

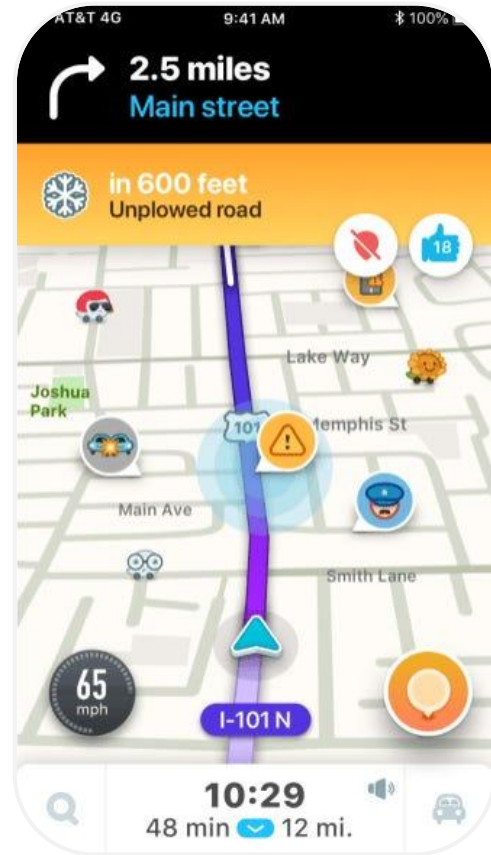
Waze For All Transit

Margeaux Comerford, UXR



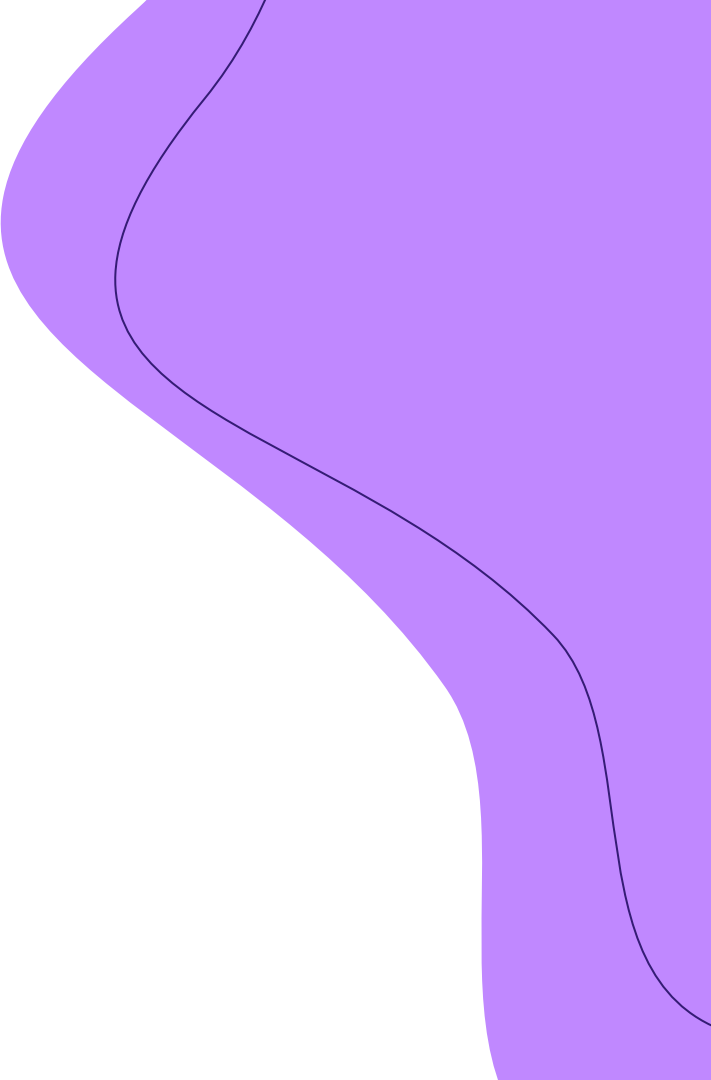
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CONTEXT & BUSINESS CHALLENGE



WAZE & PUBLIC TRANSIT

CONTEXT

Waze is a GPS navigation app which provides turn-by-turn navigation for drivers and is augmented by user-submitted reports of traffic, gas prices, road incidents, and other potential hazards along a driver's route.



