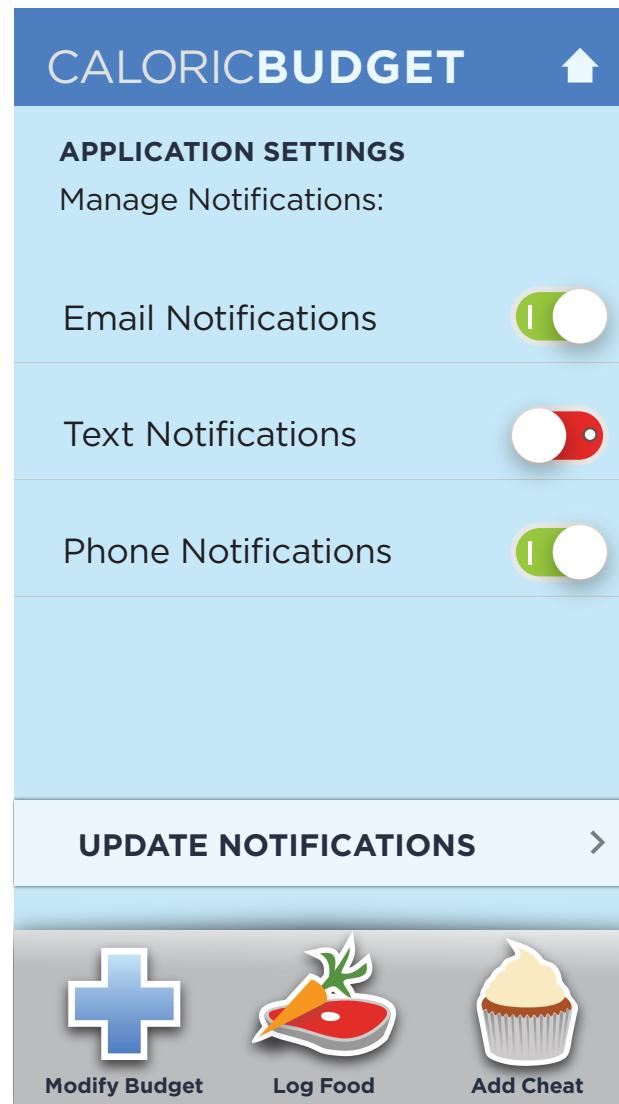
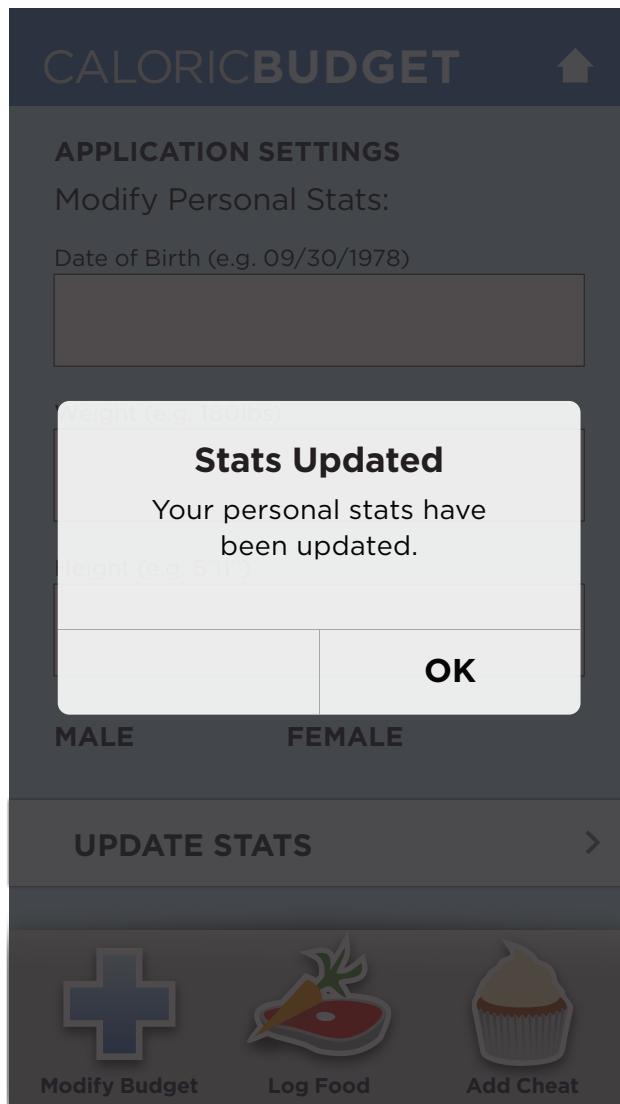
MALE FEMALE

UPDATE STATS >

 Modify Budget  Log Food  Add Cheat

CALORICBUDGET

Phase III: Refined Design



CALORICBUDGET
Phase III: Refined Design

CALORICBUDGET 

APPLICATION SETTINGS

Update Email:

Email

UPDATE EMAIL >

 **Modify Budget**

 **Log Food**

 **Add Cheat**

CALORICBUDGET 

APPLICATION SETTINGS

Update Email:

Email

Email Update

Your email is about to be updated. Are you sure you want to proceed?

