Georgia Tech Human Computer Interaction

APEX

R3 Design Ideas & Feedback

PSYC 6023 / Research Methods for HCI

Gabriel Britain
John Britti
Phoebe Tan
Wenrui Zhang

10 / 26 / 2020

Table of Content

01 Introduction

We seek to improve vegans' and vegetarians' experiences when dining out. From our prior work, we've gathered exploratory data to define our problem statement (R1) and gathered more user experience data to brainstorm design solutions (R2). Now, we seek to narrow our design concepts towards our final prototype.

This report expounds on the Discover phase in our project. We intend to converge on a more narrow or defined design concept towards our final prototype. To identify a final design, we conducted two sets of user feedback sessions. The first set was based on storyboarded sketches which we tested with four participants over two days. The next set was based on low-to-middle fidelity wireframes, again tested with four users over a span of two days. We split our process into steps to refine our sketches based on user feedback before transforming them into wireframes.

We'll discuss the original sketches and storyboards, user feedback and our analysis, our refined concepts and wireframes, and user feedback on those wireframes. We will also discuss and justify our future plans for design iteration. Lastly, we included lessons learned at this phase.

Our more granular goals during this phase relate to testing and evaluating our design concepts with our target users. Thus, we focused on:

- **User flow.** Do our current wireframes make sense to users? Are they intuitive? Where are the hiccups in the design or flow? What specifically, needs to be changed?
- **User task analyses.** Can users successfully interact with our designs to complete common tasks associated with our current concepts? If they find it easy or difficult, why? What must be improved, changed, or omitted?
- **Other specific design issues.** What language fits users' mental models? What's misleading or confusing? What should be changed so users can clearly predict the consequences of their actions, or know what they need to do to achieve their goals?
- **User needs.** Do our design solutions fulfil our target population's strongest needs? Are we ignoring any key gaps?
- **User goals.** Do our design solutions allow users to achieve their goals? What is in the way? How can we enhance the experience to make it more seamless for them?

We investigated these key topics in our design feedback sessions that we conducted. The resulting insights were then used to inform our suggested improvements and plans for our final prototype.

02 Sketched Concepts

2.1 Designs

2.1.1 AR Menu Reader

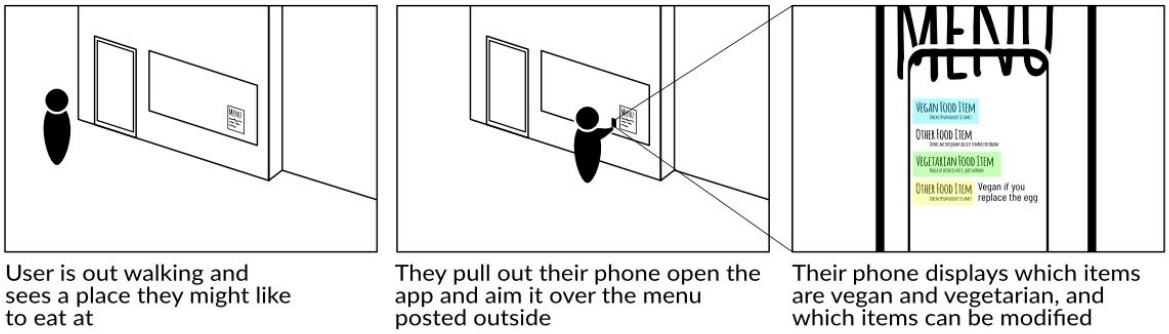


Figure 2.1.1. AR Menu Reader concept sketches

This design allows users to quickly scan menus to find items they can eat though an AR overlay on their phone. While out and about, they can pull out their phone, hover it over any menu, and have vegan and vegetarian items highlighted. It will also highlight dishes that can be made vegan or vegetarian through simple modification

2.1.2 Vegan/Vegetarian Secret Menu

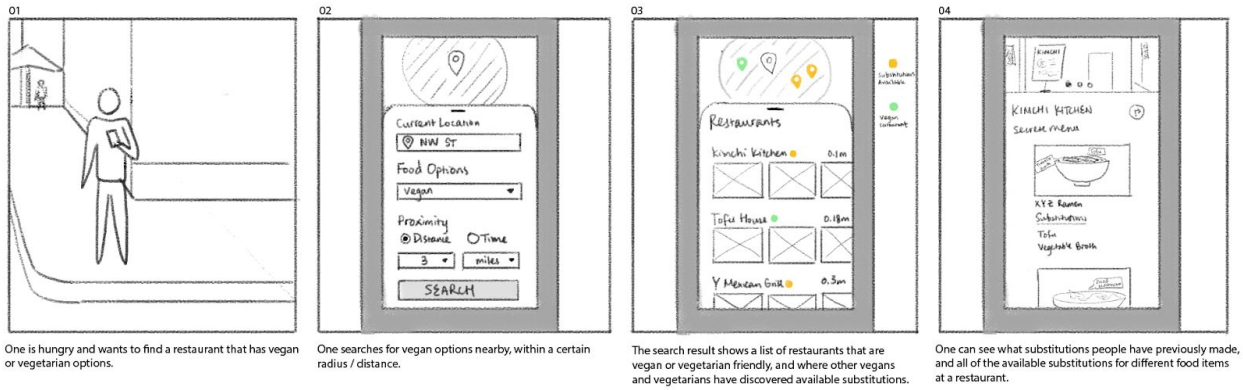


Figure 2.1.2. Vegan/Vegetarian Secret Menu concept sketches

This system allows users to discover vegetarian / vegan options through a combination of menu items posted by restaurants, and substitutions / alternative meals that other vegans and vegetarians have ordered before. By utilizing crowd sourced data, the system helps vegans and vegetarians build a more close knitted community for sharing and helping each other discover sustainable food options when dining out.

2.1.3 Scheduled Restaurant Notification & Local Discovery

This app gives users a controlled way of being notified of vegan / vegetarian-friendly places based on geo-location. The system doesn't bombard them with notifications, but allows them to customize when they want a "delivery" of notifications to come through. If they want to receive notifications earlier, they can choose to receive their "delivery" early.

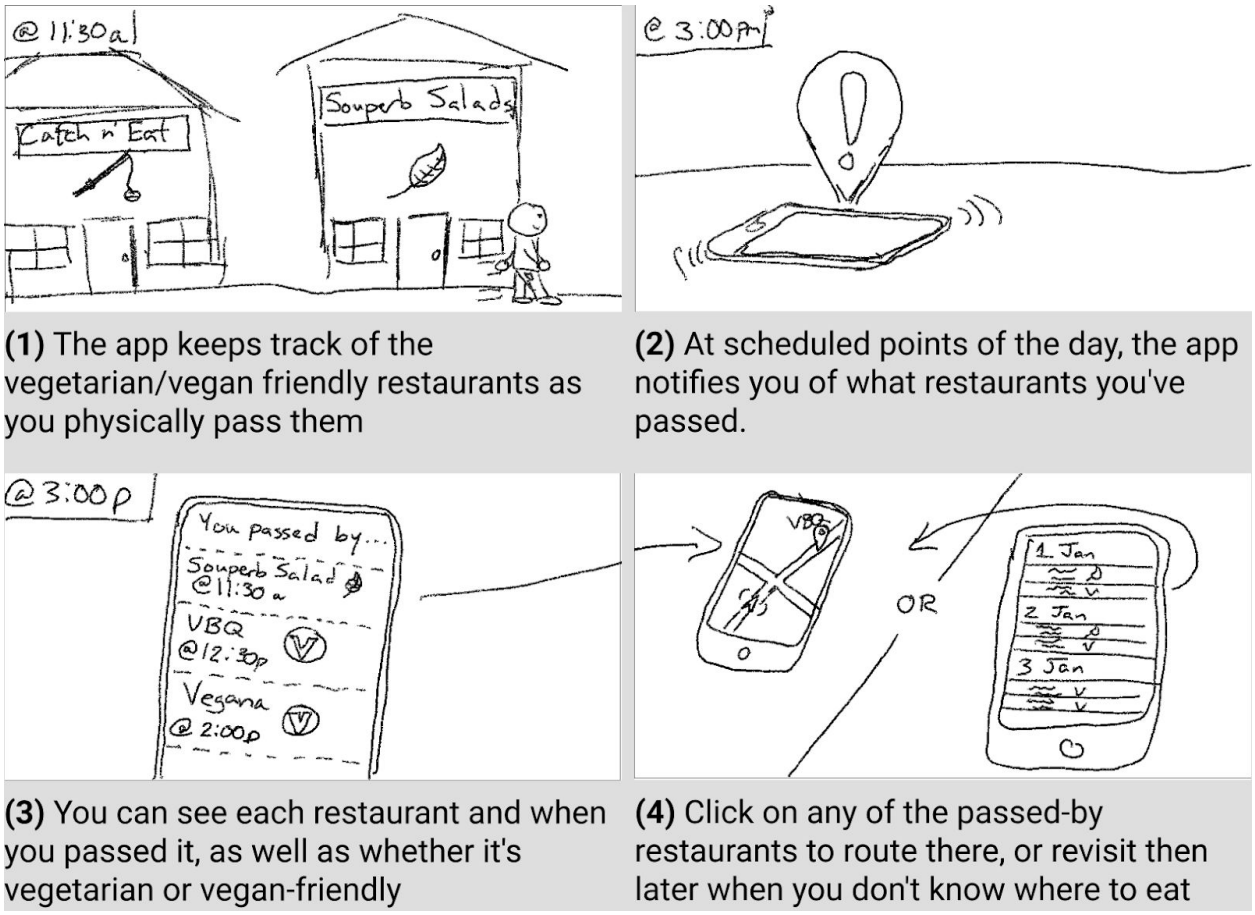


Figure 2.1.3. Scheduled Restaurant Notification and Local Discovery concept sketches

2.2 Session Design

To test our design sketches, we designed and conducted a 30-35 minute 1-on-1 user feedback session through Mural. Our previous 1-on-1 studies were longer, but we successfully conducted a similar feedback session with 10 sketches for our design project in under 45 minutes, so we tried to conduct these on a tighter time frame out of respect for our users' rapidly-tightening schedules. The study consisted of 5 phases:

1. **Introduction [3-5min]**
   Following our script, we introduced ourselves, the project, and the plan and objective of

the session. We then asked the user for their permission to be recorded, and for any questions they had before beginning.

2. **Participant Information [<1min]**
   Though we screened each user before asking them to participate, we still wanted to confirm certain details like how often they ate out and whether they considered themselves vegan or vegetarian to contextualize their answers.
3. **Rose/Bud/Thorn Sketch Walkthrough [20min]**
   In this activity, we described each sketch, and let the participant ask any clarifying questions. After we confirmed that they understood the idea, we asked them to think of what they liked about the design (roses), what they didn't like about the design (thorns), and aspects that had potential, but could use development (bud). As they spoke, we created colored sticky notes on each design based on their answers.
4. **Rating [1min]**
   After going through the sketches, we had the participant rate each design out of 10, and explain the rating. We explicitly told participants that these ratings were not intended to be rankings, and that they should rate each design independently of the others.
5. **Follow-up Questions [3-5min]**
   If there was time remaining and we wanted to clarify something with the user, we asked them follow-ups or other questions we felt weren't yet answered.

Script

The following was the script prepared for our feedback sessions (sketched concepts).

Objective

Assess 3 design concepts with real users

Introduction

[3-5 mins]

Hi [*participant name*]. Thanks for taking part in this feedback session. I [your name] will be interviewing you while my teammate here [notetaker] will be taking down notes and may interject at any point to ask questions too. This session will be recorded, are you alright with that?

[Briefly explain context]

We're presenting 3 design ideas we generated to improve the vegan/vegetarian experiences when eating out.

I'll walk you through each concept. We will stop at each concept so you can rate the Rose, Thorn, Bud for that concept. Roses are anything you like about it, Thorns are things you dislike, and Buds are anything that has potential to become something you like (Rose).

Feel free to be as honest as you like, we won't be offended as we are aiming to design the best solutions for our users like yourself.

