

UXDBOS10 Final Project  
Mapsimize  
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# 1. Problem Statement

Parents with full time jobs waste valuable time planning their days and running errands during peak hours.

## Summary

- Initial problem statement read “20 - 48 year olds with full time jobs, activities throughout the week, and busy schedules on the weekends don’t have enough time to fit in all of their errands”
- Revised problem statement following user research to come up with “Parents with full time jobs waste valuable time planning their days and running errands during peak hours. ”

# 2. User Research Plan & Findings

## Research Goals:

- Identify whether people struggle with finding time to run errands
- Identify whether people already plan their days/evenings around perceived peak hours.
- Understand how people actively manage and schedule their daily errands/events. (not work related).
- Understand if people are willing to go to restaurants/stores during off-peak hours.
  - Note: What contributes to peak hours? Standard 9-5 work schedules, k-12 school schedules, recurring sporting events (thinking cities with professional teams), societal norms (standard dining hours).

## Screener:

- 20 - 50 Years old
- Full Time Employee or Stay-at-home parent
- Goes out to eat at least twice a week
- Lives in City/Town with a population >30,000
- Works 40-50 hours a week
- Owns a car OR regularly uses public transportation

## Questions:

- Do you schedule when you’re going to go to the grocery store, barber/hair salon, breakfast/lunch/dinner

- Does your work/family schedule ever prevent you from running errands because you know those errands will take too long?
- Do you ever plan on going to restaurants/stores during off-peak hours?
- How do you feel about going out to dinner on a Saturday at 7:30pm? How do you feel about grocery shopping on a Sunday afternoon?
- How do you fit time into your schedule to do activities that make you happy?
- Do you have any hobbies?
- Do you make use of any on-demand delivery services? (instacart, uber, savanah haircuts)

### **Discussion guide:**

#### *Welcome (5 minutes):*

Thanks again for agreeing to meet with me today. As part of a User Experience Design course that I am currently enrolled in, we have been asked to come up with a digital product that will hopefully solve a real problem facing certain individuals. While you may be able identify the general idea behind the product, I do not plan on giving you a detailed explanation of what I am hoping to eventually create. Any questions?

#### *Session Details (5 minutes):*

The session consists of a few questions that will help me gain a better understanding of how you organize your day and plan your errands. This session should last about an hour so we will be done at [end time].

#### *Validate Screener (5 minutes):*

Great! Let's get started!

1. Tell me a bit about yourself and a typical weekday in the life of [insert interviewee's name].
2. Do you have any kids?
3. What is your primary form of transportation

#### *Interview (40 minutes):*

1. Do you schedule when you're going to go to the grocery store, barber/hair salon, breakfast/lunch/dinner?
  - a. Is there a recurring time/day when you perform these errands?
  - b. Do you just make a mental note or are there calendars, apps that you already use.
2. Does your work/family schedule ever prevent you from running errands?
  - a. What is the primary reason for this?
  - b. Do you tend to run into overlapping scheduled events?

- c. What is the current solution for completing these tasks and getting through your day.
3. Do you ever plan on going to restaurants/stores during off-peak hours?
  - a. If yes, what is the primary motivator for doing so? If no, what is preventing you from doing so
4. How do you feel about going out to dinner on a Saturday at 7:30pm?
  - a. Do you typically end up waiting for your table/food for longer than you would expect/prefer?
5. How do you feel about grocery shopping on a Sunday afternoon?
6. How do you fit time into your schedule to do activities that make you happy?
  - a. Do you have any hobbies that require you to go a location where there may be “peak hours”.
  - b. Do you feel you ever have time to just do nothing? Is that something you’re interested in or do you feel like you always need to be doing something?

#### *Conclusion (5 minutes):*

Thank you so much for taking the time to answer these questions. You have helped me further define the problem and identify areas where I need to focus more.

#### **Research Findings**

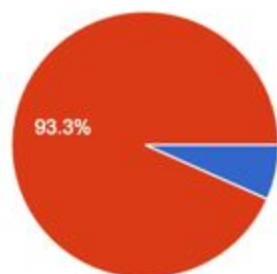
My initial user research consisted of 5 in-person interviews and 15 surveys.

The screener helped me identify individuals who I thought might fit into the personas that I believed identified with my problem statement. Through user research, I found myself revising my problem statement pretty dramatically.

The in-person interviews were helpful in identifying both my primary and secondary personas. I almost immediately noticed a trend where individuals who did not have children were not as impacted by a stressful work/family schedule. Altering the screener to only qualify users who had children would have been useful, but it also would not have produced the more accurate problem statement that was revised and used to build our first prototype.