Cancel **OK**

UPDATE EMAIL >

 **Modify Budget**

 **Log Food**

 **Add Cheat**

CALORICBUDGET 

APPLICATION SETTINGS

Update Password:

Current Password

NEW Password

Retype NEW Password

UPDATE PASSWORD >

 **Modify Budget**

 **Log Food**

 **Add Cheat**

CALORICBUDGET

Phase III: Refined Design

CALORICBUDGET 

APPLICATION SETTINGS

Update Password:

Current Password

Password Updated

Your password is about to be updated. Are you sure you want to proceed?

RETYPE NEW PASSWORD

Cancel **OK**

UPDATE PASSWORD 

 Modify Budget  Log Food  Add Cheat

CALORICBUDGET 

MODIFY BUDGET

Enter your Date of Birth, Weight, Height & Gender below:

Date of Birth (e.g. 09/30/1978)

Weight (e.g. 180lbs)

Height (e.g. 5'11")

MALE  FEMALE

ENTER STATS 

 Home  Log Food  Add Cheat

CALORICBUDGET 

MODIFY BUDGET

Select your average Activity Level:

SEDENTARY (Don't move much) 

LIGHT (Sit most of the day) 

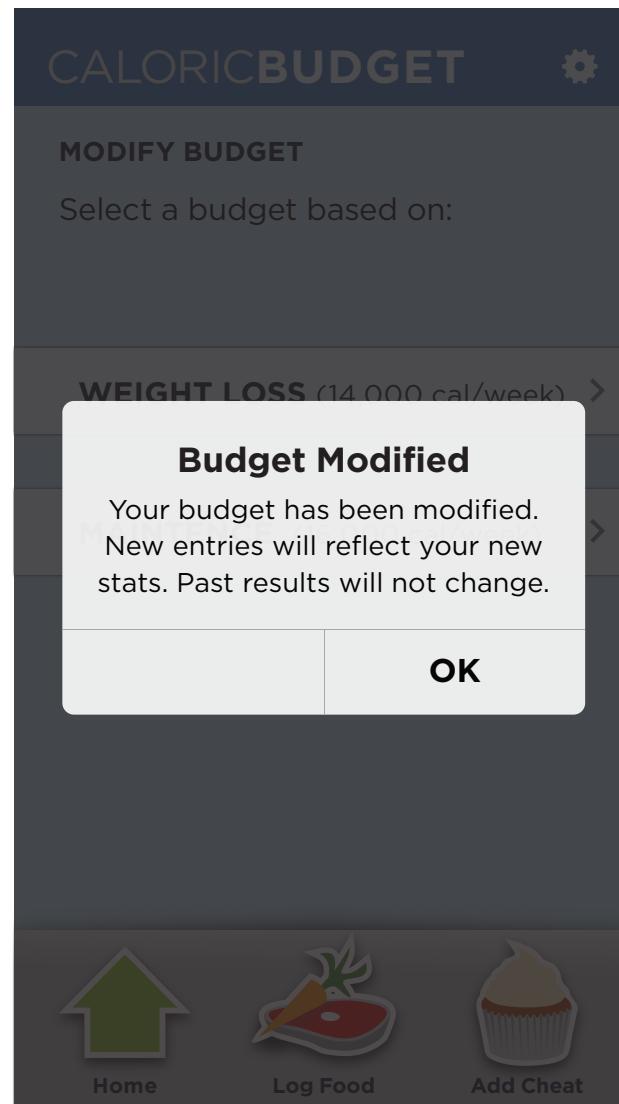
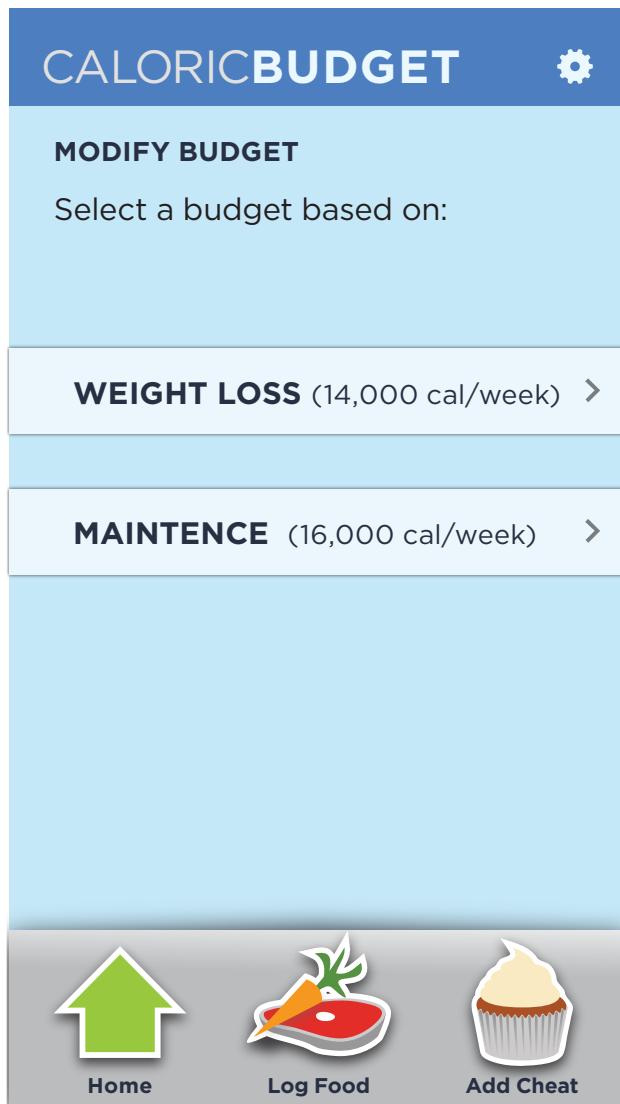
MEDIUM (Light Exercise) 

HEAVY (Athlete) 

 Home  Log Food  Add Cheat

CALORICBUDGET

Phase III: Refined Design



CALORICBUDGET
Phase III: Refined Design

I considered the three main types of colorblindness before finalizing my color palette; Deutanopia, Protanopia and Tritanopia. I wanted to allow for differential in tone and contrast to provide a similar experience for those users who may be colorblind.