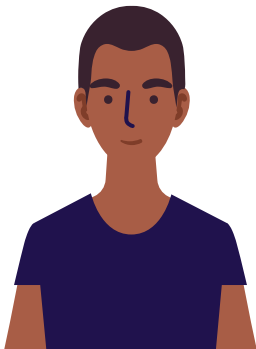
BUSINESS CHALLENGE

Waze does not currently support navigation for any other transit modes besides driving, unlike competitor apps such as Google Maps and Apple Maps.

As major cities increase their investments in public transit options (such as Seattle's Light Rail expansions), Waze has the opportunity to expand into an all-transit-included navigation tool with crowdsourced updates on the status of road conditions, public transit conditions, and walking conditions along a route.

The Waze product team wants to add walking and public transit navigation to Waze, and collaborates with UXR to examine the value of these new feature additions and understand what users need from a day 1 launch of new navigation options.

OUR TEAM/COLLABORATORS



PRODUCT MANAGER

Advising on high-level product goals and roadmaps



DESIGN

Creating mocks for diary study for feature ranking exercise



TPM or ENG

Advising on feature and overall technical feasibility



UXR

Conducting research on user needs to inform user-centric feature development

ADDITIONAL STAKEHOLDERS TO KEEP INFORMED

- Product leadership, including Director of product
- Legal team (to ensure legal compliance from day 0 of development)
- Data Science/Engineering (to determine user sizing and develop recruitment lists)
- Recruitment team

METHODOLOGY

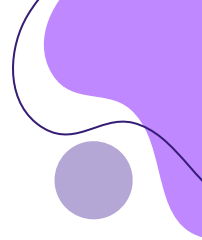


OUR BIG QUESTION

How might Waze best support users on modes of transit other than driving by leveraging the crowdsourced information and real-time updates already present for drivers?



WHAT DO WE WANT TO LEARN?



RESEARCH QUESTIONS

1. What do users perceive as the current value of features offered by major navigation apps (Google Maps, Apple Maps, CityMapper, etc.) in terms of driving, public transit, and walking?
2. What is the value of existing Waze features, such as crowdsourced updates, in these new transit contexts?
3. What features do users expect when using GPS apps like Waze while walking and/or using public transit (e.g., trains, buses, etc.)?
4. What categories of user-submitted updates, such as bus/train fullness, sidewalk hazards, or directions to specific location entrances, would be most valuable for non-driving commuters?
5. What do users expect from their GPS app when using multiple transportation modes, such as walking and public transit, on a single route?

METHODOLOGY

- 2-week diary study with 6 diary entries total (no more than 15 mins per diary entry, not including travel time)
- n = 30 participants
 - n = 15 drivers who use Waze currently
 - n = 15 public transit users

RESEARCH TOOLS

- A diary study tool, such as dscout
 - 1 set of diary entries for drivers
 - 1 set of diary entries for public transit users
- File storage system, such as Google Drive, for secure participant file uploads

HYPOTHESES

Waze Participants

We will want to recruit current Waze drivers for existing context and feature knowledge. Portions of the diary study will ask them to utilize public transit for 2 trips (one familiar and one unfamiliar) and ask about the value of Waze's user reports and real-time updates in the context of public transit.

Hypothesis 1

Waze drivers will desire both a single app experience for navigation and Waze's crowdsourced information and real-time updates on public transit.

Non-Waze Participants

We will want to recruit non-Waze public transit users to evaluate their wants and needs for navigating public transit and reactions to mocks showing existing Waze features in public transit navigation. Portions of the diary study will ask them to route a drive on Waze (ideally make the drive) to compare app experiences.