After walking through all 3 concepts, you will then give an overall rating for each concept. Just your general impression and liking or dislike; you would rate it out of ten, ten being the best and 0 being the worst. You can also leave any general feedback or comments throughout the session and we will record that down.

[Important Note]

a. Please keep in mind that these sketches are to visualize ideas, these are not the final product or concept, so keep this in mind when it comes to your ratings
b. The ideas are not organized in any particular order

At any point, if you have any questions or concerns, or want to drop out from the study, please feel free to interject me and let me know. Do you have any questions before we get started?

Participant Info

[<1 min]

1. Are you vegan / vegetarian?
2. How often do you eat out (can be delivery, takeaway, or dine in) in a week?

Feedback Session Procedures

1. 2-3 mins [Walkthrough (describe) concept 1 storyboard with participant]
2. 2 mins [Let the participant ask questions, answer]
3. 1-2 mins [Rose, thorn, bud for Concept 1] Explain concept, then 1 min for participant to stick sticky notes on board
4. Repeat for Concept 2 & 3.
5. Rate 3 concepts out of 10
6. Follow up questions:
    a. Would you use this?
    b. Would you use this over your current system?
    c. What is the key benefit offered by this design?
    d. From the potential features, which ones would make you use the design?
    e. Which features were missing that would make you want to use it?
    f. Feel free to annotate any changes or corrections that you feel would improve this concept.
    g. [For Concept #2, crowdsourced secret menus] Would you log the substitutions you found when eating out? Do you see yourself helping other vegs through this channel?
7. [Ask for feedback on session design]
8. [Thank participant]

2.3 Findings for Sketched Concepts

During the sessions, we recorded our findings in a prepared template (Appendix A)
In this section, we highlight accessibility issues we found in our feedback session dry run. For our design concepts, we organized the design concept issues based on each respective concept in the table below, along with their descriptions, evidence, and recommendations:-

Issue	Description	Evidence	Recommendation(s)
Accessibility of Session Design			
Visual heavy	Our session depended heavily on design concepts that were conveyed in visual wireframes on Mural. Thus, participants with visual impairment would have had a difficult time interacting and testing the wireframes	Internal evaluation	Develop clear, detailed alt-text or verbal descriptions for our wireframe design concepts. Test these concepts on their clarity with target participants and refine the guides where needed.
Mainly auditory-verbal communication	We communicated via verbal-auditory modes using Microsoft Teams; we gave introductions, session outlines, instructions, asked questions, and etc, by speaking and listening to our participants. Thus, participants with auditory and/or verbal impairments might likely have struggled with the feedback session.	Internal evaluation	Ensure closed captions are enabled for participants with auditory impairments; ensure chat, written, or other preferred forms of communication are available for participants with verbal impairments. Obtain participant feedback on their experiences and needs, and refine the communication method.
Need internet access and smartphone / computer	We recruited users via Slack, email, and Microsoft Teams; we ran the sessions using Microsoft Teams and Mural. Without internet access and a proper device for communication as well as access to view the Mural board, participants would be	Internal evaluation	Re-use the alt-text / description heavy guide prepared as an alternative to visual-heavy sessions; utilize other forms of communication such as dial in / landlines so that users can access the sessions without the need for internet

	hindered from have a full experience in the sessions		access or a smartphone / computer.
Concept 1: AR Menu Reader			
Using color highlight may be inaccessible or difficult to understand	Some users may not be able to distinguish between colors, and even those who can, may not understand what they mean	**U4**: “Legend for color-coding would be nice”	We should design icons to associate with each highlight
Our users don’t want help deciding on a place to eat when they’re already out	All of our users indicated that they decided where to eat before going out, and that this design didn’t support that ordering. We had anticipated this response. While the intent of the design was specifically to encourage more spontaneity, it was clear that this design wouldn’t compel the average user to alter their current behavior.	**U1**: “Unlikely use case for me; looks up menu before going out”	We should design the menu reader to better function in at home settings, where the user isn’t required to interact with physical menus
AR isn’t helpful to our users	Our user base seems perfectly comfortable with using their digital devices for the entirety of the discovery process, so the idea of pulling out their phones and having to physically point their camera at a real menu is actually a limitation. They said they usually just look at menus online and worried that they may not be able to easily access a restaurant’s physical menu.	**U2**: “Looks up things with phone, so couldn't scan the phone” **U3**: “What if one is waiting inline and cannot scan?”	Our design shouldn’t be limited to a camera pointing out to the real world, but rather work on digital menus as well.

The highlight feature is helpful for its convenience	Users noted the convenience of the menu highlight in making menus more legible without much effort	**U3**: “very efficient, don't have to ask server” **U4**: “Neat that it's not super involved”	This feature is good, but given the other findings, we ought to maintain this core functionality
Concept 2: Vegan/Vegetarian Secret Menu			
Reading through menu substitutions is too much effort	Users will sometimes limit their choices to options that do not need modification instead of asking for substitutions. Some also prefer to order from familiar restaurants to minimize work.	**U1**: “I won’t put that much effort in looking for substitutions. I’d just go for ready options.”	Provide users with simplified substitution item information through visual indicators. Only show the specific substitution ingredients when the users want to delve deeper into them (e.g. using a collapsible menu).
Overview total number of vegan/vegetarian options	Scrolling through each menu to see all of the available options is too much effort. Users want to quickly find out how many vegan/vegetarian options are available at each restaurant.	**U3**: “I want to see which restaurants have *many* or *no* vegetarian options.”	Provide an overview of the total number of vegan/vegetarian options available at each restaurant, next to the restaurant listings.
Crowd-sourced food substitutions requires a large user base to be effective	Without an expansive and comprehensive database cataloging available substitutions, users may not want to use the secret menu functionality.	**U2**: “The crowd-sourced menu depends heavily on how many people use the app.”	1) Incentivize users (e.g. monetary rewards) to contribute to the crowd-sourced menu database. 2) Aggregate different sources and incorporate substitution items found in blog posts, and other platforms (e.g. Yelp.) 3) Ask restaurants to compile a list of available substitutions /accommodations, or gather the substitutions

			other vegan or vegetarians have ordered.
Lack of incentive to contribute	Users admitted that they would not contribute to a crowd-sourced list of dishes. Their justification was that creating an entry for their meal seemed like a hassle, and that they don't usually contribute to these kinds of things. That being said, it only takes a small percentage of users contributing to the app to have an acceptable number of options. Additionally, our four feedback participants may not be representative of the entire population. Theoretically, this concept could stay afloat with a relatively small number of dedicated contributors. Alternatively, users suggested that they would if properly incentivised.	**U2**: "It'd be nice to see other people's contributions/posts. I don't know how much I would contribute to the community, it seems like too much effort on my part." **U3**: "I might want to give back to the community if I find useful information on this platform, but I'm not sure how much I'd contribute. " **U4**: "I need monetary incentives (e.g. reward points, free meals) to contribute to the crowd-sourced menu."	1) Provide a good incentive for users to contribute to the crowd-sourced menu. For instance, the app could partner with restaurants to provide monetary rewards such as discounts, points, free give-aways, etc. 2) In addition to providing incentives, the in-app flow for contributing (i.e. uploading pictures, recording substitution items) must be easy to use and require minimal effort.
Concept 3: Scheduled Restaurant Notification & Local Discovery			
Mistimed notifications	Users are concerned that they'd receive notifications at times that are convenient for them. Getting a notification after a meal would be frustrating, and getting one too far in advance would be annoying.	**U1**: "Notifications need to be intelligent, if not, I'd be annoyed." **U3**: "I'd want to customize the notifications"	Provide users with granular control over their notification delivery times. Also use basic heuristics to identify when users most want to see these notifications.
Location tracking and privacy	Users are concerned about providing constant	**U2**: "I'm not sure showing the time	Location access is integral to this

concerns	location access to an application, and feel they're being watched when presented granular information about when they passed restaurants.	I passed a restaurant would help me. It makes me feel tracked" **U4**: "Lots of people are particular about privacy and location access, this app immediately leaves them out."	application, so it can't be removed completely. However, the sensation of being tracked can be minimized by providing user with useful information that lacks granularity.

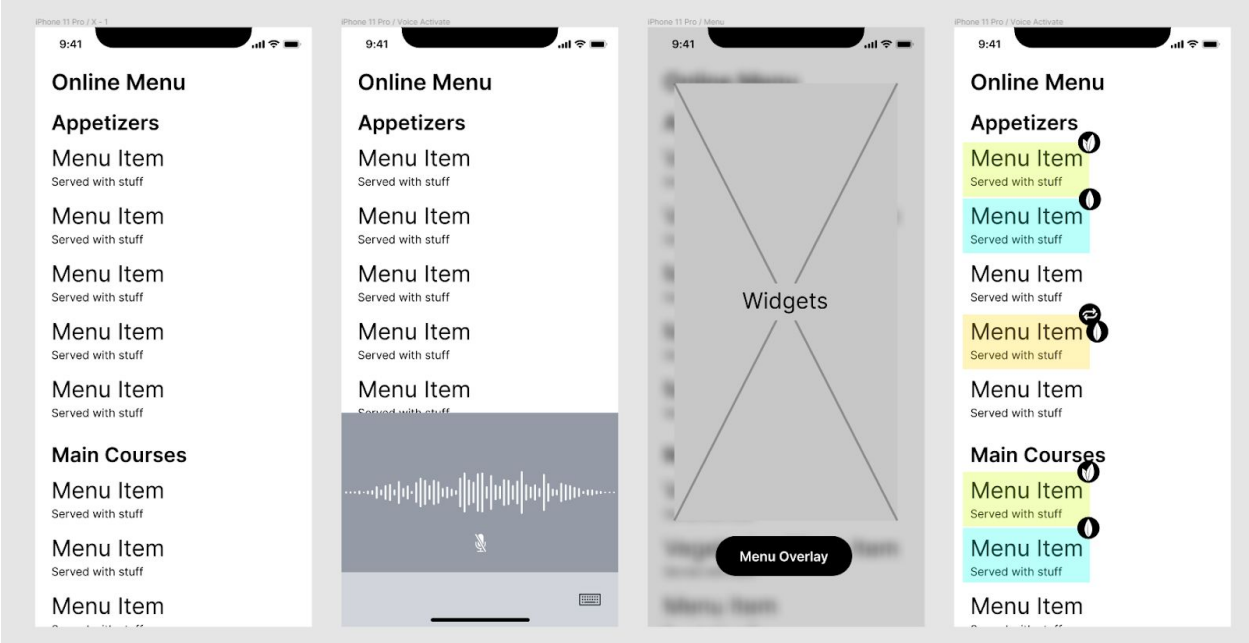
03 Wireframes

3.1 Design

Once we had compiled our sketch feedback, we conducted a debrief session for the consolidated findings (Appendix B). We then isolated the key issues or other highlights gained from the participants. These issues guided the designs of our wireframes; each team member received a concept to own the wireframe concept and flow. We created a team Figma account where we were able to work individually but also collaborate and help evaluate / feedback each others' designs when needed. From there, we transferred these wireframes as static images into our feedback session template and included text descriptions to help users understand the contextual usage of these concepts.

For each wireframe, we crafted scenarios to represent average use cases. These scenarios consisted of a situational context and several goals that would compel our participants to engage with every wireframe screen and their components. This allowed us to determine how effectively our wireframe supported the users in accomplishing their goals.