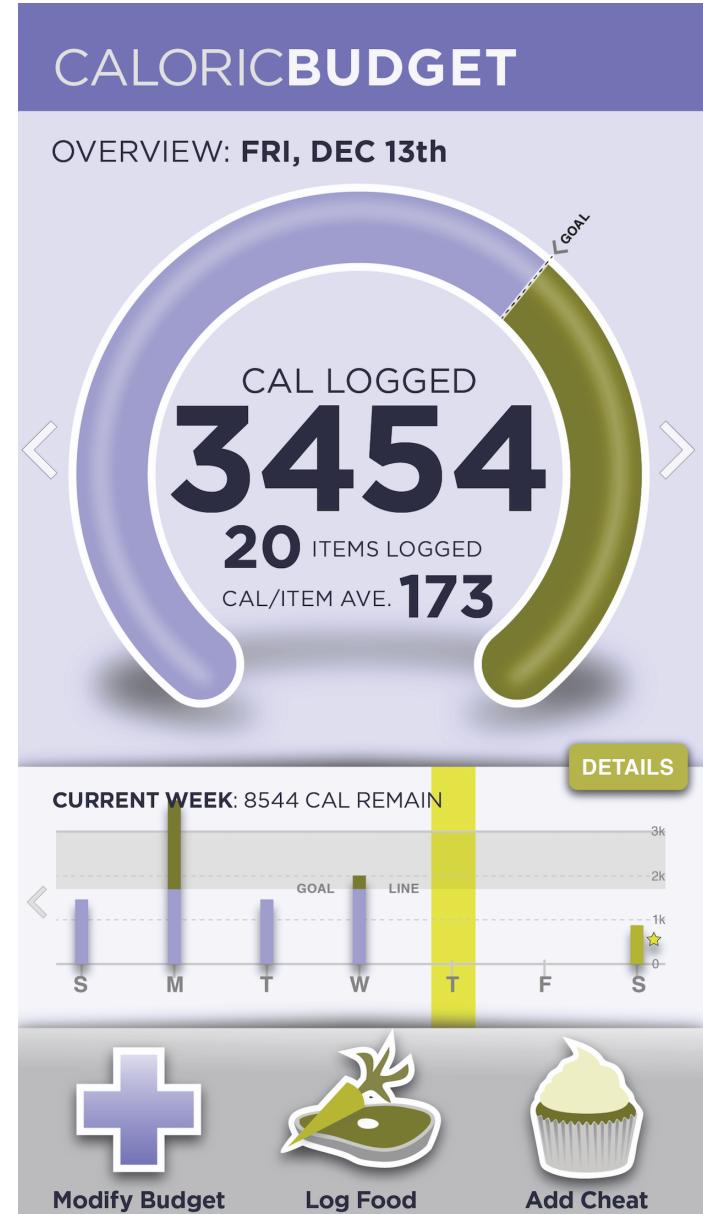
CALORIC**BUDGET**

Phase III: Color Blindness Consideration

Deutanopia

from http://en.wikipedia.org/wiki/Color_blindness:

“Deutanopia is a color vision deficiency in which the green retinal photoreceptors are absent, moderately affecting red-green hue discrimination. It is a form of dichromatism in which there are only two cone pigments present. It is likewise hereditary and sex-linked.”