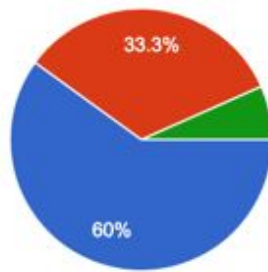
Here are some of the most important results from the survey that were eventually used to alter the problem statement and build on the primary persona’s demographic and psychographic characteristics.

#### **Do you have any children?**



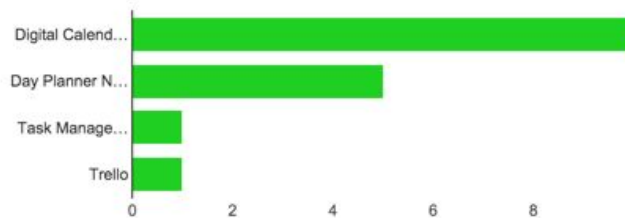
Yes	1	6.7%
No	14	93.3%

### How Far from your home do you tend to travel to perform your errands?



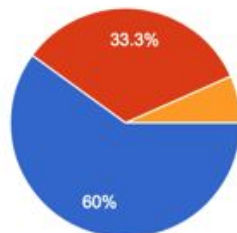
<5 Miles	9	60%
5-10 Miles	5	33.3%
10-20 Miles	0	0%
>20 Miles	1	6.7%

### How do you plan your day? Select all that apply.



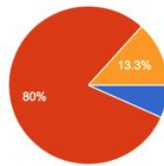
Digital Calendar (gmail, iCal, outlook)	10	76.9%
Day Planner Notebook	5	38.5%
Task Management App	1	7.7%
Trello	1	7.7%

### Does your work/family schedule ever prevent you from running errands?



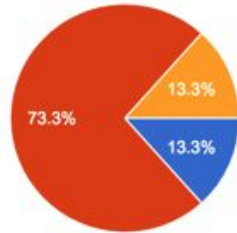
Yes	9	60%
Yes, but only on the weekdays	5	33.3%
No	1	6.7%

#### How do you feel about grocery shopping at a grocery store during peak hours



I always shop during peak hours	1	6.7%
I try to avoid shopping during peak hours, but it is difficult with my work/family schedule	12	80%
I will never shop during peak hours	2	13.3%

#### Do you use any "on-demand" services to help save you time



Yes	2	13.3%
No	11	73.3%
They have those?! Sign me up	2	13.3%

#### Summary

- Primary research goals consisted of identifying how people planned their days, whether people struggled with having enough time to run errands, and whether people already planned on running errands during off-peak hours.
- Screener was almost too inclusive and didn't allow me to gather as much information from individuals who would have fallen under my Primary Persona.
- Survey helped to further identify the need to revise my problem statement and in turn my Primary Persona.
- I found that most single/married (without kids) 25 - 40 year olds don't struggle with finding time to run errands.
- The perceived stress level of attending a busy restaurant, bar, grocery store, is much lower in individuals without kids.

### 3. Competitive Review

#### Direct and Indirect Competitors

Direct Competitor	URL	Indirect Competitor	URL
Nowait	<a href="http://nowait.com/">http://nowait.com/</a>	Open Table	<a href="http://www.opentable.com/start/home">http://www.opentable.com/start/home</a>
Wunderlist	<a href="https://www.wunderlist.com/">https://www.wunderlist.com/</a>	Trello	<a href="https://trello.com/">https://trello.com/</a>
Todoist	<a href="https://en.todoist.com/">https://en.todoist.com/</a>	Google Popular Times	<a href="https://maps.google.com">maps.google.com</a>
Any.do	<a href="http://www.any.do/">http://www.any.do/</a>	Waze	<a href="http://waze.com">waze.com</a>
skiplino	<a href="http://skiplino.com/">http://skiplino.com/</a>	Instacart	<a href="http://instacart.com">instacart.com</a>
Route4Me	<a href="http://route4me.com/">http://route4me.com/</a>	Blue Apron	<a href="http://www.blueapron.com">www.blueapron.com</a>
Best Route	<a href="https://play.google.com/store/apps/details?id=com.spiralsoftware.bestroute&amp;hl=en">https://play.google.com/store/apps/details?id=com.spiralsoftware.bestroute&amp;hl=en</a>	Foursquare	<a href="https://foursquare.com/">https://foursquare.com/</a>

#### Summary of landscape:

There are a couple applications out there that focus on task management, reducing wait time at restaurants, and “Smart” map functions. There are very few direct competitors who claim to solve the problem of not having enough time in the day/week by blending all functions together as Mapsimize would. Applications listed in the indirect competitors column have mastered some of the technical animations that I would like to incorporate into my product (trello- drag and drop). Some of the indirect competitors are solving the problem in an entirely different way that can often be costly and not ideal for everyone (Instacart - You don’t even have to think about going to the grocery store anymore).