Hypothesis 2

Non-Waze public transit users will see value in Waze's crowdsourced information and real-time updates along a route compared to their usual public transit apps, and be interested in adopting Waze as their primary navigation app.

Both Cohorts

Both cohorts will be asked to provide feedback on Waze's existing features relative to other familiar navigation apps to determine value of existing features to port to public transit use-cases and new public transit-specific features.

Hypothesis 3

Outside of basic turn-by-turn navigation, both cohorts will expect essential information such as ticket prices, transit arrival times, and transit ETAs along with user-generated reports and real-time updates.

WHO DO WE WANT TO LEARN FROM?



DRIVERS

n = 15

- Currently use Waze to drive familiar and unfamiliar routes
- Have access to public transportation
- Located in US urban areas (e.g., Seattle, Los Angeles, Boston, NYC, etc.)

Sample size assumes participant dropoff and expects n=10 completes



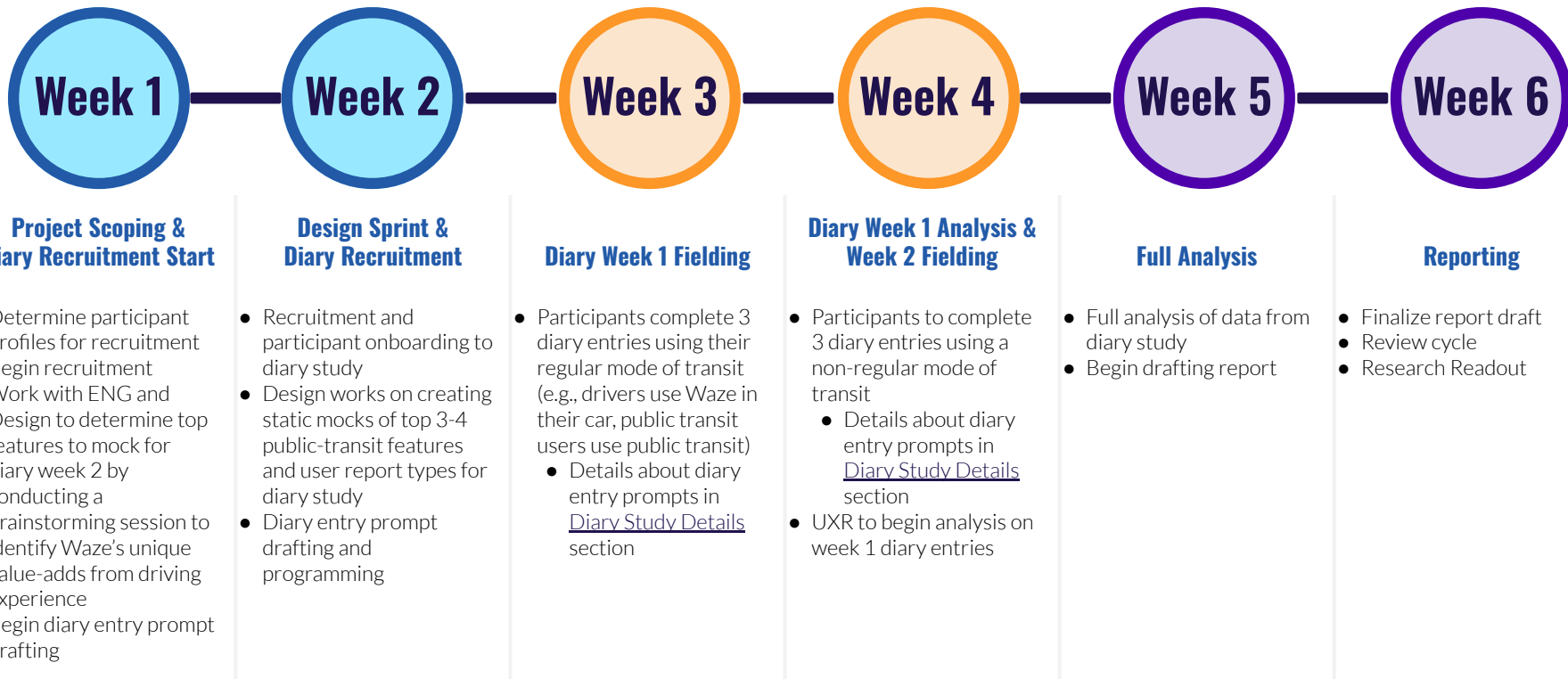
PUBLIC TRANSIT USERS

n = 15

- Currently use navigation apps such as Google Maps, Apple Maps, CityMapper, etc. to navigate on public transit
- Have access to a vehicle (owned, borrowed, or through a car share such as ZipCar)
- Located in US urban areas (e.g., Seattle, Los Angeles, Boston, NYC, etc.)

Sample size assumes participant dropoff and expects n=10 completes

PROJECT TIMELINE



DIARY STUDY DETAILS



DIARY WEEK 1 ENTRIES

This week, we ask that you use your normal mode of transportation (for drivers, driving using Waze for navigation and updates; for transit users, using public transit and your choice of navigation app) to make two trips, one along a familiar route and one along an unfamiliar route, and record your experience as a diary entry with the provided prompts. At the end of the week, we will ask you about some features you may use during your travel and how useful they were along your route.

Familiar Route

- Understand navigation needs for familiar routes, including real-time disruption reports when navigation is open but route is not programmed
- Understand pain points of current navigation apps
- **[Transit users]** Understand transit users' needs for transit-specific information on familiar routes, like ticket prices, line closures, etc.