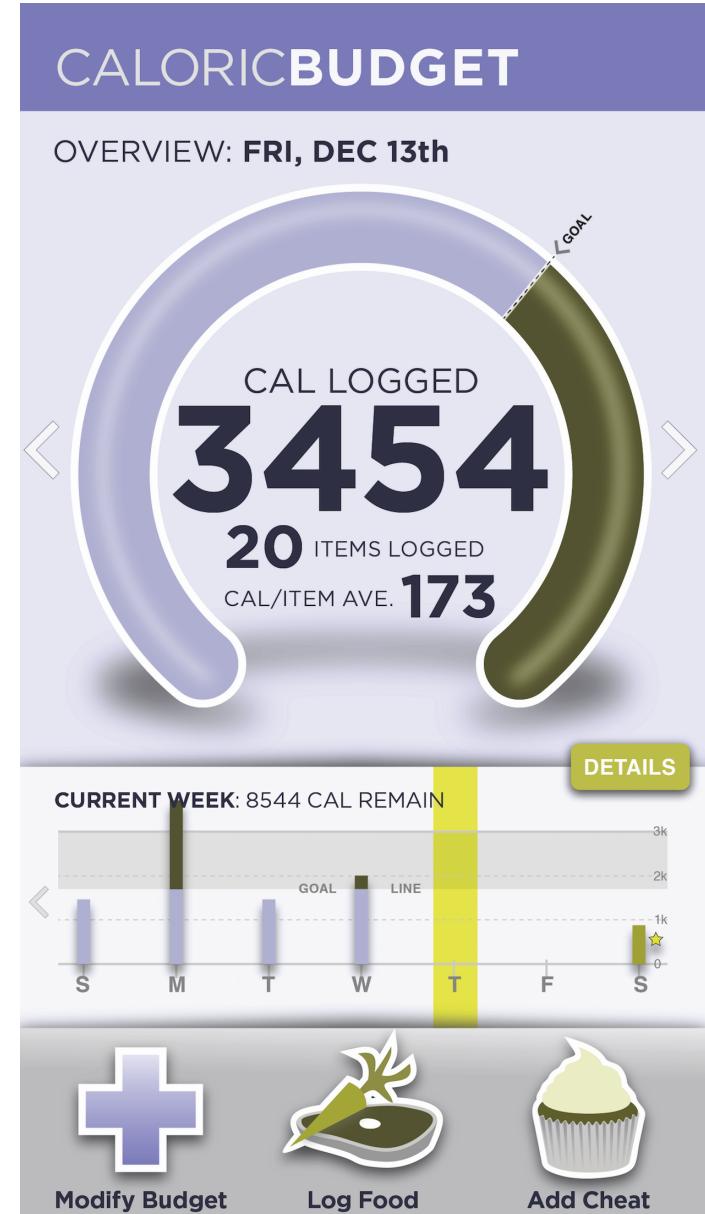
CALORICBUDGET

Phase III: Color Blindness Consideration

Protanopia

from http://en.wikipedia.org/wiki/Color_blindness:

"Protanopia is a severe type of color vision deficiency caused by the complete absence of red retinal photoreceptors. It is a form of dichromatism in which the subject can only perceive light wavelengths from 400 to 650nm, instead of the usual 700nm. Pure reds cannot be seen, instead appearing black; purple colors cannot be distinguished from blues; more orange-tinted reds may appear as very dim yellows, and all orange-yellow-green shades of too long a wavelength to stimulate the blue receptors appear as a similar yellow hue. It is hereditary, sex-linked, and present in 1% of males."



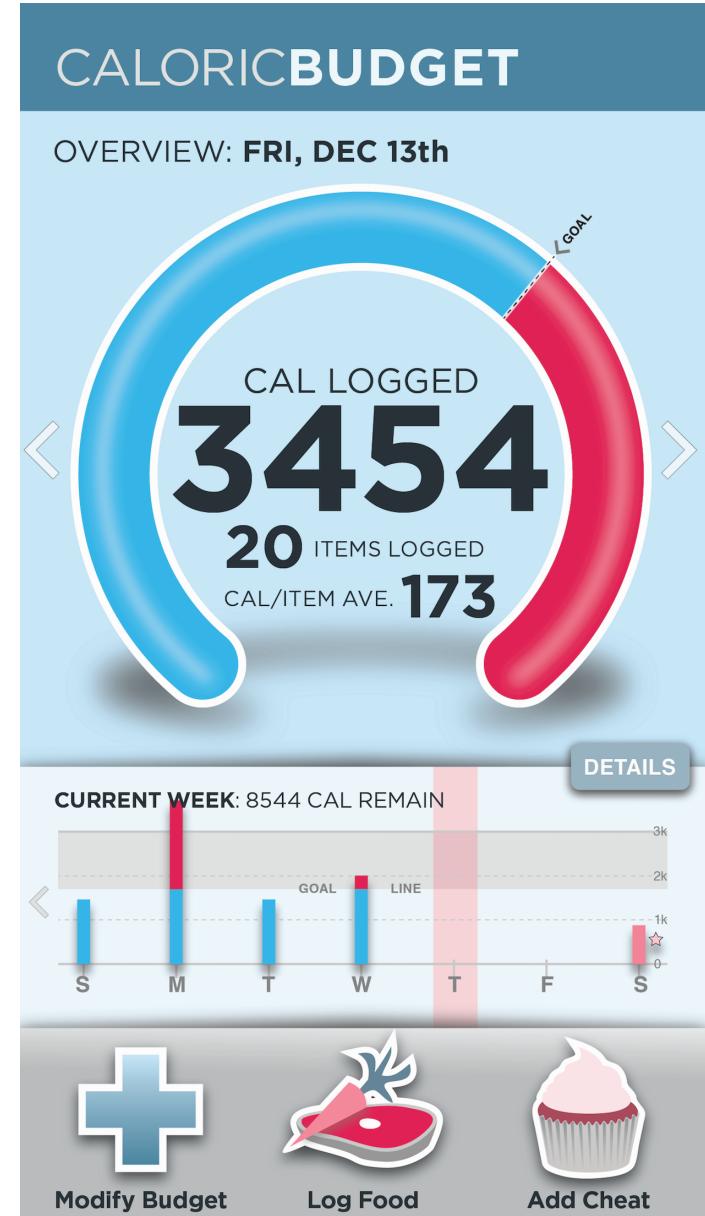
CALORICBUDGET

Phase III: Color Blindness Consideration

Tritanopia

from http://en.wikipedia.org/wiki/Color_blindness:

"Tritanopia is a very rare color vision disturbance in which there are only two cone pigments present and a total absence of blue retinal receptors. Blues appear greenish, yellows and oranges appear pinkish, and purple colors appear deep red. It is related to Chromosome "7"."



CALORIC BUDGET

Phase III: Color Blindness Consideration

Fred J.