#### Application Criteria:

1. Simple/Clean design - Max 3 screens
2. Ability to sort function (JS Example: <http://jsfiddle.net/jaakkytt/FVyS2/>)
3. User Orientation
4. Modern Search/Instant Search functionality
5. Clearly displays time saved
6. Minimalistic lists and list items

### Application Criteria Scoring:

A  
B  
C  
D  
F

Direct Competitor	URL	Simple Design	Filter	User Orientation	Instant Search	Progress Bar/Visual	Minimalistic Lists
Nowait	<a href="http://nowait.com/">http://nowait.com/</a>	B	B	A	A	C	B
Wunderlist	<a href="https://www.wunderlist.com/">https://www.wunderlist.com/</a>	A	D	A	F	B	A
Todoist	<a href="https://en.todoist.com/">https://en.todoist.com/</a>	B	C	C	D	B	A
Any.do	<a href="http://www.any.do/">http://www.any.do/</a>	B	A	B	A	B	A
skiplino	<a href="http://skiplino.com/">http://skiplino.com/</a>	C	B	C	D	F	D
Route4Me	<a href="http://route4me.com">http://route4me.com</a>	C	D	D	F	F	D
Best Route	<a href="https://play.google.com/store/apps/details">https://play.google.com/store/apps/details</a>	D	F	D	F	F	D

### Competitive examples

- Any.do: I really enjoy the ability to browser filters by tapping through the “Sort By” option.
- NoWait: Great instant search for restaurants
- Wunderlist and Any.do: Adding new items to a single list is pretty easy
- Todoist: User orientation can be confusing because you are always brought back to your folders and not a list when you open the app. It also doesn't explain why there is an 'inbox'

## Insights and takeaways

There aren't any direct competitors who fall into the exact same space as the proposed product. I am hoping to merge list and maps tools to help save time and make errands quick and easy with deliberate planning. A number of products have mastered clean, user-friendly list tools, but they don't play well with planning trips to local businesses/restaurants/shops.

Apps that focus on Restaurants are solving only a portion of the problem facing individuals with no free time. Unlike my proposed product, these apps also don't solve for the restaurants and getting people into the restaurant during off-peak hours. I do like their value proposition that they will save their users time by using an app to check in and hold your place in line. I can definitely see how this would be useful if you were out with your friends and you happened to be a planner. I think it would be nice to incorporate something similar into my product.

I really like the idea of coming up with a new animation.

Here are some examples of CSS, JS libraries that I would like to explore. Ideally, it would be awesome to have a unique animation/js function that sets us even further apart from the competition:

workday.com

Web Application homepage's css animation is very unique.

Mobile App is pretty slick

<https://www.youtube.com/watch?v=ZjRNZyRkojE>

trello.com

love the drag and drop function.

<http://jsfiddle.net/jaakkytt/FVyS2/>

### Summary

- No traditional direct competitors, but many applications in the same space trying to boost productivity with a "to-do" list feature.
- A number of indirect competitors are solving part of my problem statement by taking the act of running errands out of the equation with on-demand services
- A number of the apps reviewed take advantage of mental models to make the applications more intuitive.
- Want to focus on a single-screen/bento box design similar to other "to-do list" apps.
- Interested in pursuing eye-catching animations to help delight first-time users.



## 4. Personas



### Nicole (Primary Persona)

Nicole is a busy stay at home mom who has two children ages 3 and 5. The 5 year old just started kindergarten and the 3 year old is in pre-school. She lives in the suburbs in a single family home. Nicole owns a Volvo XC60, which she uses to cart her kids from activity to activity. Nicole's husband is usually out of the house around 6:45 and doesn't come home until 6pm, so she has the kids for most of the day. She is pretty tech savvy and uses a couple apps to manage her family's schedule. Nicole runs a small marketing consulting business out of her home. A majority of her clients are local non-profits where she knows a number of the members personally. She spends about 20 hours a week on her side business. When Nicole isn't caring for the children or working, she is typically running errands.

#### Goals

- Free up her schedule to spend more time doing activities that she enjoys
- Spend less time planning her day
- Try to avoid crowds at grocery stores/malls/restaurants

#### Pain Points

- Spends too much time planning her day
- Crowds add to an already hectic/stressful day and slow her down
- Feels like there isn't enough time in the day
- Family/work schedules limit her to running only a handful of her daily errands

#### Behaviors

- Makes mental notes whenever she needs to run an errand
- Certain errands are marked on a digital calendar
- Sets aside 3-4 hrs every day to get work done
- Uses Peapod

#### On Demand Services

- Peapod

**John (Secondary Persona)**

John is 35 years old, single, and lives in a city with a population >60k. He works full time and is typically in the office from 8am - 6:30pm, Monday-Friday. He fits in a workout after work from 7pm-8pm and then heads home. He typically eats dinner around 8pm and is in bed by 10:30pm. Work and going to the gym are really the only daily activities that affect his schedule. He likes to spend as little time shopping or going to the barber as possible. He does like to spend a lot of time trying out new restaurants. John doesn't own a car, so he often uses public transportation or ride share services. Because he doesn't own a car, he can often only complete one errand a day.