3.1.1 Menu Overlay



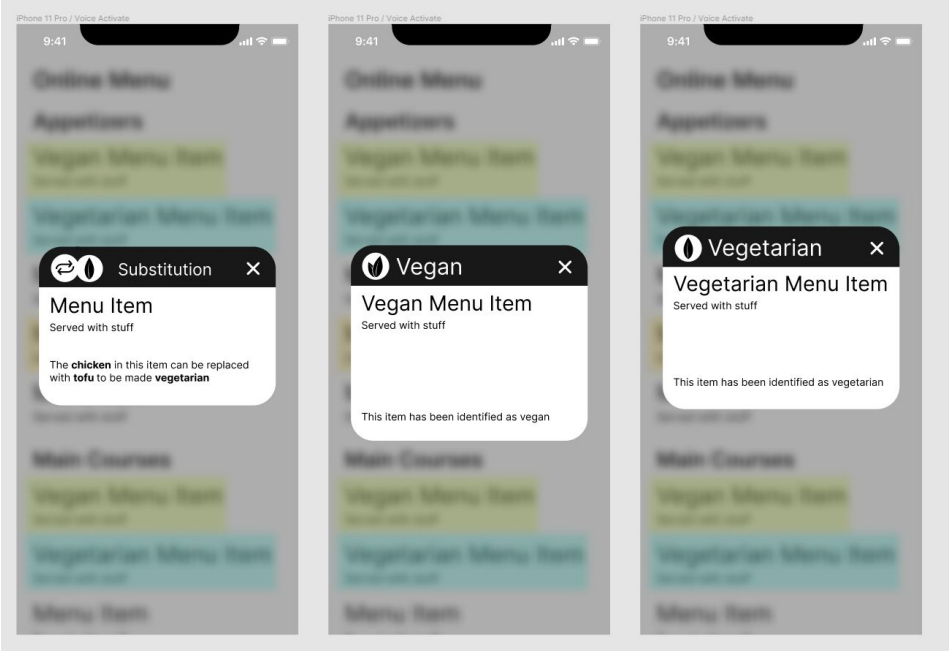


Figure 3.1.1. Menu Overlay wireframes

To iterate on the AR menu reader, we changed it to a universal phone overlay for menus. Rather than rely on the phone's camera, the overlay could be activated over any screen on the phone, so users could read menus they navigated to over the internet. The overlay can be opened either through voice activation or the widget menu, but otherwise the functionality is essentially the same as it was in the AR reader. We also added icons in response to user feedback, though we were unsure how to distinguish between vegan and vegetarian with icons, as there is currently no definitive solution that we could find.

3.1.2 Vegan/Vegetarian Secret Menu

Search for Restaurants

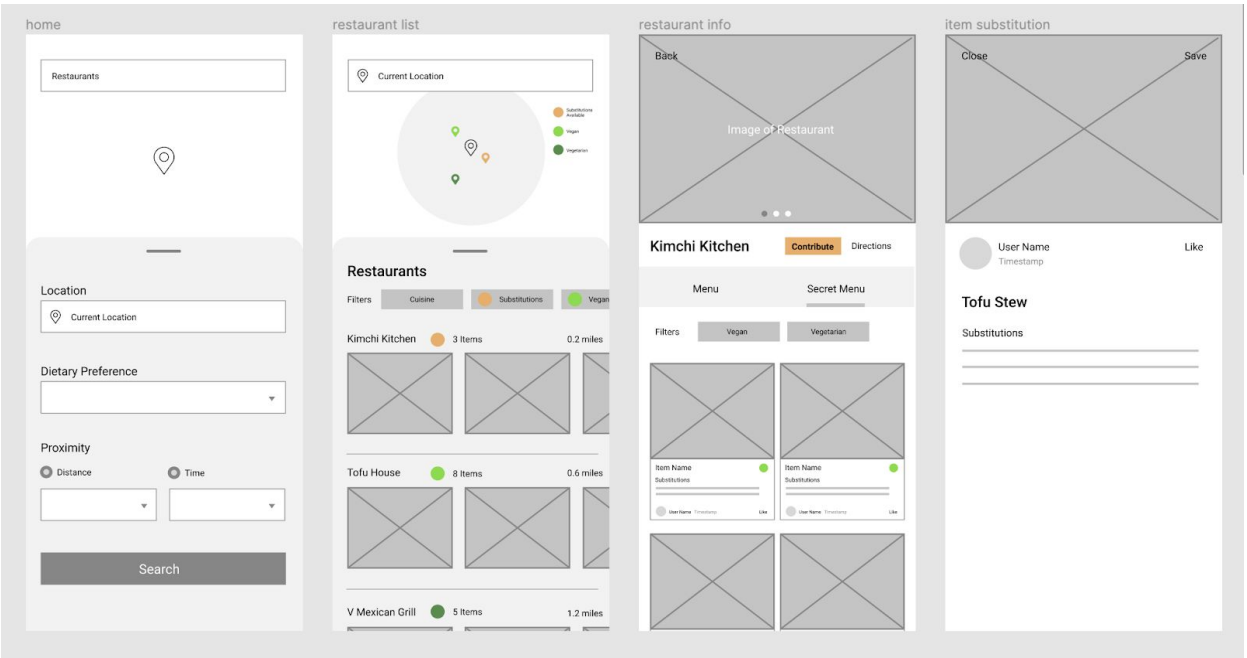


Figure 3.1.2-1. Vegan/Vegetarian Secret Menu - "Search for Restaurants" wireframes

Contribute to Crowd-sourced Menu

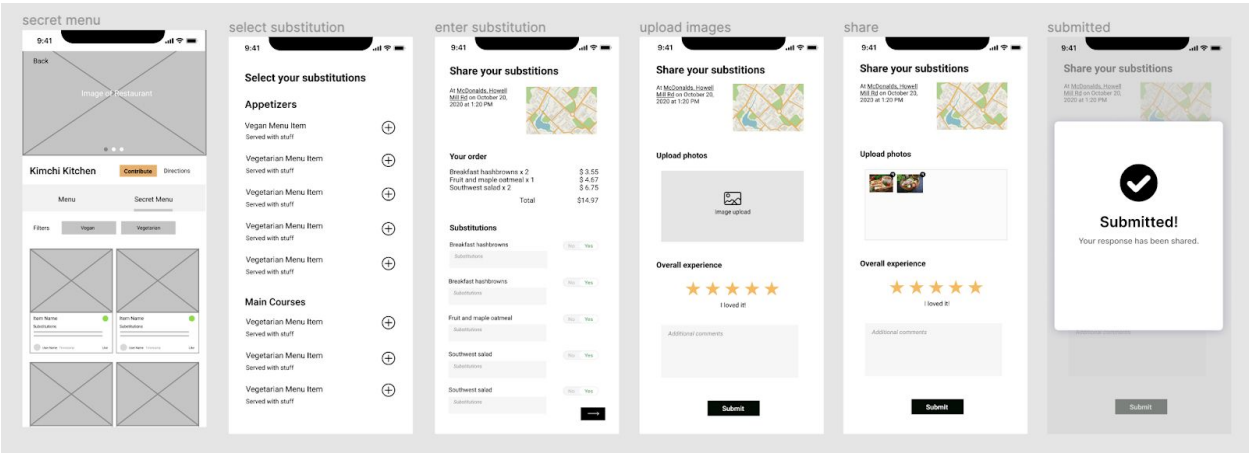


Figure 3.1.2-2. Vegan/Vegetarian Secret Menu - "Contribute to Crowd-sourced Menu" wireframes

To iterate on the crowd-sourced secret menu, we added the number of available vegan / vegetarian / substitution items offered by each restaurant, as suggested by one of the users from our previous feedback sessions. It proved to be a helpful piece of information for other

users as well. We also added separate cards for each item in the secret menu, as not all users want to read through the entire list of substitution ingredients. In this iteration, users can quickly browse through the available substitutions, and look more into specific ingredients if they want to.

Finally, we fleshed out the user contribution functionality since it is a crucial component of this design concept. While we recognize the lack of incentives to contribute, it seems that providing monetary rewards (suggested by some users from previous feedback sessions) is a marketing strategy / business problem rather than a design problem to solve. Hence we did not attempt to focus on providing incentives. Instead, we focused on minimizing the steps and effort required for users to share their substitution items. As shown in the wireframes, this process mainly involves selecting menu options, typing in substitutions and uploading images when applicable.

3.1.3 Scheduled Restaurant Notification & Local Discovery

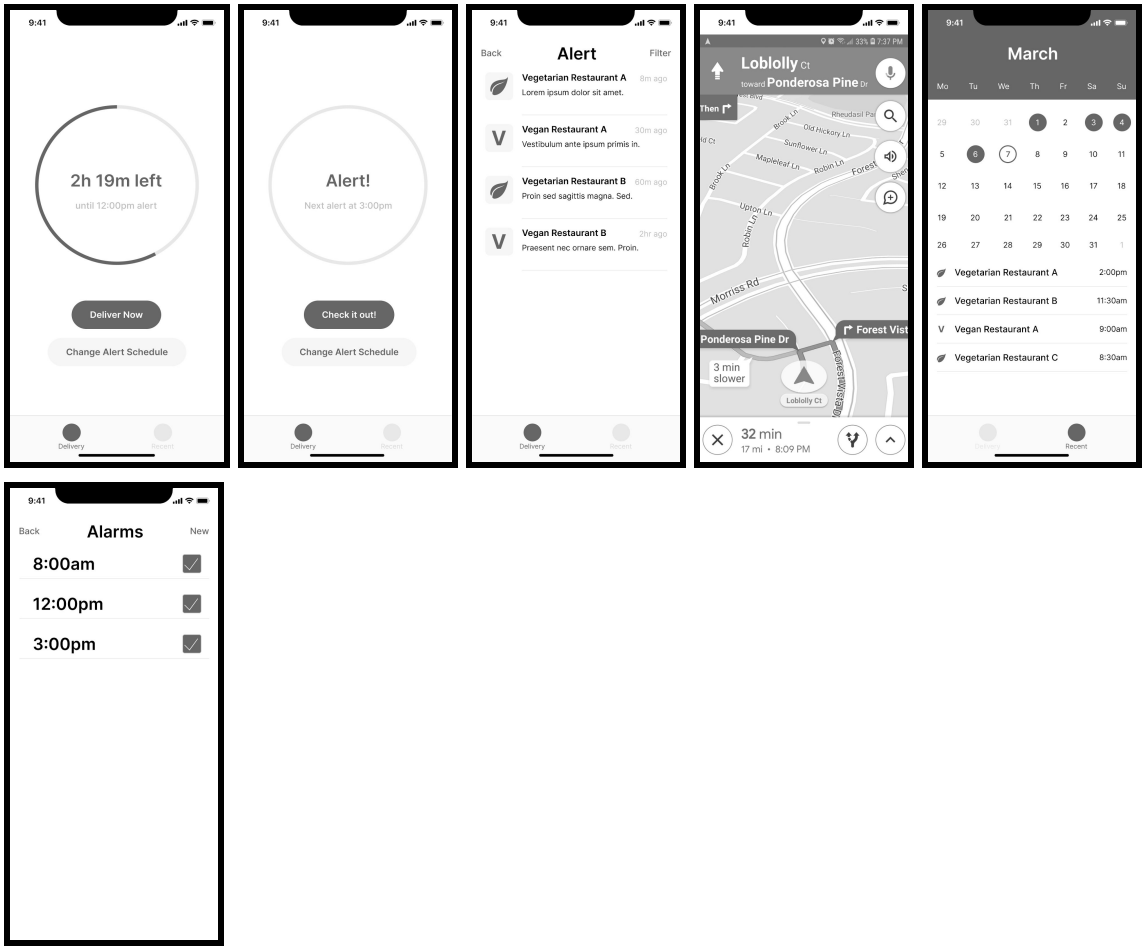


Figure 3.1.3. Scheduled Restaurant Notification and Local Discovery wireframes

Building off of what we had found from the sketches, we knew that users wanted more control over when they'd be notified. We added a new screen so that users can add and remove delivery intervals during the day, and made it accessible from the delivery screen.

3.2 Session Design

We conducted four sessions in total. The participants were taken from a list of vegans and vegetarians we collected during R1. Three participants were vegetarian while one participant was vegan. Two of them dine out or order take-outs on a more regular basis while the others do so less frequently. Each session had an interviewer and a notetaker. To distribute the responsibilities equally, each teammate participated in two sessions, serving as the interviewer for one session and the notetaker for the other. Most sessions took 45 - 55 minutes.