'Between my doctor and my shortness of breath, I know that I need to be healthier. But I work hard and like to enjoy the little things in life like going out to a nice dinner.'

Male / 47 / Married / 2 children / Chicago, IL / Homeowner

BS, MBA / Financial Analyst for a hedge fund

Every day Fred wakes up, eats breakfast, usually consisting of either bacon and eggs or cold cereal, gets ready for work and rides the train about 45 minutes to work downtown. Over the past year he has started to notice that it takes longer for him to catch his breath after walking up the stairs to the platform. A few months ago his wife suggested he see his doctor to get a physical and to make sure everything was 'in working order'. The doctor ran some tests and, aside from being overweight, Fred is in decent health for his age. The doctor did recommend a better diet, regular exercise and cutting out Fred's occasional cigar.

Fred enjoys eating - but more so how food tastes in his mouth. When he eats, he eats for enjoyment. Typically for lunch he goes out with co-workers to one of the establishments near his work, which consists of the choice of sub sandwiches, burgers, fried chicken, thai food or Chinese. Fred's wife, Barbara, is a stay at home mom, prepares dinner. Over the years she has moted what Fred likes and doesn't like and no longer prepares those meals. Barbara tries to make healthy choices for her family, but it is difficult to also cater for their tastes. Fred's favorite meal that she cooks is pineapple glazed pork loin wrapped in bacon - he usually has two helpings. On the weekends Fred usually grills steaks for the family.

Fred was once fit in his 'prime' and is troubled to find out he is out of shape now in middle age. He wants to take his doctor's advice, but thinks it will be difficult to stay away from the unhealthy choices of food that he makes. Ideally, he would like to lose 20-30 pounds in the next year.

Fred uses a laptop for work and knows how to diagnose basic technological issues on his machine. He commonly uses spreadsheet programs, but also spends a good amount of time researching companies (for work) and sports (in his free time) on the internet. He and his family have a shared cellular plan and have all used smartphones for over three years.

Key Attributes:

- Comfortable with computers
- Desire to try a healthier lifestyle
- At the beginning of his health goals

Overview of Application Use - Fred:

Fred will use the application for both calorie tracking and to schedule reward meals for the weekend. He will track his at home meals and beverages (weekdays: breakfast and dinners, weekends: all meals, except if the family goes out for a meal) and meals out (weekday lunches, weekend potential for meals out). Fred enjoys eating "good" food and will be attempting to schedule his "reward" meals for the weekends in order to balance his calorie intake for the week. Being a smartphone user, he will mostly use the the application on his smartphone to track his meals and beverages, but may also use the web-based application on his laptop from time to time.



CALORIC BUDGET

Phase III: Personas

Susan T.

'Before I went away to college I heard of 'the Freshman 15' - I thought it was a myth or that it wouldn't happen to me. I'm healthy, I run a few times a week and do yoga when I can. However, between dormitory food and parties on the weekend, there was nothing I could do. I enjoy going out with friends for dinner and drinks but there aren't many healthy choices.'

Female / 21 / Single / No children / Ames, IA / Rents

Studying Veterinary Medicine / Student

Susan is a good student. She is studying to become a veterinarian at the local university and will graduate soon. She understands the importance of eating healthy, but doesn't feel like there are enough healthy choices when going out for meals and drinks with friends.

Susan doesn't live far from campus or from the area where she engages in her social activities. She mostly walks everywhere she needs to go. A few times a week she runs, 30-60 minutes a time when she can find the time. She used to do yoga more often, but her classes and social life have been keeping her from the gym this semester. She wants to make healthier food choices during the week so that she can offset 'partying' on the weekends.

Susan is moderately good with computers. She mainly uses her laptop to write papers, do research and play on social media sites. She has a smartphone. Her smartphone is two generations old, a hand-me-down from her parents. It still works, but she doesn't do much with it because she perceives it as 'slow'.

Key Attributes:

- Familiar with web browsing/interaction on websites
- Desire to eat healthier

Overview of Application Use - Susan:

Susan will use the application mostly for the reward structure. She will track her meals and beverage intake during the week in order to spend most of her calories on the weekend for "bad food choices" and alcoholic beverages. She may or may not use the reward function seeing as she does not have a specific reward in mind, but just the general "going out" weekend meals and drinking. Susan will use the application on her phone and on her laptop, depending on which offers her the best internet signal when she is ready to use the app.



CALORIC BUDGET

Phase III: Personas

Daniel P.

'I know people say this all the time, but I really do love my job... which is funny, because when I was a kid I hated school. I have always been a bigger guy so school was more like torture for me. Now that I'm in my 30s I am more interested in turning my weight around.'

Male / 33 / Single / No children / Cincinnati, OH / Homeowner

MS / High School Science Teacher

Daniel is passionate about teaching middle school science. He has been at his current school for the past ten years, since he graduated from college. His daily routine revolves around his disability. Dan has always been a bigger guy, but a few years ago he was diagnosed with Type II diabetes. Several times he has attempted to keep his diabetes under control by diet and exercise, but feels that he lacks the willpower to keep both up.

Dan likes to eat, so much that he notes that it is one of his 'pastimes' along with watching movies and playing video games. Aside from using his television and video game console, Daniel lists himself as 'technologically inept'. He is the last of his friends to still have a flip phone, a fact that he wears as a badge. Dan is also a social media holdout, claiming to not have interest or desire to waste time on those sites. For his job, Dan has a laptop, but he uses it for grading, giving class presentations, getting directions and sparingly using the internet.