**Goals**

- Avoid crowds at grocery store
- Free up time for his hobby
- Complete multiple errands in a single day

**Pain Points**

- No time to do errands during the week.
- Hates dealing with crowds after a stressful day at the office.

**Behaviors**

- Small daily grocery runs whenever he can fit them in.
- Spends more time at gym/hanging out with colleagues
- Grocery Shopping/Barber/Errands comes secondary to work/the gym

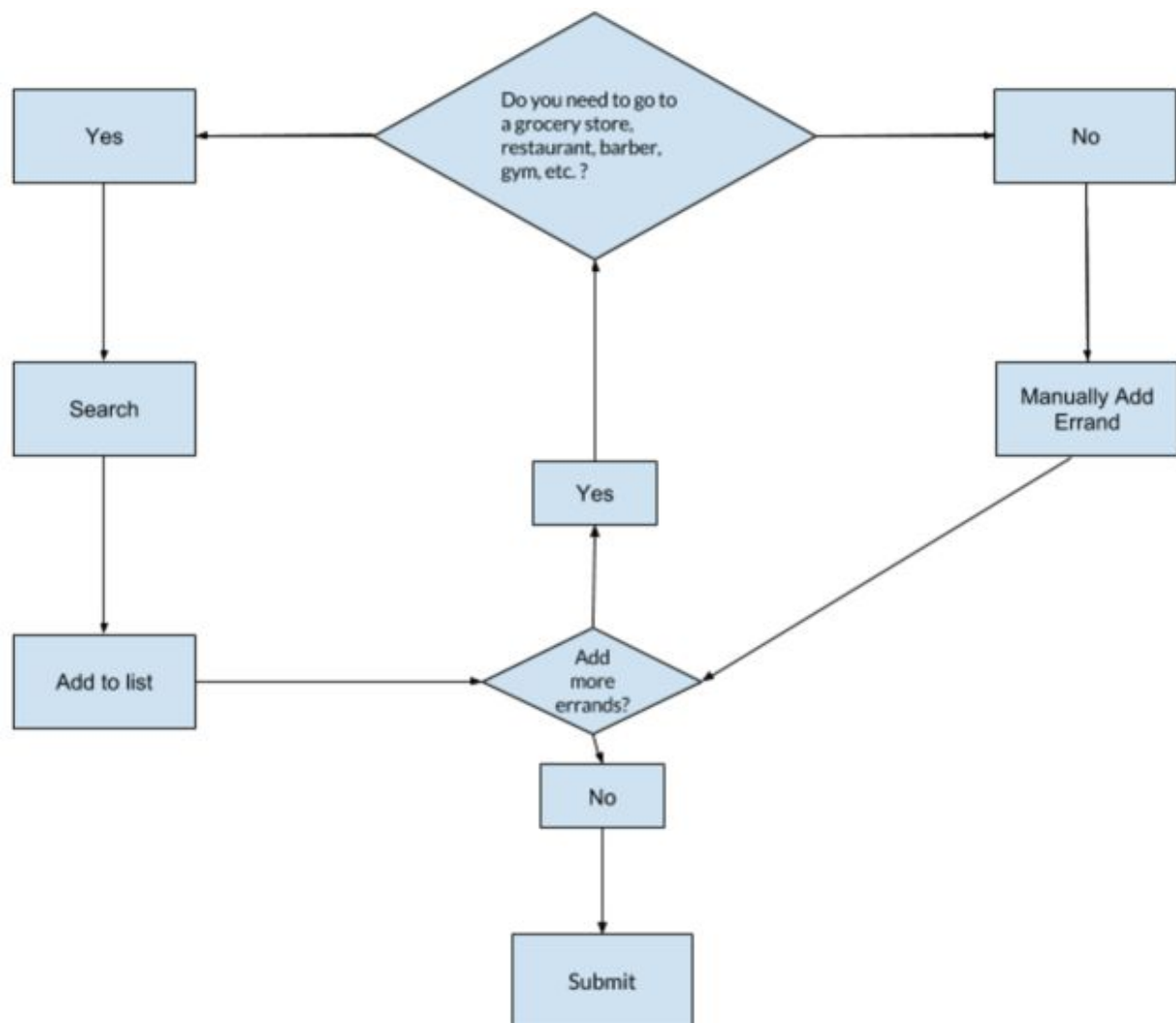
**On Demand Services**

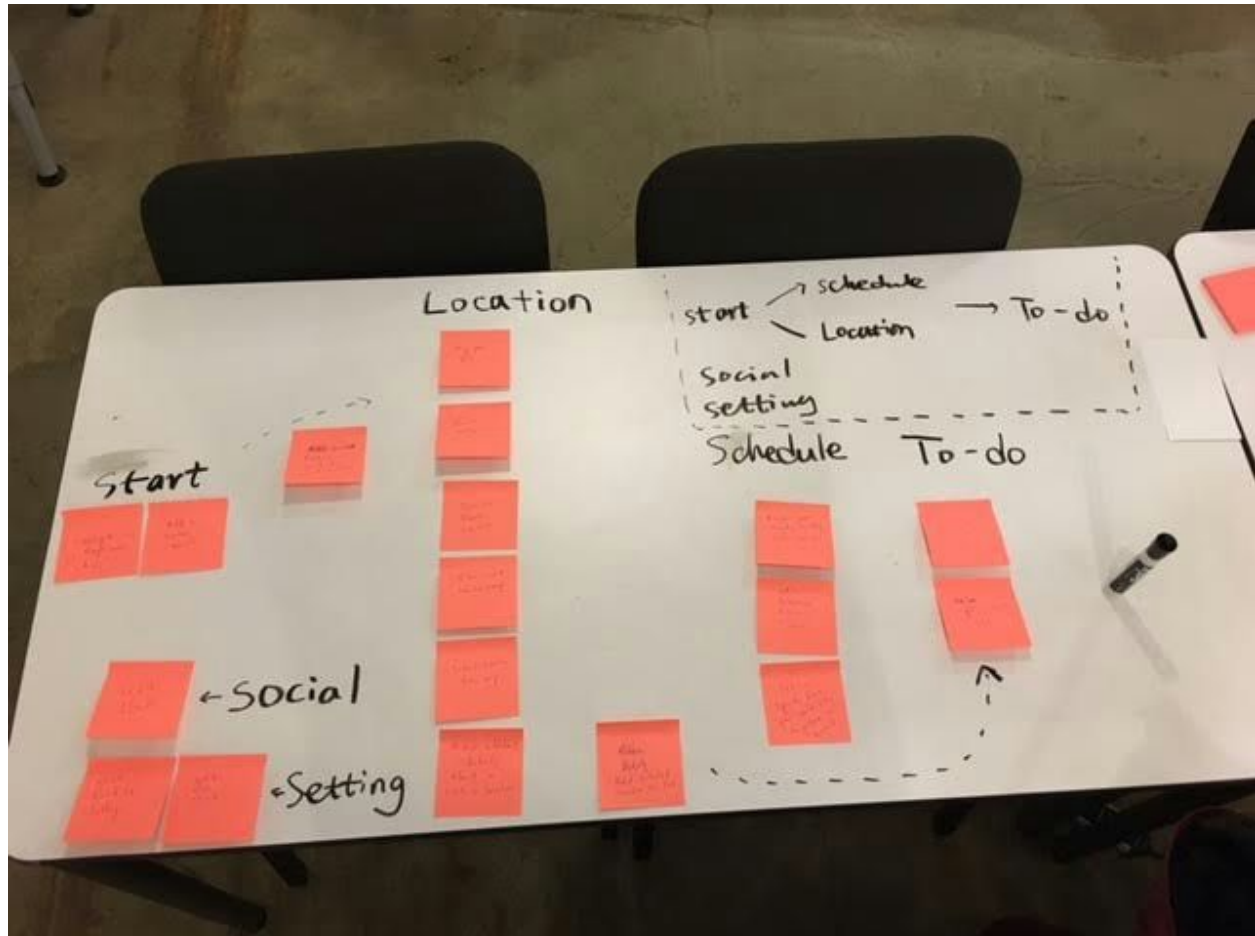
- Uber/Lyft - Blue Apron - Instacart

**Summary**

- Through user research I determined early on that user with children needed to be my primary persona (Nicole).
- Nicole sees value in any tool that helps her achieve her end goal of spending more time with her family.
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## 5. User Flows





### Summary

- Keeping the user flow as simple as possible was one of my biggest challenges.
- Struggled to limit user interactions with the application as much as possible