Unfamiliar Route

- Understand navigation needs for unfamiliar routes, including real-time disruption reports and route recommendations based on user preferences
- Understand pain points of current navigation apps
- **[Transit users]** Understand transit users' needs for transit-specific information on unfamiliar routes, like ticket prices, line closures, etc.

Feature Evaluation

- Evaluate the usefulness of features used in preferred/usual navigation apps on typical transit mode
- Rank importance of features in navigation apps on typical transit mode

DIARY WEEK 2 ENTRIES

This week, we ask that you use a different mode of transportation (for drivers, use public transit and your choice of navigation app; for transit users, drive a car using Waze for navigation) to make two trips, one to a familiar destination and one to an unfamiliar destination, and record your experience as a diary entry using the provided prompts. At the end of the week, we will ask you about some features you may use during your travel and how useful they were along your route.

Familiar Destination

- Understand navigation needs for unfamiliar transit modes/navigation apps to a familiar destination
- Understand pain points of unfamiliar/atypical navigation apps
- **[Waze drivers]** Understand which Waze features for driving are most valuable for atypical public transit usage
- **[Transit users]** Understand value-add of Waze features for driving

Unfamiliar Destination

- Understand navigation needs for unfamiliar transit modes/navigation apps to an unfamiliar destination
- Understand pain points of unfamiliar/atypical navigation apps when traveling to an unfamiliar destination
- **[Waze drivers]** Understand which Waze features for driving are most valuable for atypical public transit usage
- **[Transit users]** Understand value-add of Waze features for driving

Feature Evaluation

- Evaluate the usefulness of features used in unfamiliar or atypical navigation apps on atypical transit mode
- Rank importance of features in navigation apps on atypical transit mode
- Using static design mocks, rank order the importance for proposed new Waze features on public transit outside of standard navigation