Daniel would be interested in using an application or device that would help him to get motivated as long as there is training included.

Key Attributes:

- Needs to moderate diet
- Moderately technical

Overview of Application Use - Daniel:

Dan will use the app to assist his weight loss and management. His budget will help him to refine his eating habits. However, no successful diet is so strict to disallow cheating. Dan may use the reward system from time to time, but that will not be his primary goal for using the application. He will use the application on his computer since he does not have a smartphone.



CALORIC BUDGET

Phase III: Personas

Vanessa D.

'After I left Paul I was relieved. I wasn't getting as much out of life as I want. Now I want to feel sexy and don't know how to meet people.'

Female / 48 / Divorced / 3 children / Philadelphia, PA / Homeowner

High School Graduate / Factory worker

Vanessa, mother of three, is recently divorced. Her marriage to Paul, her now ex-husband lasted 25 years. Newly single, Vanessa is interested in reentering the dating scene but feels awkward doing so. Her self-image after her failed marriage is not great; she is feeling overweight, unsure and undesirable. Vanessa's friends at work have suggested a personal trainer, but she has neither the time nor the money to join a gym. She would like to gain more self confidence and look better, but has no immediate goals set to achieve either.

Her eating habits are not great. Being a full-time worker and raising three children means that dinners, and consequently her lunches are mostly casseroles. Neither she nor her children like vegetables much. She does like some fruit, such as apples, orange juice without the pulp and she adds 'the flavor of gummi peach rings'.

Vanessa's children have a laptop that they share, but she has never used it. Technology, in her words, 'scares her'. At her job she operates a mechanical press, which runs off of a computer interface, but her part of the labor is removing the pressed pieces and stacking them in crates. She has a pay-as-you-go cell phone that she keeps only for emergencies. She has used the phone twice in the four years she has had it. Once when her car broke down leaving her stranded in the grocery store parking lot after it closed and once when she had a tire blowout on the way to visit her sister 3 hours north.

She would like to rekindle some of her hobbies from before her marriage, like dancing and reading. She is also an avid knitter.

Key Attributes:

- Non technical
- Wants to be healthier, but doesn't know how to go about it
- Desire to make a change at this point in her life

Overview of Application Use - Vanessa:

Vanessa will be using the application to help her to make better food choice decisions with the motivation to lose weight. She may occasionally use the reward system to plan out meeting with friends or, she hopes, dating. Technology will be the difficulty for Vanessa, seeing as she does not feel technologically competent. She will be using the web-based application and will not be using a mobile version of the application.



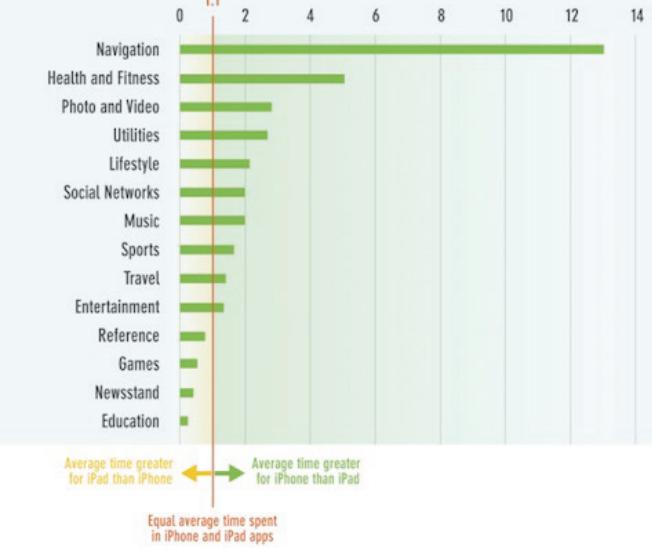
CALORIC BUDGET

Phase III: Personas

While my personas are my target audience, I researched information for who is currently using Health & Wellness applications on SmartPhones. I thought that, while my target audience is defined by my personas, I would better optimize for whom the main audience will be. In my research I found a company called Flurry, whose main focus is measuring and quantifying mobile usage. Their information is mostly locked down except for articles they post to their blog, but within these articles I was able to glean some pertinent information that could help to tailor my product.

CALORIC**BUDGET**

Phase III: Redefine Audience

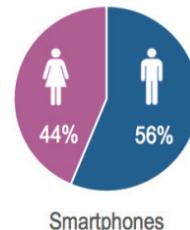


Source: Flurry Analytics, May 2013, n= 44,295 iOS devices.

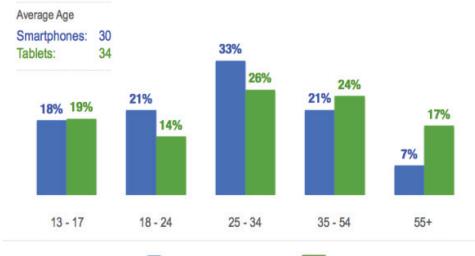
Data from the 2012 Flurry article, 'The Truth About Cats and Dogs: Smartphone vs Tablet Usage Differences' (<http://blog.flurry.com/bid/90987/The-Truth-About-Cats-and-Dogs-Smartphone-vs-Tablet-Usage-Differences>), the average of smartphone users is 30 years of age. 56% of smartphone users are male. Smartphones appear to be used mostly for gaming (39%) and social media (24%) with Health & Wellness clocking in at a mere 3%. The average use per session of a smartphone is 4.1 minutes.