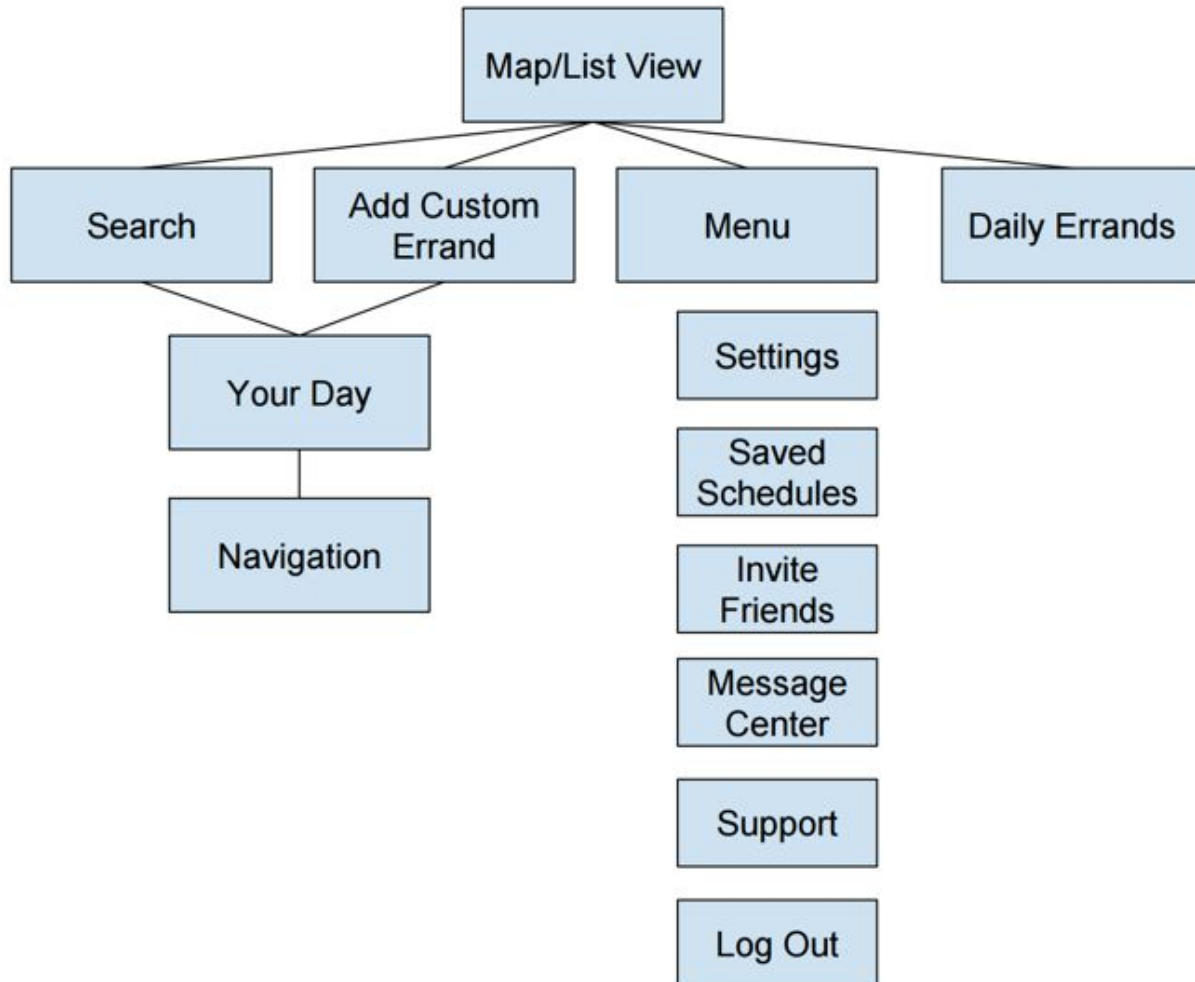
## 6. MVP Feature List

Suggested Times	Using Google's Popular Times API, Mapsimize will organize your day for you to ensure you are running your errands at the optimal time of day.
Searchable Map View	User should be able to search for an establishment/address and select the location from the map.
Navigation Integration	Must be able to integrate with navigation application (google maps, waze, apple maps)
Location Detection	Mapsimize will perform checks throughout your day to see if you're near an errand location/similar establishment that you already had on your list.
Calendar Integration	User must be able to integrate with one of their calendar applications

### Summary

- The MVP Feature list evolved over time with the biggest distinguishing feature being Mapsimize's use of the Popular Times API.
- The calendar integration and navigation integration features are important but could possibly be left off the MVP
- Suggested times and location detection help the Primary Persona Nicole fulfill her goal of spending less time planning her day/running errands and more time with her family

## 7. Information Architecture/Site Map



### Summary

- The site map accurately depicts the lack of complexity that I was going for when building the app.
- The app map really centers around a single screen, similar to the bento-box format.

## 8. Annotated Wireframes

### Search Home



#### 1. Map - Dynamic Background

Map background will automatically snap to your location. When searching, the app will display results within a certain radius of you. There isn't a way to set your starting location because the app will always start navigation from your current location.

#### 2. Errand Bar

As you add errands to your day, your errand bar will fill up and rearrange itself to maximize your free time and optimize your schedule so you're not going to restaurants/grocery stores when they are their busiest.

#### 3. Search

Search for a nearby restaurant, gym, grocery store, barber, office location, park, or any other establishment.

#### 4. Date Toggle

Plan ahead or see what you achieved yesterday. The date toggle can show you yesterday's errands, today's errands, and tomorrow's errands.