We presented our wireframes and ran the study on Mural. Adopting the Wizard of Oz method, we hid all subsequent wireframes and only revealed one screen (wireframe) per time. As users verbally describe their steps and trigger new actions, the corresponding screen was then revealed.

Our primary goal for these sessions is to get feedback on user (task) flow, Information hierarchy, and clarity in section layout. The overall structure of the sessions is as follows.

1. **Introduction [3-5min]**
   Following our script, we introduced ourselves, our project, and the general proceedings and objective of the session. We then ask the user's permission to be recorded, and if they have any questions before beginning. In addition, we let the participants know that the wireframes are not the final design and will go through further iterations and refinements based on user feedback.

2. **Task-based Think-alouds & Feedback [40-50min]**
   For each set of wireframes, we would provide the participants with a scenario to help them understand the context of use, and to better simulate the actual situation in which the app / functionalities can be used. We then ask participants to use their mouse cursor to navigate through each set of wireframes, and verbally walk us through the steps they would take to achieve the desired task(s). Along each step, we ask participants to elaborate on why they take certain steps, how intuitive the interface is, and/or any confusions/concerns they have. **Next**, we would ask a list of follow-up questions regarding specific wireframe components to help us probe users' mental model, expectations, and preferences. **Finally**, we ask users to give general reflections on information hierarchy, user flow, and key interactions regarding each set of wireframes. The specific questions can be found below.

Introduction

Objective

Assess wireframes of 3 design concepts with real users. Focus on testing user (task) flow, Information hierarchy, clarity in section layout.

Introduction

Hi [*participant name*]. Thanks for being here. I [your name] will be interviewing you while my teammate [notetaker] here will be note-taking and may interject at any point to ask questions too. This session will be recorded but the recordings will not be shared outside of our team, are you alright with that?

[Briefly explain context] We're presenting the wireframes of 3 design concepts we generated to improve the vegan/vegetarian experiences when eating out. For this session, we focus on getting feedback on user (task) flow, Information hierarchy, clarity in section divisions & layout.

For each concept, I will provide you with a scenario, and ask you to perform a series of tasks with the wireframes. Please use your cursor to navigate through each set of wireframes, and verbally walk us through the steps you would take to achieve the desired task. Feel free to elaborate on why you take certain steps, how intuitive it is, and/or any confusions/concerns you have along the way.

After each walkthrough, we'll ask for your opinions and feedback on specific parts of the wireframes. Then, we will ask you to reflect on some general questions.

[Important Notes]

a. Please keep in mind that the wireframes are not the final product.
b. The wireframes are made by different team members hence the style is not consistent.
c. The concepts are not organized in any particular order.

At any point, if you have any questions or concerns, or want to drop out from the study, please feel free to interject me and let me know. Do you have any questions before we get started?

Task-based Think-alouds & Feedback

Part 1. Scenario + Task Walkthroughs

Concept 1: AR Menu Reader
Scenario
You have just looked up the online menu for a place you'd like to eat at. It has a lot of items on it, and it doesn't have any indicators or separate sections for vegan/vegetarian items. You could look at each item and make the determination yourself, but you have recently downloaded an app that'll help you do this. This app can read any menu, be it on a website, a downloaded pdf, or picture, and highlight dishes that are vegan, vegetarian, or could be made vegan or vegetarian via substitution.

Key Task	Justification
From the description of the app, you know that it can be activated either through voice command or through the widget menu. Which do you opt for? a. *[IF VOICE ACTIVATED]* You've activated your phone's built-in voice command interface, what do you think you would say to activate the menu highlighting feature b. *[IF WIDGET > Do you have Android or iPhone? Explain:The widget is not the app. You open the app through the widget]* Here you've brought up your phone's widget menu (if you use android, this would be one of the widgets in the top pull-down menu). What would you do here?	● To understand which activation method fits the users' mental model, and the reason(s) behind it. ● To understand the contextual factors that influence how users expect to interact with the system. ● To understand the benefits and limitations of different activation methods through our target users' perspective.
Now that the menu is highlighted, find a vegan meal to eat.	● To gauge whether the visual indicators help users identify the different categories ("Vegan", "Vegetarian", "Substitution Available") clearly. ● To gauge whether the functionalities of the interface fits users' mental model.
Now that the menu is highlighted, find a vegetarian meal to eat.	● To gauge whether the visual indicators help users identify the different categories ("Vegan", "Vegetarian", "Substitution Available") clearly. ● To gauge whether the functionalities of the interface fits users' mental model.
Now that the menu is highlighted, find a meal that you can substitute to make vegan.	● To gauge whether the visual indicators help users identify the different categories ("Vegan", "Vegetarian", "Substitution Available")

	clearly. ● To gauge whether the functionalities of the interface fits users' mental model.
Concept 2: Vegan/Vegetarian Crowdsourced Menu	
Feature 1: Search for Vegan, Vegetarian, and Substitution Options	
Scenario	
You want to grab food and would like to search for available options using an app on your phone.	
Key Task	Justification
Search for restaurants near a location based on your dietary preference.	● To understand the clarity and effectiveness of information hierarchy and layout (Does it fit the users' mental model?) ● To understand what filters are most useful for users, and what factors impact the steps they take and/or the filters they use.
Browse through restaurants that have substitutions/vegan/vegetarian options.	● To understand whether the layout and information hierarchy fits users' mental model. ● To gauge whether the visual indicators help users identify the different categories clearly. ● To gauge whether the filters for substitutions/vegan/vegetarian options are helpful to include.
Look at available options at a restaurant that has vegan/vegetarian substitutions.	● To gauge if users find the information hierarchy, layout, and visual indicators to be effective in helping them locate key information.
View substitutions of a specific item in the secret menu.	● To gauge whether the "secret menu" section makes sense to users. ● To discover gaps in the information presented and what users expect to see. ● To understand what elements are more important to users and may need to be emphasized.
Feature 2: Contribute to Crowd-sourced Menu	

Scenario	
You have eaten at a restaurant where you substituted ingredients to be friendly to your diet. Now, you want to share your substitutions with others on the app.	
Key Task	Justification
From the restaurant main page in the app, add your contribution.	• To gauge if users were able to intuitively create, upload images, rate, add texts, and submit their experiences to the database to be shared on the system.
Submit your contribution.	• To gauge if users were able to successfully complete the task end-to-end. • To identify any points of gaps, issues, or confusion along the end-to-end flow for this feature.
Concept 3: Scheduled Restaurant Notification & Local Discovery	
Scenario	
You want to see what vegan or vegetarian friendly restaurants you've passed during the day (and on previous days) using an app on your phone.	
Key Task	Justification
Figure out what restaurants you've passed by from the start of today until now.	• To identify whether or not the users understand the "delivery" mental model, and can differentiate between past deliveries and current deliveries
Filter down your dining options to vegan-only.	• To determine if users could manipulate a delivery to display only vegan options
Get directions towards *Vegetarian Restaurant A*.	• To identify whether users expected explicit affordances for navigating, or if they implicitly expected list items to take them to navigation
Figure out what restaurants you passed by 4 days ago.	• To gauge if users were able to understand how restaurants were bound to calendar dates • To understand if the users would use the calendar to filter by date or the "Filter" affordance on the most recent delivery

Part 2. Questions about Key Components

Question	Justification
Concept 1: AR Menu Reader	
Did the indicator icons make sense to you at first glance? ○ Do they make sense to you now? Would you remember their meanings on later usage?	● To get feedback on current visual indicator design, and understand what specific elements users liked or did not like (to inform future iterations.) ● To understand how learnable the visual indicators are, and what kinds of assistance would be helpful (or required.)
Do the highlighted items seem interactable, or should they be better sign-posted?	● To evaluate effectiveness and clarity of highlighted items in conveying functionalities and the set of actions users can perform. ● To understand how learnable the visual indicators are, and what kinds of assistance would be helpful (or required.)
Concept 2: Vegan/Vegetarian Crowdsourced Menu	
Feature 1: Search for Vegan, Vegetarian, and Substitution Options	
[Homepage design] Do you prefer to see a list of restaurants (similar to a food delivery app) or a map (similar to a navigation tool) when you first open the app? Why?	● To understand users' preferences and expectations for information displayed on the home page. ● To delve deeper into users' mental models and understand why they prefer one set of information over the other, or both.
What do you think of the visual indicators highlighting whether a restaurant has "substitutions available", "vegan options" and "vegetarian options"? a. Are they presented in a clear way? b. Did we miss any important categories that would be helpful for you?	● To get feedback on current visual indicator design, and understand what specific elements users liked or did not like. This was primarily used to inform future iterations. ● To make sure we've captured all the essential filter categories for our target users.
Do you like that the crowd-sourced menu (aka "secret menu") and restaurant menu are	● To propose alternatives, and ask users to reflect on what they like or

separate, or do you prefer to browse through a combined menu? Why?	dislike about current information structure. ● To ensure the current design is effective and efficient.
Feature 2: Contribute to Crowd-sourced Menu	
What did you think of the main action button?	● To ensure UX writing fit users' mental models ● To ensure users could predict system behavior ● To ensure users knew how to get to their goal (i.e. create their review)
How did you know the action to select your substitutions?	● To evaluate effectiveness and clarity of icon ● To evaluate fitness of concept flow with user mental model and expectations ● To check predictability of system behavior and UI layout
What other information or features do you expect to have in this flow?	● To check for missing gaps in the UI and user flow
Concept 3: Scheduled Restaurant Notification & Local Discovery	
Do you think that the date/calendar-based method of viewing recent restaurants could be improved? Is there a better way of organizing this information?	● To determine if users felt that the calendar interface was supporting them in recalling when they'd passed a certain restaurant ● To identify a more apt time scale for notifying users
Would you want to see restaurants' proximity to your current location when you're viewing them?	● To understand what kind of location-based information users expected when viewing restaurants that they weren't actively looking for
Would you want to fine-tune the notification alarms based on if you'd already eaten (or if it was too early?)	● To understand whether users would willingly tune the notifications themselves or if automated solutions were desired.

Part 3. General Feedback Questions

The following questions were asked per solution.

Question	Justification

Info Hierarchy 1. Was it easy to find common task functionality? 2. Was there any content or information that wasn't clear?	• To ensure users are able to achieve their goals seamlessly • To identify pain points or hiccups in the flow • To gauge user expectations and mental models
User Flow 1. Were there any gaps or missing steps when you're moving from one page to another? 2. Were there any additional pages/features that you hope were fleshed out more? Why?	• To check for overlooked / missing gaps in the UI • To check for overlooked / missing gaps in the user flow • To ensure user flow is seamless
Key Interactions: 1. Does the system support key actions involved in performing desired tasks?	• To ensure users' key needs and goals are met
Additional notes: 1. Feel free to discuss any changes that you feel would improve this concept.	• To obtain user feedback, expectations, and wishlists for the future designs

3.3 Findings for Wireframes

In this section, we highlight accessibility issues we found in our feedback session dry run. As these sessions were run similarly as our sketches feedback sessions, we found overlapping issues. Nevertheless, we ensured that our current participants were not affected by these issues. Moving forward, these issues would inform and prepare us for future sessions where accommodations might be needed.