This data is backed up by another Flurry static from 2013 in the article, 'Health and fitness users prefer iPhones to iPads' (<http://mobihealthnews.com/24847/health-and-fitness-users-prefer-iphones-to-ipads/>), although suggest that Health & Wellness applications clock in around 5 minutes per session.

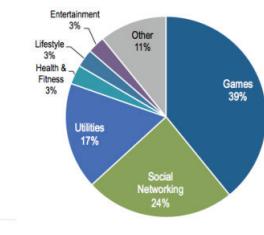
Gender Comparison,



Age Distribution, Smartphones versus Tablets



Time Spent per Category

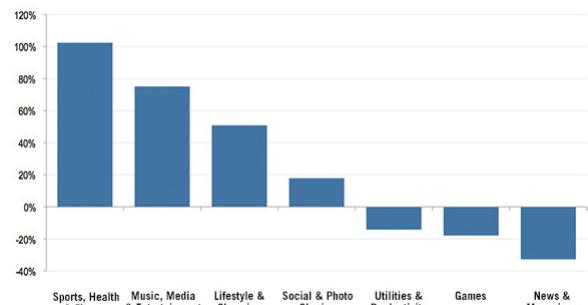


CALORIC BUDGET

Phase III: Redefine Audience

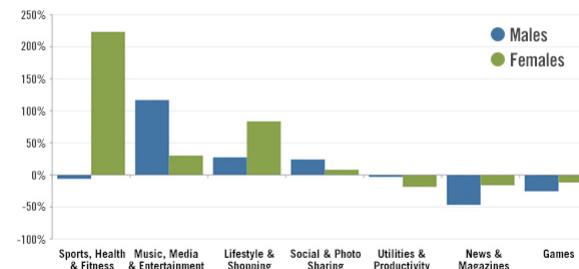
Returning to the first article, Smartphone usage spikes between the hours of 7pm and 10pm. This usage information is backed up by another Flurry article from 2013 titled, 'A Day in the Life of a Mobile Consumer' (<http://blog.flurry.com/bid/98080/A-Day-in-the-Life-of-a-Mobile-Consumer>). This 'Day in the Life' article suggests that iOS smartphone users, ages 25-34 are 100% more likely to use Health & Wellness applications over other age demographics and that those users are more likely females over males. So, if I am refining my target demographic for my application, I should be targeting females between the ages of 25 and 34. There should be some sort of a promotional effort built into the application to use it before bed between the hours of 7pm and 10pm and tailor the interaction to fit within a time limit of 4 to 5 minutes or less. Another consideration that needs to be made for my user base is income, which would need to be enough to afford a smartphone and data plan to be able to run the application.

How Young Adults Age 25-34 Index Against All Age Groups



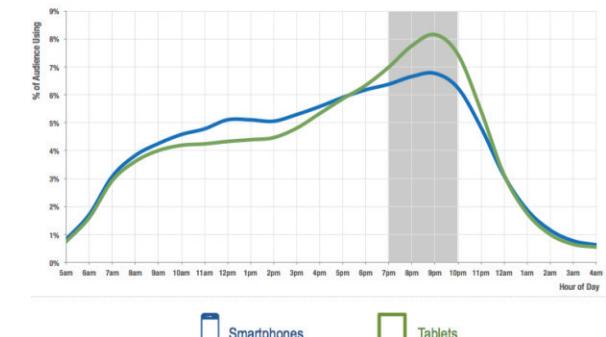
FLURRY Source: Flurry Analytics; random sample of 15,271 American (13+) iOS device owners, May 2013 data.

How Young Adults Age 25-34 Index Against All Age Groups- Gender Cut



FLURRY Source: Flurry Analytics; random sample of 15,271 American (13+) iOS device owners, May 2013 data.