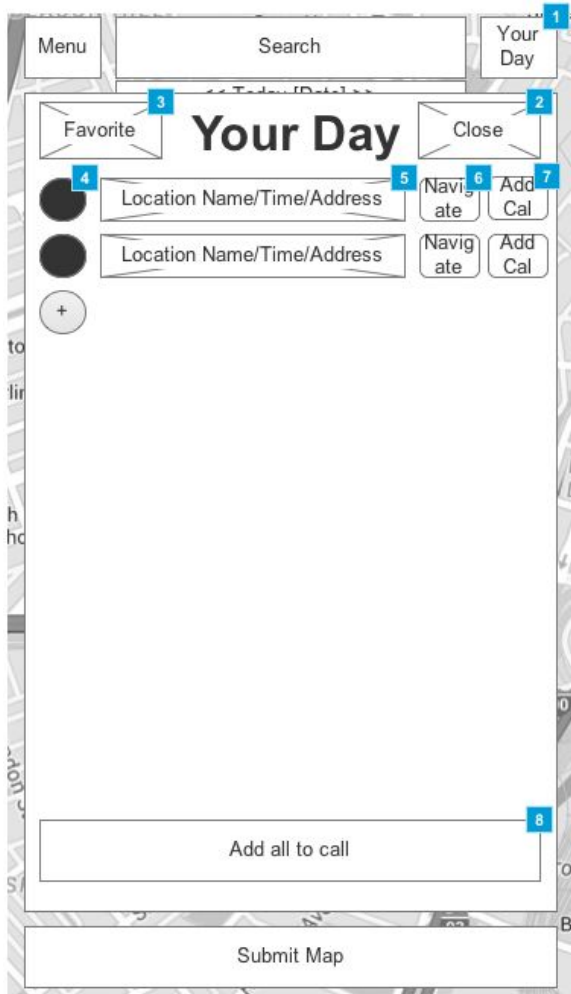
#### 5. Menu

Update your settings, sync your calendar, share the app with friends, contact support, login/logout.

#### 6. Custom Errand

Add a custom errand to your day. Provide the time, estimated duration and location information.

## Errand Overview



### 1. Your Day

Selecting "Your Day" provides you with an overview of all of the errands you have added to your day. You can review this area at any time during the errand adding process.

### 2. Close

This minimizes the "Your Day" overview and brings you back to the standard "Errand Bar" module.

### 3. Favorite

This adds your current errand schedule to your favorites section so you can easily pull up the same errands for when you want to run similar errands again and see what the best time to run them is.

### 4. Errand Icon

If mapsimize is able to identify the errand, we will pull in one of the preloaded icons. If not, there is a default mapsimize icon that will be pulled in for unknown events. Custom events will get their own icon.

### 5. Errand Listing

The errand listing shows the name of the errand/establishment, the suggested time to run that errand, and the address.

### 6. Navigate Errand

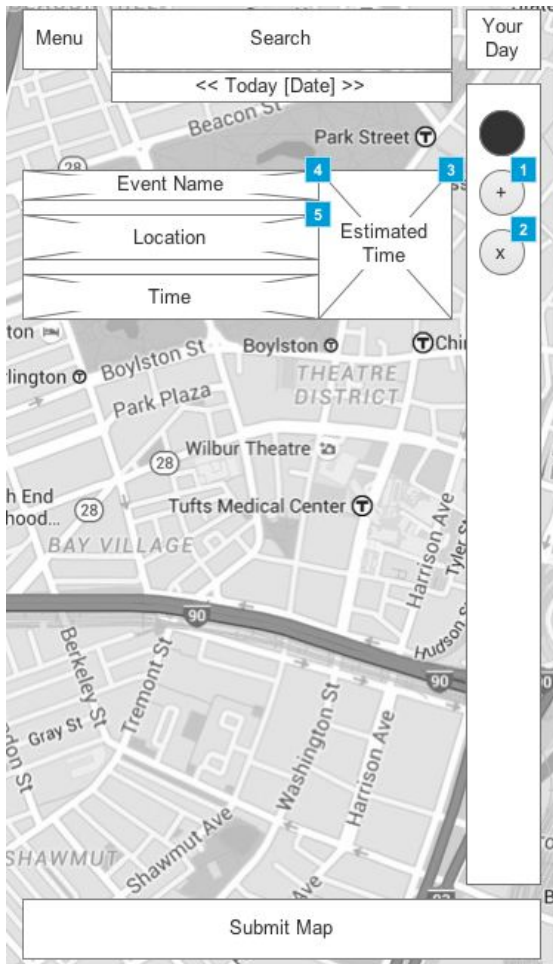
The navigate errand button will bring you to your navigation of choice and begin navigating from your current location in a vehicle. You can set your desired default form of transportation.