In this section, we organized our wireframes feedback findings based on each respective concept wireframe in the table below, along with their descriptions, evidence, and recommendations:

Issue	Description	Evidence	Recommendation(s)
Accessibility of Session Design			
Visual heavy	Our wireframes were conveyed in visual form on Mural. Thus,	Internal evaluation	Develop clear, detailed alt-text or verbal descriptions for our

	participants with visual impairment be challenged to observe and understand the wireframes without assistance		wireframe design concepts. Have an audio guide as an alternative to text descriptions.
Mainly auditory-verbal communication	We communicated via verbal-auditory modes using Microsoft Teams; we gave introductions, session outlines, instructions, asked questions, and etc, by speaking and listening to our participants. Thus, participants with auditory and/or verbal impairments would be challenged.	Internal evaluation	Ensure closed captions are enabled for participants with auditory impairment. Ensure chat, written, or other preferred forms of communication are available for participants with verbal impairments.
Need internet access and smartphone / computer	We recruited users via Slack, email, and Microsoft Teams; we ran the sessions using Microsoft Teams and Mural app. Without internet access and a proper device for communication as well as access to view the Mural board, participants would be hindered from have a full experience in the sessions	Internal evaluation	Re-use the alt-text / description heavy guide prepared as an alternative to visual-heavy sessions; utilize other forms of communication such as dial in / landlines so that users can access the sessions without the need for internet access or a smartphone / computer.
Concept 1: AR Menu Reader			
Highlight icons/color are not very intuitive	Some users had difficulty discerning icon and highlight meaning either individually or together (e.g. the substitution indicator paired with another icon)	**U1**: “1 leaf vs 2 leaves is kind of confusing at a glance” **U2**: “Doesn't know what the icons mean immediately; wants legend” **U3**: “Did not recognize	We need to do more extensive testing on the semiotic design, but having an even more distinctive difference between the vegan/vegetarian icons would be a good start

		substitution icon” **U3**: “Color codes are vague - Have to guess which is vegan or vegetarian”	
Highlight/buttons don’t seem intractable at first glance	Most users said that the highlights/icons didn’t seem to suggest that they performed an action; they just seemed like visual adornments	**U1**: “Not clear that she could interact with the highlighted items” **U2**: “[Highlight] doesn't indicate interaction well though” **U3**: “Confused whether they are info icons or a button/action?”	Either design the icons to look more like buttons or provide a tutorial to onboard users with the expectation that they’ll remember on later use
Color highlight may clash with menu color scheme	The colored highlights may not look good or even be legible if applied over a menu that already has color on it	**U1**: “Potential coloring issues based on menu background color”	Reduce reliance on color as a means of highlighting; perhaps highlight with a bounding box
Highlights may put too much information on the screen	With all the highlights and icons we apply to the menu, a user may become assailed with information rather than become focused on the important items	**U3**: “Too much info - a lot of info b/c multiple icons associated with an item + highlight”	1) Change the substitution icon language to be more clear; would require further testing 2) Alternatively, rather than making an overlay, we might consider extracting the text into a different screen so there is no confusion with the overlay
Users seemed to prefer using widget to voice activation	We gave each user the option to use a voice command to open the app or a widget menu button, and most	**U1**: “Uses widget” **U2**: “Uses widget”	We should focus on the widget flow more intensely because that’s what users care about

	preferred to use the widget because that felt more natural	**U3**: “If at a restaurant (& with other people) feels awkward speaking out loud” **U4**: “Uses widget”	
Widget activation flow should be more clear	Users had difficulty understanding how to activate the app via the widget menu. The menu button wasn’t clear enough, but they also expressed confusion over the fact that the app was an overlay and not a distinct interface	**U1**: “Widget button not intuitive” **U2**: “Widget button writing could be more clear” **U2**: “Thinks about it as a camera widget” **U3**: “Integrated w/ camera?? But too many steps involved in opening it” **U3**: “A separate app would be less confusing” **U4**: “Does the widget take me from the menu to the app? Im not sure what the flow is ”	1) The “Menu Overlay” button should be more clearly identifiable (if the app had a name, that might suffice) 2) We need to explain the concept of the universal overlay more clearly, so people understand what the button does
Concept 2: Vegan/Vegetarian Crowdsourced Menu			
Feature 1: Search for Vegan, Vegetarian, and Substitution Options			
Concerns about using a “Dietary Preference” filter may restrict options	Users expressed concerns about using a “Vegan” filter may rule out restaurants that have	**U4**: “I feel like picking ‘Vegan’ might limit my options.	1) When designing the “Dietary Preference” filters, make a “Vegan/Vegetarian”

	vegetarian options, which could easily be vegan-friendly through simple modifications.	Sometimes I want to see vegetarian options to find available substitutions."	filter rather than separating the two. 2) Allow users to select multiple "Dietary Preference" filters at once.
Users had very different opinions about which filters are useful for them	Depending on individuals' search needs, users had different expectations for what filters should be included. The filters they use also depend on different scenarios. For instance, if they're in a hurry, they might use the proximity filter. Some users would not use "Proximity" filters because they expect to zoom in and out on the map.	**U2**: "I'd only use the "Time" filter if it's required." **U3**: "The 'Proximity' filter is not helpful. Zooming in and out on the map is sufficient." **U4**: "I would use the "Time" filter."	1) When users use the app for the first time, allow them to customize a set of filters according to individual preferences. They could save that set of filters as "default". For future usage, only the set of customized filters will show up / be applied. If users want to change their customized set of filters, they can access all filter options through "Settings", and reset the default filters. 2) Clearly indicate that not all filters must be used. Users can simply choose those applicable to them, and skip the rest.
The current location of "Cuisine" filter causes confusions	Users want to use the "Cuisine" filter at the very beginning, along with other parameters such as "Dietary Preference", "Proximity", etc. Currently the "Cuisine" filter is grouped with the subcategories of "Dietary Preference", which confuses users.	**U2**: "I think the "Cuisine" filter should be grouped with the first set of filters (i.e. 'Location', 'Dietary Preference', "Proximity', etc.)" **U4**: "I'm not sure how the 'Cuisine' filter relates to 'Vegan', 'Vegetarian', and	Group the "Cuisine" filter with the first set of parameters/filters used for customizing search options.

		'Substitution' filters."	
"Secret Menu" section label is not very intuitive	At a first glance, some users did not understand what the "Secret Menu" was. There were questions about how the "Secret Menu" was different from the "Menu" section next to it. Not until we explained that it was the crowd-sourced substitutions were users able to grasp the concept.	**U2**: "I'm not sure what 'Secret Menu' means." **U4**: "I imagine it would have crowd-sourced data and different information."	1) Add a small information icon ("i") / tooltip next to the "Secret Menu" section, where people can read about what it is, and how the menu items are collected. 2) Change the section label to "Crowd-sourced Menu". 3) Add a short explanation about the "Secret menu" under restaurant name and info.
The "Vegan", "Vegetarian" and "Substitution" filters do not follow a consistent style across different pages, and their functionalities are not apparent	1) The filters on the restaurant list page are color-coded whereas the same filters on the individual restaurant page are not. 2) It is not clear whether the "Vegan", "Vegetarian" and "Substitution" filters are clickable or not. 3) In addition, making the filters stand out more will help users find them more easily.	**U2**: "It took me a while to understand what 'Vegan', 'Vegetarian', and 'Substitution' filters do (on the second screen)." **U4**: "If the filters had colors too, the consistency would help." [Note: The 'Vegan', 'Vegetarian', and 'Substitution' categories are currently color-coded.]	1) Make sure the same set of filters follow a consistent style throughout the navigation flow. 2) Make it more apparent that the filters are clickable by highlighting the selected filters. 3) Increase the size of the filters, or highlight the filter section by adding line dividers to make it look more like a horizontal scroll menu.
(A list of) Nearby restaurants should be easier to access before applying the first set of filters	While many users prefer to see a map on the first page, they also want to be able to toggle between a list of restaurants and a map.	**U1**: "I prefer to have both a list of restaurants and a map for the home page."	1) [Home/first page] Move the set of filters under the search bar, and change the bottom menu to a list of recommended

			restaurants, or restaurants nearby, or restaurant search history.
Uncertainties about the functionality of “Contribute” button	Before we introduced the functionality of uploading substitutions, some users did not understand what the “Contribute” button was for. One user thought it was for donations.	**U3**: “I’m confused about what “Contribute” button does.”	Add an information icon / tooltip next to the contribute button explaining what it is for / what it does.
Feature 2: Contribute to Crowd-sourced Menu			
The “Your Order” section caused confusions	Initially we had a few different ideas about how to ask users to contribute the substitutions they ordered at restaurants. We came up with solutions such as scanning QR code, accessing the contribution page through a digital receipt, etc. Hence, the assumption is users can see a summary of their order and add substitutions to each menu item in their orders, if applicable. However, this is not conveyed clearly in the current user flow. It looks as if the user is placing an order and seeing a payment summary.	**U1**: “The prices threw me off because it seems like I ordered something from this site.”	1) Remove “Your Order” section completely. 2) Take out the prices and price summary. Only show a list of items the user wants to add substitutions for.
Users are confused about how the “Select Your Substitutions” interface works.	Users had different expectations for how the “Select Your Substitution” page should behave. It took them a while to understand the intended actions / steps. 1) Users expected to enter one set of substitutions for a single	**U2**: “I’d click on only 1 item per time.” **U3**: “I was only able to understand the expected actions after I saw the subsequence screens.”	1) Add an “info” button next to “Select Your Substitutions” to explain how it works. 2) Add an intermediate page between “Contribute” and “Select Your Substitutions”, where it plays a “guided tour” of

	menu item, rather than for multiple items per time. 2) User was unsure whether it was asking for menu item substitution or ingredient substitution. 3) User did not understand how to use the interface until the full flow was revealed.	**U3**:" Not sure what "+" sign does." **U4**: "'Share Substitution' makes more sense than 'Select Substitution'".	the steps to contribute, or just an explanation of the contribution flow. 3) Re-design the flow such that users select one item from the restaurant menu (this could be presented as a drop menu), and immediately see a box where they could enter the ingredient substitutions. After they're done with one item, they can then select another item and repeat the process.
Text and visual information matching / alignment	It might be helpful to match users' description of item and/or ingredient substitution with the images they upload.	**U1**: " If I'm going to itemize things, I think it'd be nice to tag/label my photos when I upload them."	Provide a feature such that users have the option to tag the ingredients in the photos they upload.
Concept 3: Scheduled Restaurant Notification & Local Discovery			
Notification Timing	Users want precise control over how and how often they're notified.	**U1**: "I'd set just one alarm and view what I'd passed the day before, I don't really think I'd need more than one." **U1**: "I might even just need a weekly alarm." **U3**: "I would use reminders on my phone rather than setting alarms in an app."	Provide users with granular control over how frequently they receive notifications from this application. Most users don't go out to eat more than 2-3 times per week, so provide support for weekly notifications.

		U4: ”I'd deselect what [alarms] I don't want.” **U4 (to create an alarm)**: “I’d hit ‘new’ and deselect other [alarms], but keep them around in case I need them.”	
Novel mental models require precise language and interactions	This solution operates on a “bundled notification” concept, where notifications would be delivered in bundles. However, this proved to be confusing to users, as they interpreted “delivery” to mean food delivery, and found notification delivery screens to be redundant.	**U1**: “Deliver = deliver food to me.” **U1**: "’Deliver now’ is confusing.” **U3**: “What does ‘Deliver Now’ mean?” **U3**: “[Deliver Now] Wording is confusing.” **U3**: “Lost on what the timer means.” **U4**: “‘Deliver Now’ and ‘Check it Out’ feel redundant.”	Solutions based on uncommon or novel mental models should be defined with precise language and minimal interaction complexity. Overloaded or generalized terms will become confusing, and extraneous screens become obstacles.
Support multiple ways of interacting with long-term data	Sometimes users are uncertain as to when they passed a certain place. In the wireframe that we presented, users were only able to view restaurants one day at a time, which is unhelpful when users are unsure of	**U3**: “Wonder why I want to see the history of restaurants.” **U4**: “I'd like a search function	Given our findings above concerning how often users want to be notified about restaurants, we intend to transition from a calendar-based interface that shows day-level granularity to