Usage by Hour, Smartphones versus Tablets



FLURRY Source: Flurry Analytics, Sep 2012

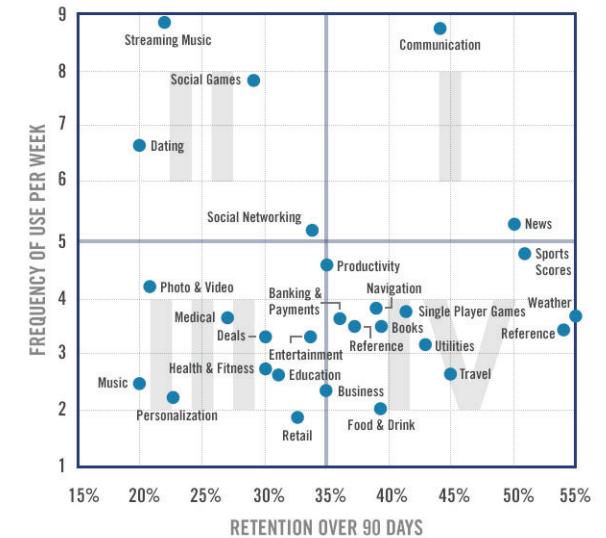
CALORIC BUDGET

Phase III: Redefine Audience

CATEGORY	AVERAGE USER RETENTION			FREQUENCY OF USE BY WEEK
	30 DAY	60 DAY	90 DAY	
Health & Fitness	47%	37%	30%	2.7

From the Flurry article, 'App Engagement: The Matrix Reloaded' (<http://blog.flurry.com/bid/90743/App-Engagement-The-Matrix-Reloaded>) their data (from 2012) shows that Health & Wellness applications have a 30% retention rate over 90 days and get used, on average, about 3 times per week. Looking more specifically at the retention rate, there is a 47% retention rate at 30 days, 37% at 60 days and 30%, as mentioned above, at 90 days of use. From my personal experience with using Health & Wellness applications, I can assume that the tapering off of users over time is due to two factors; First, most people don't like to exercise/diet - Health & Wellness applications are typically tailored to the audience who are interested and need motivation - at first the application provides that motivation, but dieting and exercising either sticks or it doesn't. I imagine that the taper rate of people falling away from their diet/exercise regimen would be similar to the taper of retention of using Health & Wellness applications. The second factor that may be the reason behind the retention taper is the nature of the redundancy of these applications. Users start the application, log information (either manually or through sensors on the device), the information gets recorded, the app gets turned off. This can either get boring and users stop using the application, or, the user learns from the application how to eat better or how to work out on their own and no longer needs the assistance of the application.

Loyalty by Application Category



CALORIC BUDGET

Phase III: Redefine Audience

This information can either be accepted as the way things are, or we as designers can attempt to add in more motivation as users interact with the application. Redundancy is natural when it comes to things that are produced. Something is new and interesting at first, then the user gets accustomed to it, then it becomes old and disused. The real solution to redundancy is to reinvent an application or experience over and over in different ways. Most companies will not have the budget or manpower or desire to continually develop an application that most likely was sold to users at \$.99 per unit. Angry Birds, the mobile video game sensation has done something similar to what I am proposing, taking the base concept and reimagining it in different settings, adding different characters with different abilities, however, each time they release a new version, the new version costs another \$.99 per unit. I don't have an answer to the taper effect for my application specifically. As Andrea Quam mentioned in my Phase I review on October 15, 2013, she would like to see a 'kick' or motivator added to increase retention. What that is, I still don't know.

Staying with my personas, according to my research, Daniel and Susan fit into my target demographic. However, Fred and Vanessa would be my secondary audience, still important for consideration.

CALORIC BUDGET

Phase III: Redefine Audience

Alerts

Future versions of Caloric Budget would need to include a notification system to send alerts to the user when the application is not in use. These alerts should be optional and tailored to the users need, such as offering text, email and device-based notifications. These alerts would be to remind users to input food at certain points in the day (e.g. breakfast, lunch, coffee break, snack, dinner, etc.) to drive the use and functionality of the application. Users could select to add, modify or remove these alerts.

Additional alerts would be goal-based notifications, such as daily caloric updates, proximity to weekly goal/intake, last week intake review with overview of problem day/times to enable recognition of potential over-intake in the future, 'cheat' overview, etc.

CALORICBUDGET

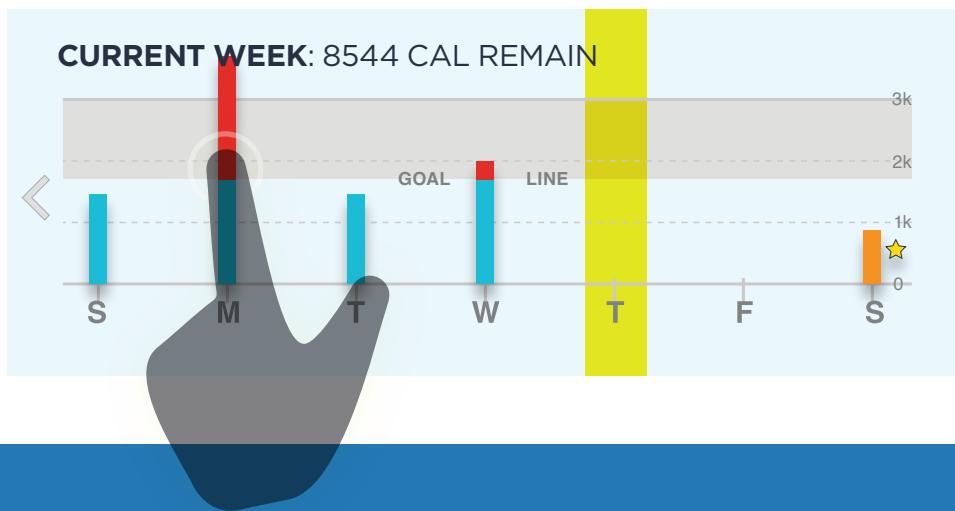
Phase III: Future Aims

Functionality/Features

One feature that Caloric Budget should include in the future is the ability to share results with others. At this point I am not sure, or interested in creating a pseudo-social network for Caloric Budget, however, being able to connect current social networks like Facebook, Twitter or G+ and present information from the application, or the ability to email caloric details to contacts. This would be more important for the user who needs outward input/motivation, but is also a good way to develop interest in the application and discover new users.

Another feature that would be interesting to include in future versions of Caloric Budget would be to connect the application to a web-based charting feature. Users can log in using their Caloric Budget username and password and view their intake from when they began using the application. With the data stored on a server, all sorts of charts and data can be delivered to the user. This data could be used to help to make visible patterns in the users caloric intake and help to predict ways that users can improve their caloric intake habits.

Lastly, in the newest revision, users will be able to click the days in the Week Overview area to view that cooresponding Daily Overview.



CALORIC BUDGET

Phase III: Future Aims

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CALORIC**BUDGET**

Phase III: Final Page