### 7. Add Errand to Cal

Add a specific errand to your calendar. This only appears if you are not syncing your calendar automatically.



## Custom Errand



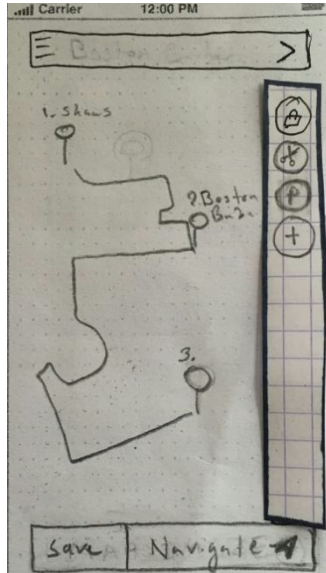
1. Confirm Custom Errand  
Confirm the addition of your custom event after you have input all of the necessary fields
2. Cancel Custom Event Creation  
Exit out of creating a custom event and return to the "Search Home" Screen
3. Set Estimated Time  
Set the estimated duration of your custom errand.
4. Custom Errand Name  
Add the name of your custom errand
5. Custom Errand Location  
Search for the address of your custom errand. We will query whatever navigation app is set as your default.

### Summary

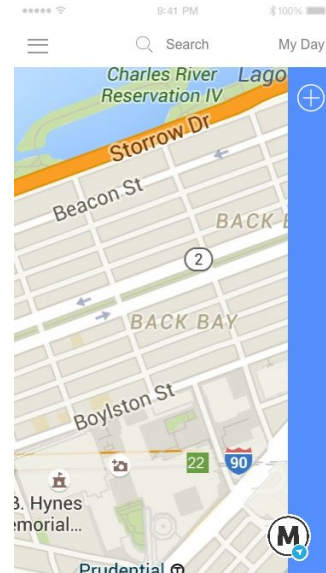
- Lo-Fi wireframe created in Axure
- "Search Home" included descriptions of the errand bar, the search bar, the menu, the map and the date toggle.
- "Errand Overview" included descriptions of the errand icon, errand description, add-to-cal, navigate button, and the "favorite" option.
- "Custom Errand" included a description of the fields one would need to fill out if you were to create a custom errand.

## 9. Clickable Prototype

Low-Fi Clickable Prototype



Hi-Fi Clickable Prototype



### Summary

- Lo-Fi clickable prototype came from one of our initial MVP exercises
- Hi-Fi Prototype created using UX Pin and Invision

## 10. User Testing Documentation and Design Recommendations

### Goals

1. I want to understand if users would like to have their entire day visualized on one screen.
2. I would like to understand how a list view would be beneficial
3. I would like to know if users would like to have the ability to start a new day or if clearing their current daily errands is sufficient.

### Scenarios

1. You went through the process of planning your day, now begin navigating through your day.
2. You would like to review all information associated with your day and possibly make some changes to the proposed times/custom errands
3. You went through the process of planning your day and you're now interest adding additional tasks or starting from scratch

### Tasks

1. Add an errand to yo44ur day
2. Add a custom errand to your day
3. View your entire day at a gland
4. Navigate through a specific errand in your day

Version	Testing Environment	Suggested Changes
<b>v1.0</b>	Card Sorting	- Make saved searches more easily accessible from menu
<b>v1.1</b>	Paper Prototype Class Critique	- Add option to "logout" from the main menu - Add option to add custom errands to your day - Add a list view - App should be able to tell you if you are near an errand that you needed to do later in the day.
<b>v1.2</b>	Lo-Fi Prototype Class Critique	- Add option to set duration of custom errand - Remove the "navigate through all errands" feature
<b>v1.3</b>	Hi-Fi Class Critique	- Update the navigation to include the option to plan ahead a full day
<b>v1.4</b>	User Testing	- Adding custom event seems to be the first item people want to select when going through the user test. Looking into providing two options after clicking the '+' icon to say 1. Search for an establishment OR 2. Add a custom event

- Some users mentioned they wanted to be able to add additional stops after clicking "Navigate".
- Users were not sure what to do with the lock icons. Looking into removing them all together. The app will just check to see if a proposed time has been manually updated and automatically lock that time in for the day.
- Remove "Mapsimize" at bottom of screen. If the app is automatically updating errands as you add them, no need to click again to run the mapsimize
- Add ability to see your day at a glance from home screen.
- Add ability to share your day with a friend
- Remove message center as it is not a social app.
- Add ability to delete an event
- Add visual map representation of your day
- 2/4 users wanted to be able to navigate within the app

#### Summary

- User testing uncovered a number of areas where I will need to continue to improve on within the app.
- Certain important pieces of feedback would require much more time to build out and improve on.
- Some of the feature requests in the feedback provided really fell into the "nice to have" category and wouldn't fall into the MVP feature list.