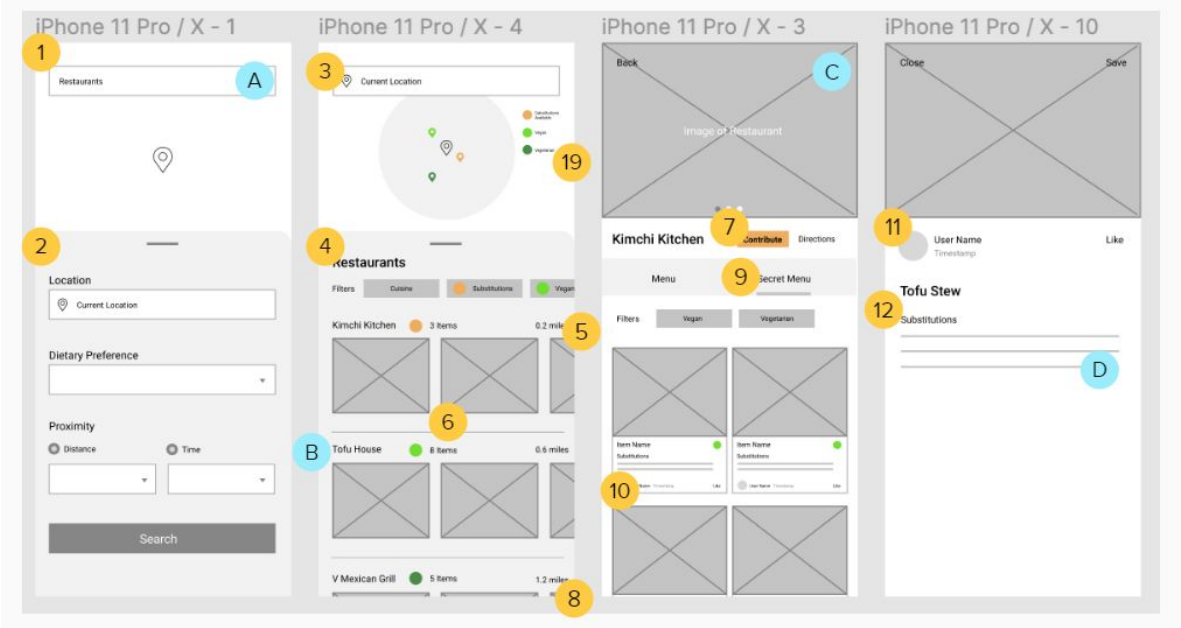
	which day they're looking for.	on the calendar screen." **U4**: "Search by name, some filters (vegan, vegetarian, location)."	a week-based interface that includes search functionality.

04 Prototype Design

In this section, we outline how our users' feedback impacted our design decisions moving forward. This is to ensure we adhere to the user-centered principles in our design process.

Following the user sessions, we selected a combination of features and concepts from our second and third designs. This was based on analysis of the user feedback which prioritized the second and third concepts over the first, thus, we unanimously agreed to discard that concept for our final prototype and modify the other two to combine them and respond to user feedback. Taking the secret menu wireframe as a base, we replaced the secret menu functionality with the notification system of the Scheduled Restaurant Notification concept. Dropping the secret menu still leaves us with an app that has a map with filtering functionality in addition to a notification system that prompts users to explore different dining options. Our users' expressed reluctance to contribute to a database of substitutions prompted these drastic changes. Some would only consider it if they were properly incentivized. While that's a fruitful direction to explore, we don't currently have the time to research and test in that area. On the other hand, users expressed a good deal of interest in the notification concept because of its novelty and encouragement of trying new restaurants. That being said, most indicated that they would prefer if notifications were less frequent. To that end, we've decided to make these notifications weekly rather than daily to act more like a restaurant newsletter, though we let a user customize this if they'd like.

Below, we have annotated the two selected concepts with notes on how we intend to combine them and resolve the usability issues identified during the feedback sessions.



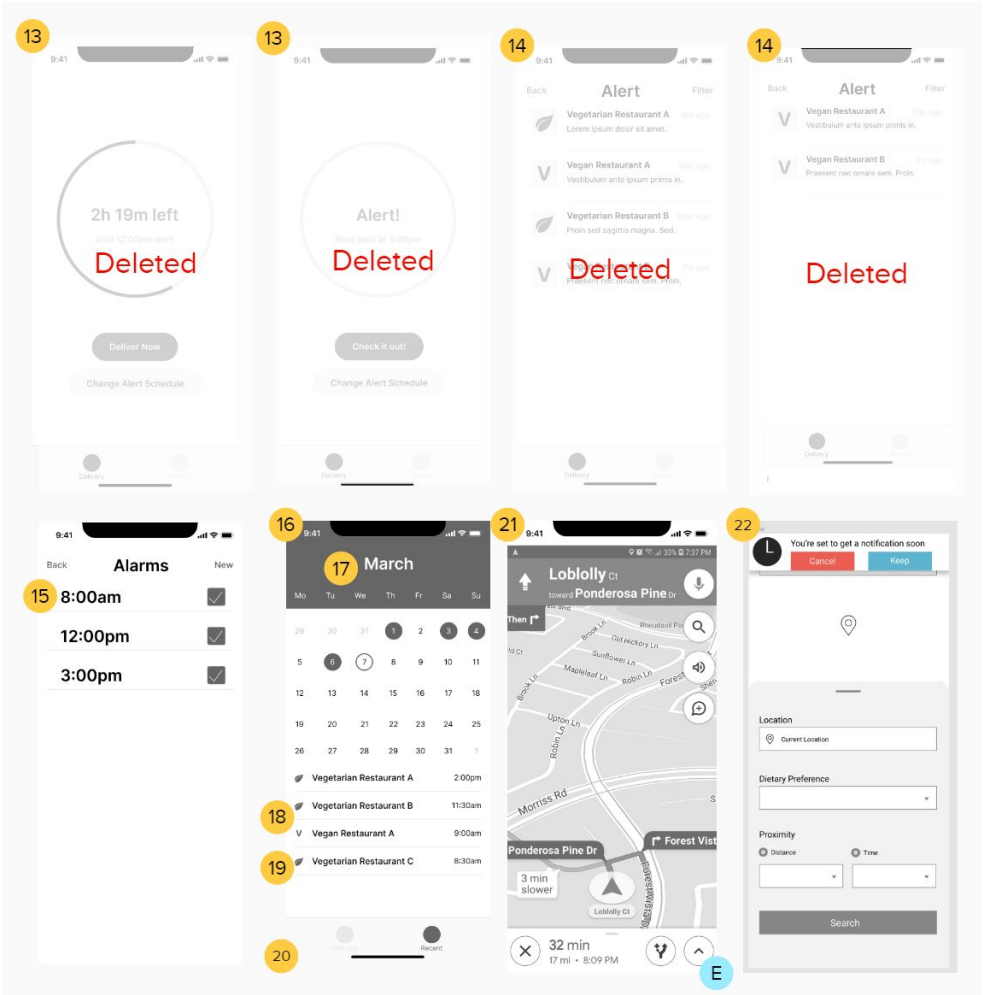


Figure 4. Annotated wireframes for final prototype design

1. **Combine filter and restaurant search screen**
   In an effort to simplify the interaction flow and condense the interface, we decided to merge the filter and restaurant search screen. The filter would be accessed via a button to the right of the search bar and would slide over the screen. Though we didn't formally test this flow, in our opinion, this simplification could only improve usability without sacrificing anything.
2. **Add cuisine and rating filters**
   From our wireframe feedback sessions, users identified that cuisines and ratings are important criteria for the search process. Initially, the cuisine filter was included on the second page, but users suggested that we group it with the first set of filters (including "Location", "Proximity", "Dietary Preference", etc.) This makes sense because the filters on the subsequent pages will encompass more granular subcategories of dietary preference(s).
3. **Add a hamburger menu to the map screen to access notification settings**

Because we're integrating the notification system into the map, the notification system can't be front and center anymore, so we decided to place these elements within screens accessible through a hamburger menu.

4. **Notifications/List if restaurants you've passed by**
   The drawer menu shows an updated list of restaurants users have recently passed by. This increases the convenience of discovering restaurants (based on users' travel history), and reduces the number of steps involved in viewing restaurant notifications (compared to our previous iteration.)
5. **Allow users to select multiple filters**
   One of the users was worried that selecting "vegan" as their primary dietary preference will rule out vegetarian options that could be made vegan through simple modification. Hence we decide to give users the option to select multiple filters.
6. **Clarify that the Restaurants drawer can be pulled over the map entirely if users just want to read a list**
   While the map on the primary display is useful for viewing options from a geographic context, quickly scanning options is more cumbersome through that interface. The list view in the bottom drawer allows users to quickly scan a list of options instead of tapping individual pins that could be crowded together on their display.
7. **Remove "Contribute" button**
   We decided to eliminate the contribution / crowd-sourcing functionality because there is a lack of incentive for users to share the substitutions they discovered. Although we tried to make the contribution flow as easy and intuitive as possible, users reflected that it is still too much effort for them to contribute without some form of monetary rewards. Additionally, since we're combining two concepts, we wanted to ensure that we're working within a reasonable scope. Therefore, features related to the crowd-sourced menu will be removed.
8. **Emphasize the "Directions" button more**
   Our current wireframe does not clearly indicate the functionality of the "Directions" button. More specifically, it does not look like a clickable button at the moment. We will make it more visually distinct as a functional button.
9. **Remove "Secret Menu" tab**
   Users found it confusing to draw a distinction between our "Secret Menu" and the restaurant's officially-published menu. Since that task is no longer part of our application, we removed the tab.
10. **Remove substitution options from the menu item cards**
    Since we're removing all the functionalities related to crowd-sourced menus, we will also remove the "Substitutions" section from the menu item cards (the crowd-sourced information), assuming that we would not have access to information regarding substitution options.
11. **Remove the user metadata block from the menu item interface**
    Because we're no longer having users submit substitutions, we no longer require the user element on this menu; it can be exclusively about the menu item itself.
12. **Display item description instead of substitution description**
    Our users were frustrated that they couldn't see the restaurant's description of a menu

item so they could determine for themselves if the dish complied with their dietary restriction.

13. **Notification countdown screens deleted**
    With notifications occurring less frequently and with the map screen now serving as the centerpiece of the app, there is little need for a countdown timer, certainly not one on the main screen.
14. **Alerts screens deleted and information integrated into map screen**
    Based on user feedback, we learned that these screens were not crucial to the user experience with some users mentioning that they found them superfluous; we decided to remove them and reduce the touchpoints for users to achieve this goal (i.e. access information list)
15. **Daily alerts interface changed to weekly alerts format**
    With alerts now happening on a less frequent basis, the alert interface will now allow users to customize the days *and* the times of when they'll receive alerts. This menu should function much like the default timer app, allowing users to create any number of alerts, set the days and time they want to receive each alert.
16. **"Recent" screen renamed to history and linked to via hamburger menu**
    Rather than be accessible directly through the main screen, notification history will be accessible through the hamburger menu as users mentioned they would likely not be checking the information daily, but several-once weekly based on their current needs
17. **Calendar changed to dropdown**
    Because we're reducing the notification frequency to weekly, we don't expect to need a calendar to navigate your past restaurant notifications. A scrollable dropdown list should suffice in giving users access to their history.
18. **Change restaurant entries to have more relevant information**
    Rather than just showing the restaurant name which diet they cater to, we'll also show cuisine type and a relevant image of the food the restaurant serves like in GrubHub.
19. **Improve vegan/vegetarian icons and color choices**
    Users had mixed responses to our icon design and color choices delineating vegan and vegetarian options, so we'll need to change them to something more intuitive. Research has yet to yield any definitive design solutions. Thus, we plan to create several icon options and test them with users.
20. **Remove bottom tab and use hamburger menu instead**
    Our internal discussions based on lecture materials, textbooks, and comparison with existing systems led us to incorporate the hamburger navigation menu over the bottom tab menu; we plan to test this feature with users in our upcoming user testing sessions
21. **Access directions screen from the restaurant screen**
    This screen will be accessible via the "Directions" button on the restaurant screen.
22. **Show popup in app if they'll receive a notification soon**
    This will allow users the option of canceling the incoming notification in case users have just eaten and / or do not need that notification at that moment.
23. **Accessibility suggestions:**
    As all of our participants in the feedback sessions did not identify themselves as facing any disabilities, we adopted standard accessibility features that may help minimize

accessibility issues with our users. Moving forward, it would advisable to test these features with users who identify as facing disabilities to evaluate their user experience with our system. Presently, these are the accessibility suggestions we have for our final prototype.

a. **Enable voice to text search.** This is to ensure users are able to use speech that gets translated to text when they are entering input into the search bar. This minimizes typing and allows for alternative controls aside from mobility / touchscreen types.
b. **Enable voice command to 'select' restaurant.** Similarly, this suggested feature would allow users to read out loud the name of the restaurant to mimic a ‘click’ / ‘tap’ action on the name card. Thus, the system would behave similarly to the voice command as it would with a physical tap/click.
c. **Alternative text for all images.** This is a standard accessibility feature that allows screen readers to describe the images to the users who may be visually impaired.
d. **Speech for menu information.** This feature allows an alternative to visually access information and lets users hear the information.
e. **Enable voice for directions.** Common in existing map systems, this feature allows users to have auditory directions without having to visually see the information.