ANALYSIS PLAN



DIARY ANALYSIS PLAN

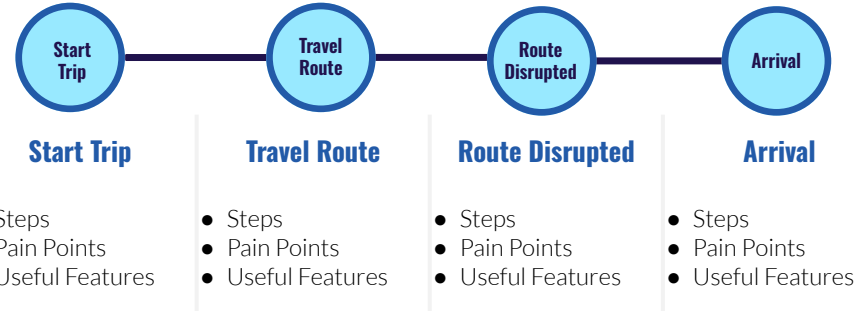
ANALYSIS PLAN

Qualitative-level analysis of the diary entries to answer research questions, including:

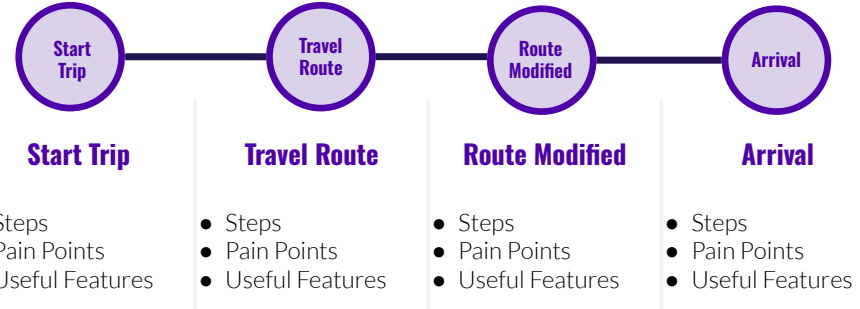
- Qualitative themes to tell the story of navigating while driving and using public transit using navigation apps on mobile devices
 - Mini user journeys for drivers and transit users illustrating the steps to travel, common pain points, and key features/tools uses to aid transit
- Identifying common navigation steps, pain points, and useful existing features in Waze and competitor apps to identify existing Waze features to integrate into public transit navigation and, if any, net-new features needed for public transit
- Identifying top needs for commuters in each cohort that would translate into navigation app features
- User-first feature ranking to determine minimum viable product for public transit navigation



Waze Driver Mini-Journey



Transit User Mini-Journey



Data Visualization Samples

Driver & Transit User Needs



Navigation
steps



Real-Time
Rerouting



Cost of Trip



Navigation
steps



Real-Time
Updates of
Route State



Cost of Trip

Feature Usefulness/Importance

While Driving



User Reports

High
Usefulness

Medium
Importance

Real-Time
Notifications

High
Usefulness

High
Importance

Gas or Ticket
Pricing

High
Usefulness

Medium
Importance

While Using
Public Transit



Medium
Usefulness

Medium
Importance

Medium
Usefulness

High
Importance

Low
Usefulness

Low
Importance

Potential Roadblocks & Anticipated Impact

Potential Roadblocks

- Public transit users may need to simulate a drive during week 2 of the diary if they cannot access a car
- Participants may need to screen record trips on their phones to conserve data and account for loss of connectivity en route; participants would be provided with a location to share files with UXR
- Diary dropoff rates, accounted for by over-recruitment
- Some desired features may not be feasible for ENG team

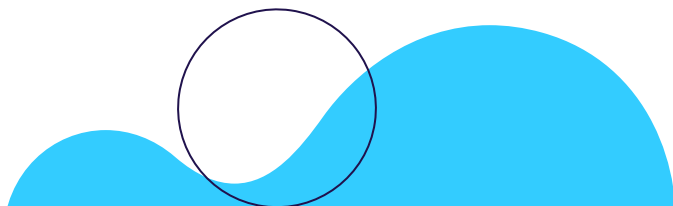
Anticipated Impact

- Deeper understanding of the value of Waze overall and in regards to public transit needs to inform long-term product roadmapping
- Identify existing gaps in driving experience for sprints/bug fixes
- Launch a public transit experience in Waze with key user needs already addressed
- Higher adoption of Waze by more potential users

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Q&A

Thank you!

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