05 Lessons Learned

Participants may alter their feedback to seem like a “normal user”

During one of our feedback sessions, a user asked if they should answer as if they were an “average user,” and frame their answers that way. During our interviews, we asked explicitly personal questions, so there wasn’t usually reason for the participants to believe that they should respond with anything other than their own opinions. However, within a design feedback session, some users feel the need to assume an air of objectivity, which isn’t what we want. We don’t want users to presume what other users think, when we’re getting that data ourselves. We told the user that they should respond exclusively with his own opinions and if they thought the “average user” would answer differently, he could note that. However, it was important for us to learn that we need to more clearly frame our feedback sessions.

Balancing what can be done within the time and resources we have

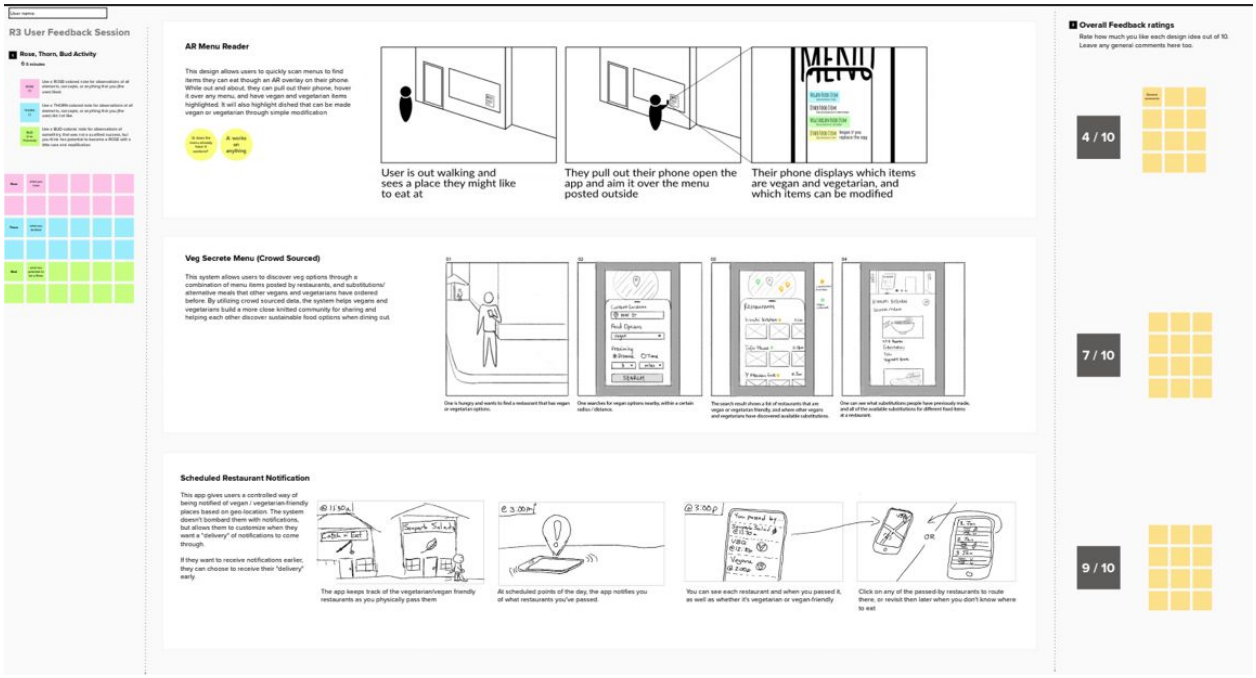
Although we wanted to recruit more participants and have more feedback sessions, we encountered time and resource (e.g. facilitators, notetakers, etc.) limitations. Thus, we pressed on with four participants for each round. We had to remind ourselves that the design process was iterative, and to not let perfect be the enemy of the good. This was a great reminder for us to start with what we had and build on that (e.g. refine design, re-test new designs); it taught us that achieving our desired results was not instantaneous and required progressive iteration.

Concept versus reality

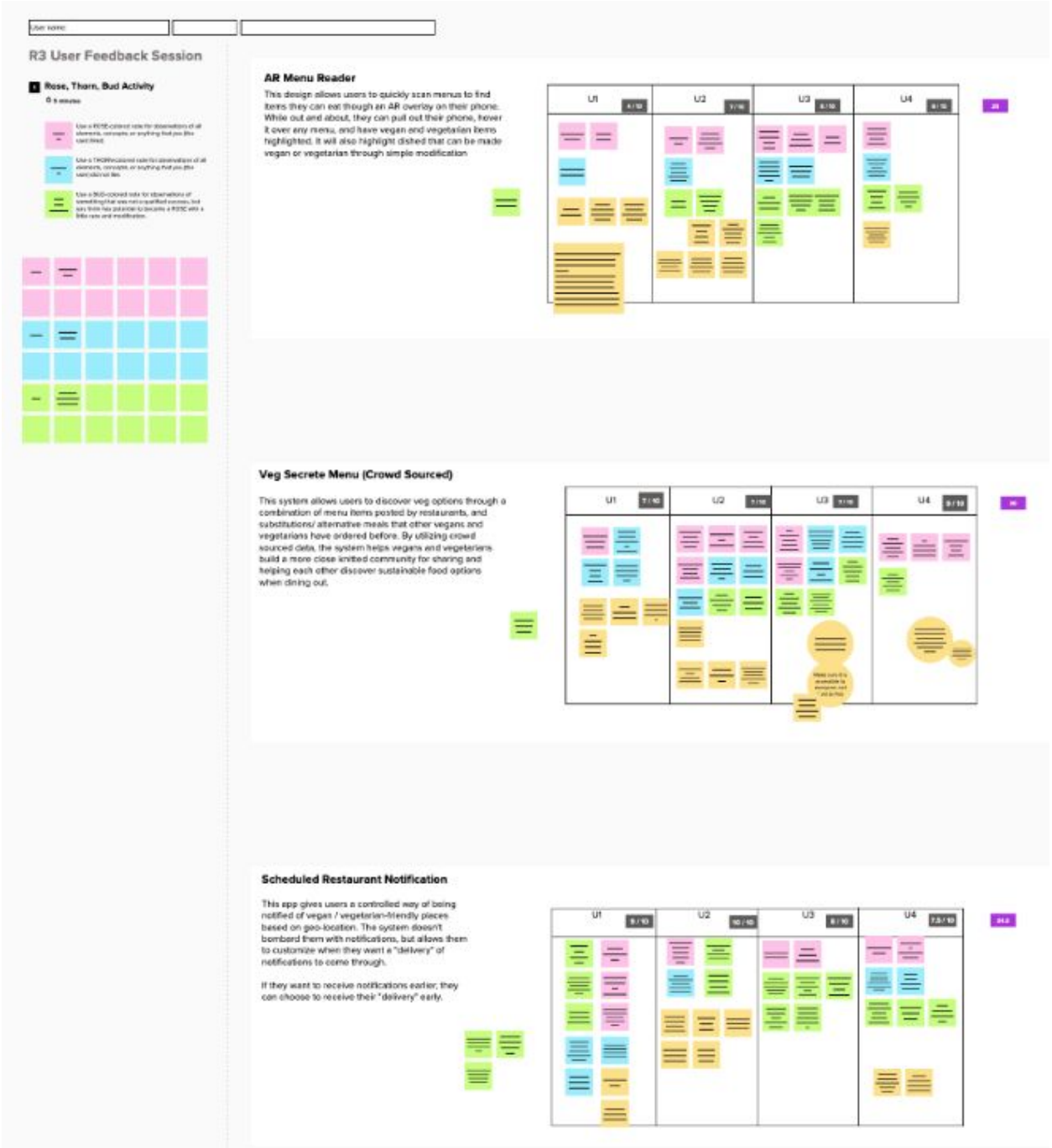
We learned that it was important to ask users how likely they were to use the product / concept in real life. In our sessions, we eventually detected a trend in user behaviors whereby users were excited, engaged, and highly favored a concept but when asked if they would use it, they reported that they might not, although it was an interesting concept. When asked why, some mentioned their current systems that fulfill their needs, while others cite that they did not have a high need or high frequency of that need to use the system everyday. Thus, we learned that we needed to dig deeper into users’ real life behaviors as this allowed us to uncover more factors and gaps that affect their usage of the system. Excitement and overall interest towards a system does not reflect actual usage.

06 Appendix

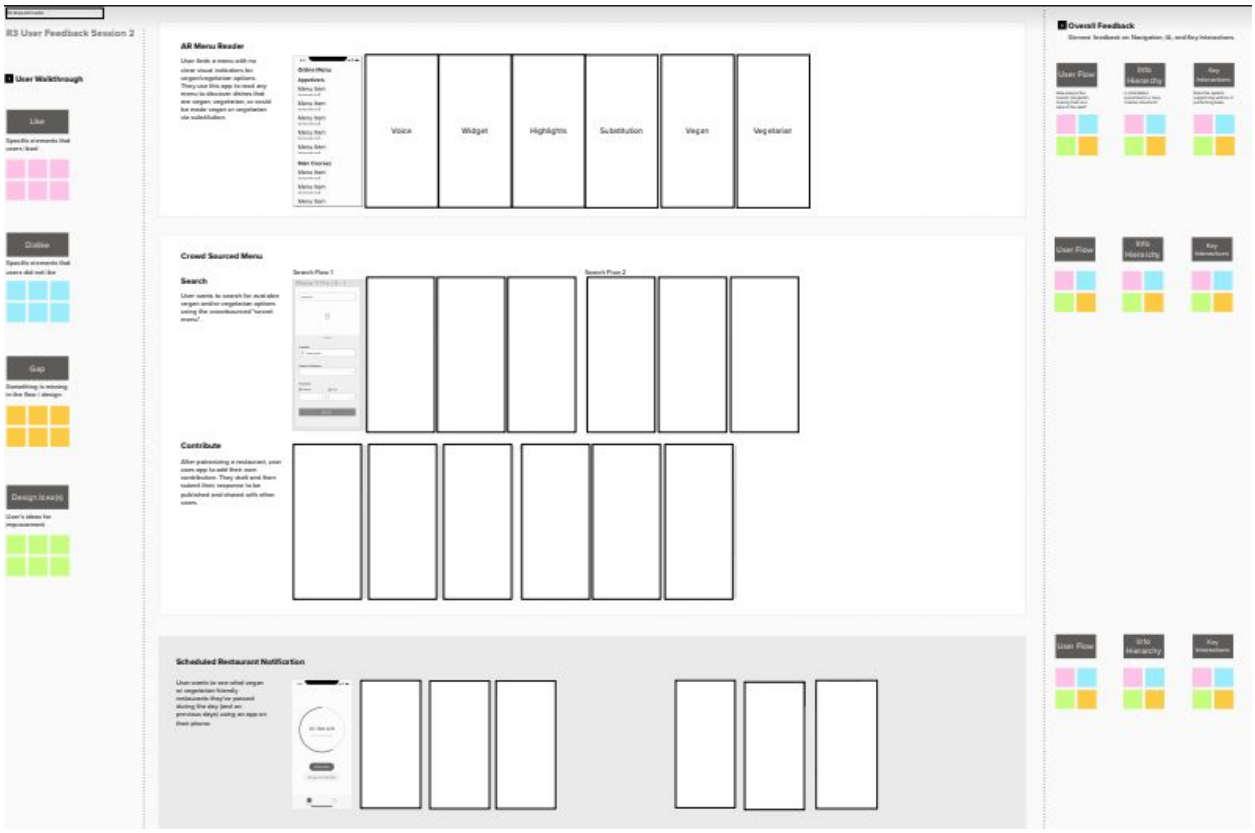
A. User feedback (UF) 1 notetaking template



B. Debrief from sketches feedback session (consolidated findings)

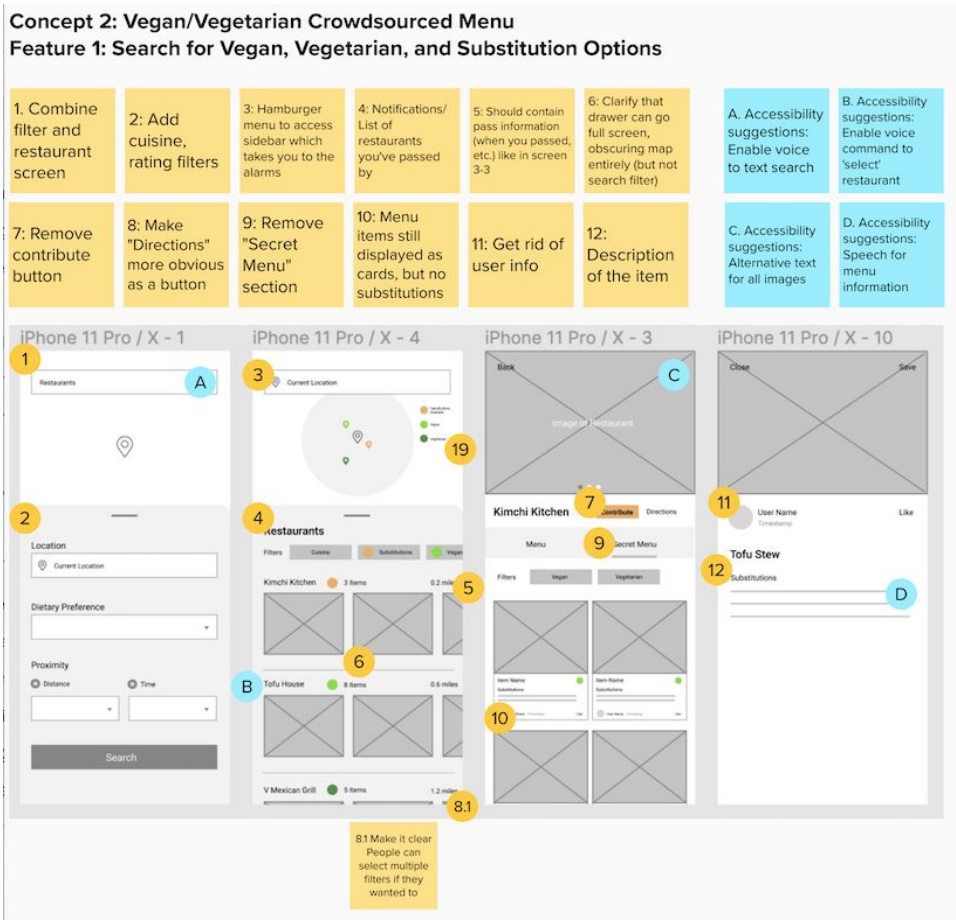


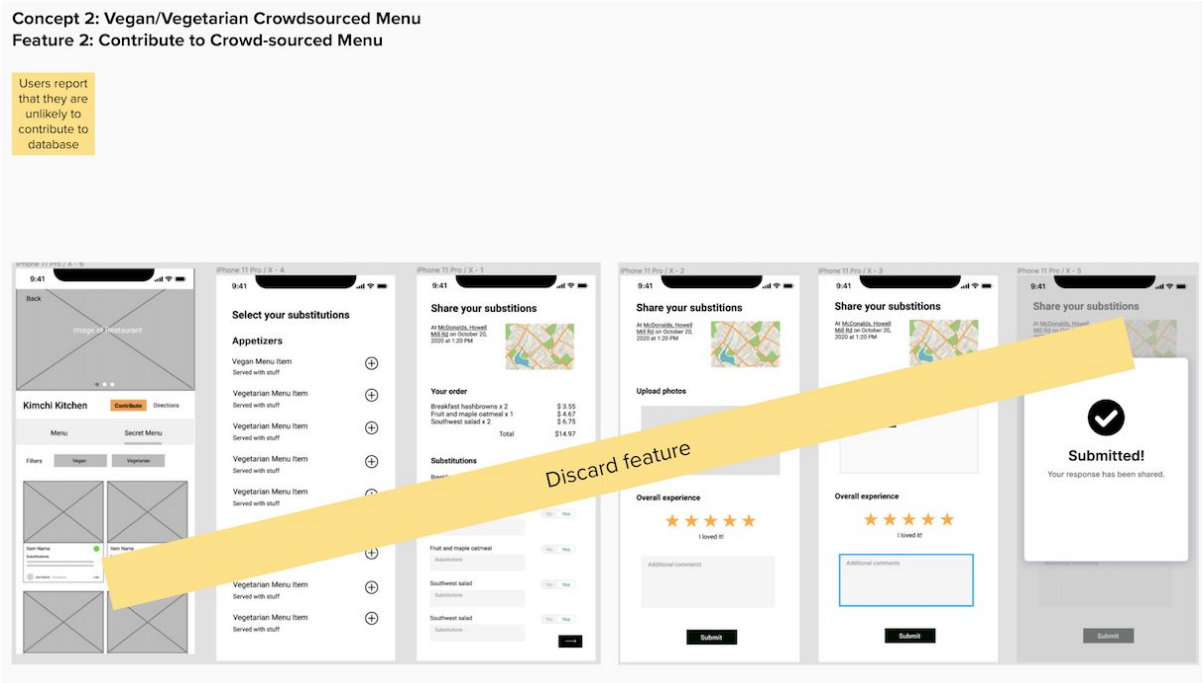
C. [UF 2 notetaking template]

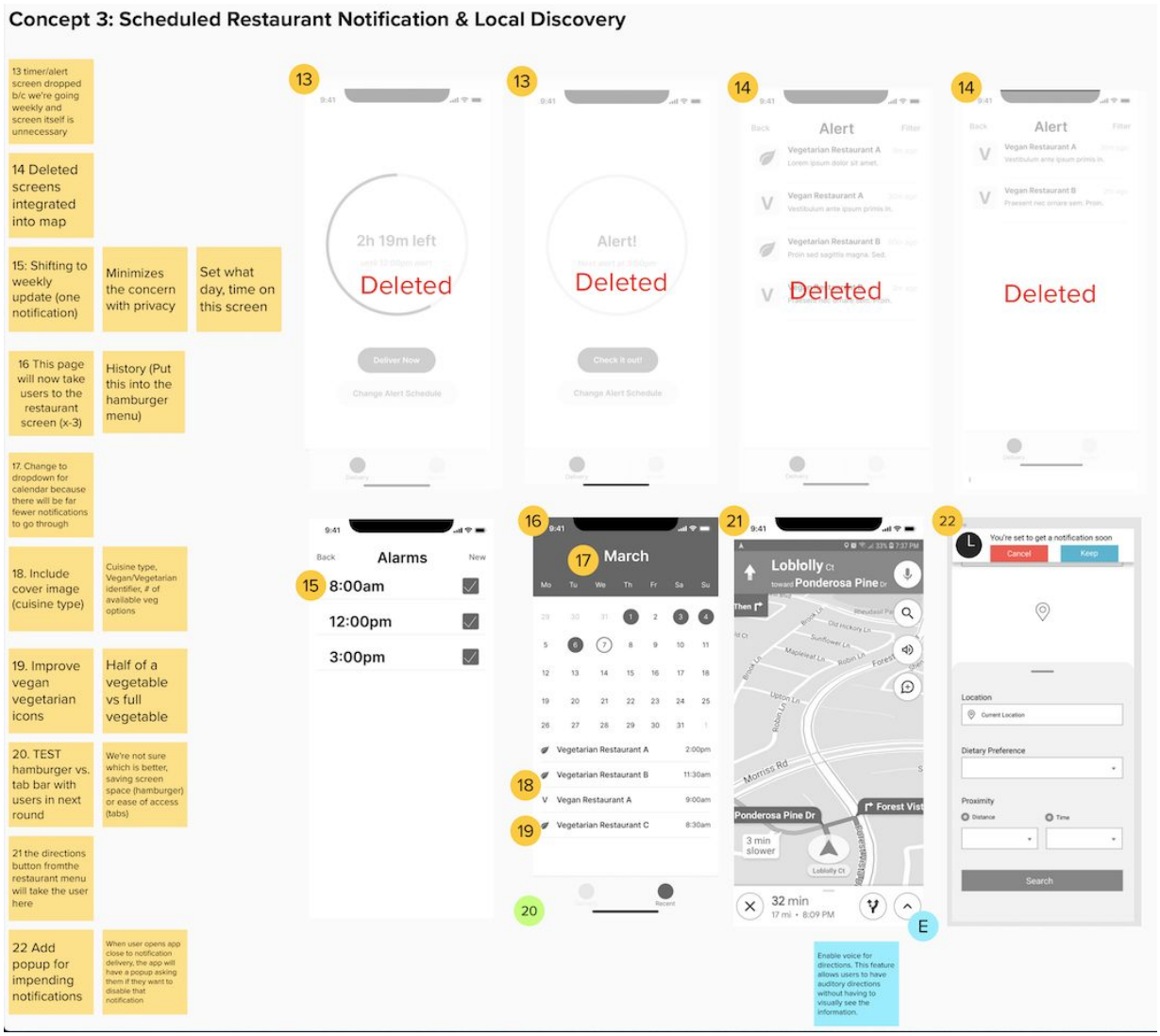


D. Debrief from wireframes feedback sessions (consolidated findings)

E. Prototype design changes and annotations






Concept 3: Scheduled Restaurant Notification & Local Discovery
13 timer/alert screen dropped b/c we're going weekly and screen itself is unnecessary
14 Deleted screens integrated into map
15: Shifting to weekly update (one notification)
Minimizes the concern with privacy
Set what day, time on this screen
16 This page will now take users to the restaurant screen (x-3)
History (Put this into the hamburger menu)
17. Change to dropdown for calendar because there will be far fewer notifications to go through
18. Include cover image (cuisine type)
Cuisine type, Vegan/Vegetarian identifier, # of available veg options
19. Improve vegan vegetarian icons
Half of a vegetable vs full vegetable
20. TEST hamburger vs. tab bar with users in next round
We're not sure which is better, saving screen space (hamburger) or ease of access (tabs)
21 the directions button fromthe restaurant menu will take the user here
22 Add popup for impending notifications
When user opens app close to notification delivery, the app will have a popup asking them if they want to disable that notification
13
2h 19m left
Deleted
Deliver Now
Change Alert Schedule
13
Alert!
Deleted
Check it out!
Change Alert Schedule
14
Alert
Vegetarian Restaurant A
Vegan Restaurant A
Vegetarian Restaurant B
Deleted
14
Alert
Vegan Restaurant A
Vegan Restaurant B
Deleted
15
Alarms
New
8:00am
12:00pm
3:00pm
16
17
March
Vegetarian Restaurant A 2:00pm
Vegetarian Restaurant B 11:30am
Vegan Restaurant A 9:00am
Vegetarian Restaurant C 8:30am
18
19
20
21
Loblolly Ct
toward Ponderosa Pine Dr
Then
Ponderosa Pine Dr
Forest Vist
3 min slower
32 min
17 mi • 8:09 PM
E
Enable voice for directions. This feature allows users to have auditory directions without having to visually see the information.
22
You're set to get a notification soon
Cancel
Keep
Location
Current Location
Dietary Preference
Proximity
Distance
Time
Search