

# MSP Report - Sprint 1

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## Roles

**Scrum Master:** Franka Traupe

**Product Owner:** Guilherme Fernandes

**Quality Controller:** Niklas Sander

**Development Team:** Roschanak Babai, Valeriia Baida

## Features

(Proposal for sprint 2 highlighted in bold)

### Basic Features (Implemented in prototype)

- Register account
- Register type of vehicle
- Define route
- Alert if speed limit is violated
- Calculate estimated time of arrival

### Features from Existing System

- **Bookmarking (home, work)**
- Avoid tolls
- **Recent destinations**
- Show current speed (implemented already as part of speed alerts)
- Parking lots
- **Hazard reports**
- **Change units**

### New Features

- **Statistics: usage and driving quality (rate of speed violations etc.)**
- Walking route
- Shared ride

# Project Planning

## Task Table

Task ID	Task	Duration (days)	Depends on
1	Explore original app & choose features	3	-
2	Review chosen features	1	1
3	Develop BPMNs for each feature	4	2
4	Review BPMNs	1	3
5	Front-end development	7	4
6	Back-end development	7	4
7	Integrate front-end and back-end	2	5,6
8	Testing	2	7
9	Bug Fixing	1	8

Table 1: Task List with Dependencies

## Gantt Chart

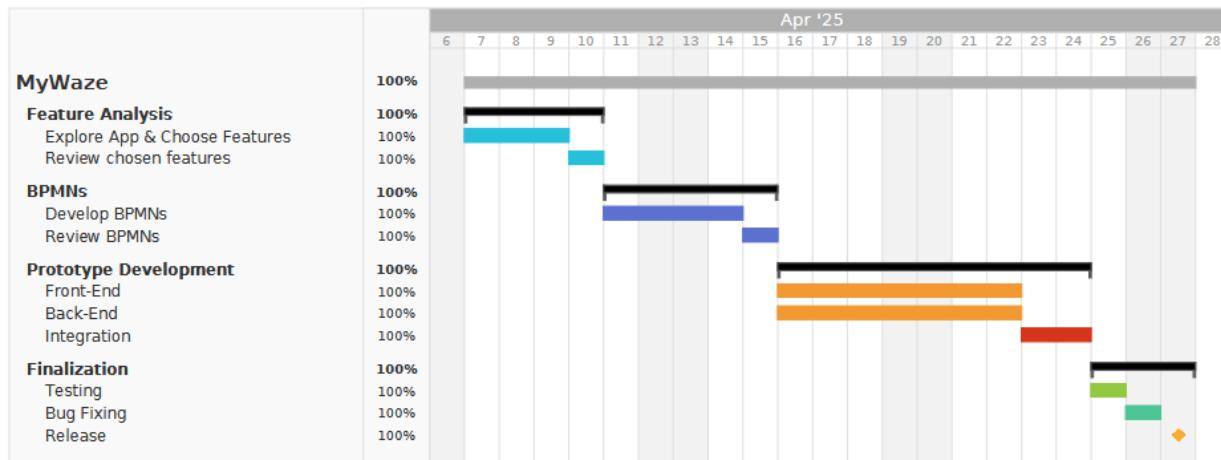


Figure 1: Gantt Chart

## Burndown Chart

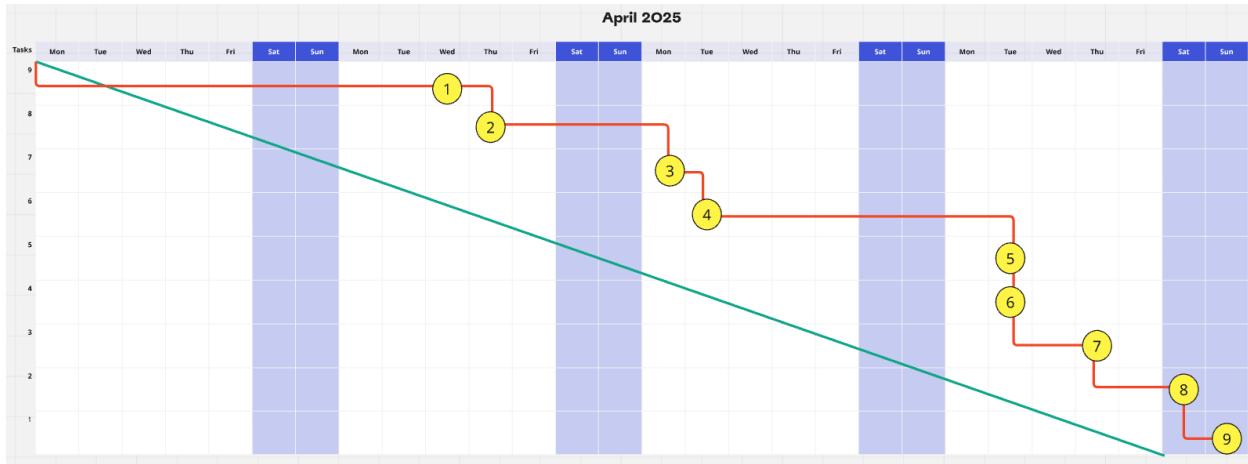


Figure 2: Burndown Chart

## Match from Features to Models

Feature	Model
Overall process	MyWaze.bpmn
Register account	MyWaze_registerAccount.bpmn
Recent destinations	MyWaze_defineDestination.bpmn
Define route	MyWaze_defineRoute.bpmn, MyWaze_calculateRoute.bpmn
Avoid tolls	MyWaze_defineRoute.bpmn
Walking route	MyWaze_defineRoute.bpmn
ETA	MyWaze_defineRoute.bpmn
Current speed	MyWaze_navigate.bpmn, MyWaze_speedMonitoring.bpmn
Speed alert	MyWaze_navigate.bpmn, MyWaze_speedMonitoring.bpmn
Find parking lots	MyWaze_navigate.bpmn, MyWaze_defineRouteToParkingLot.bpmn, MyWaze_calculateRoute.bpmn
Hazard reports	MyWaze_navigate.bpmn, MyWaze_reportHazard.bpmn
Share ride	MyWaze.bpmn, MyWaze_registerRideOffering.bpmn, MyWaze_arrangeSharedRide.bpmn
Bookmarking	MyWaze.bpmn, MyWaze_createBookmark.bpmn
Statistics	MyWaze.bpmn, MyWaze_provideStatistics.bpmn
Change units	MyWaze.bpmn, MyWaze_changeUnits.bpmn
Register vehicle type	MyWaze.bpmn, MyWaze_registerVehicleType.bpmn

# Requirements Diagram

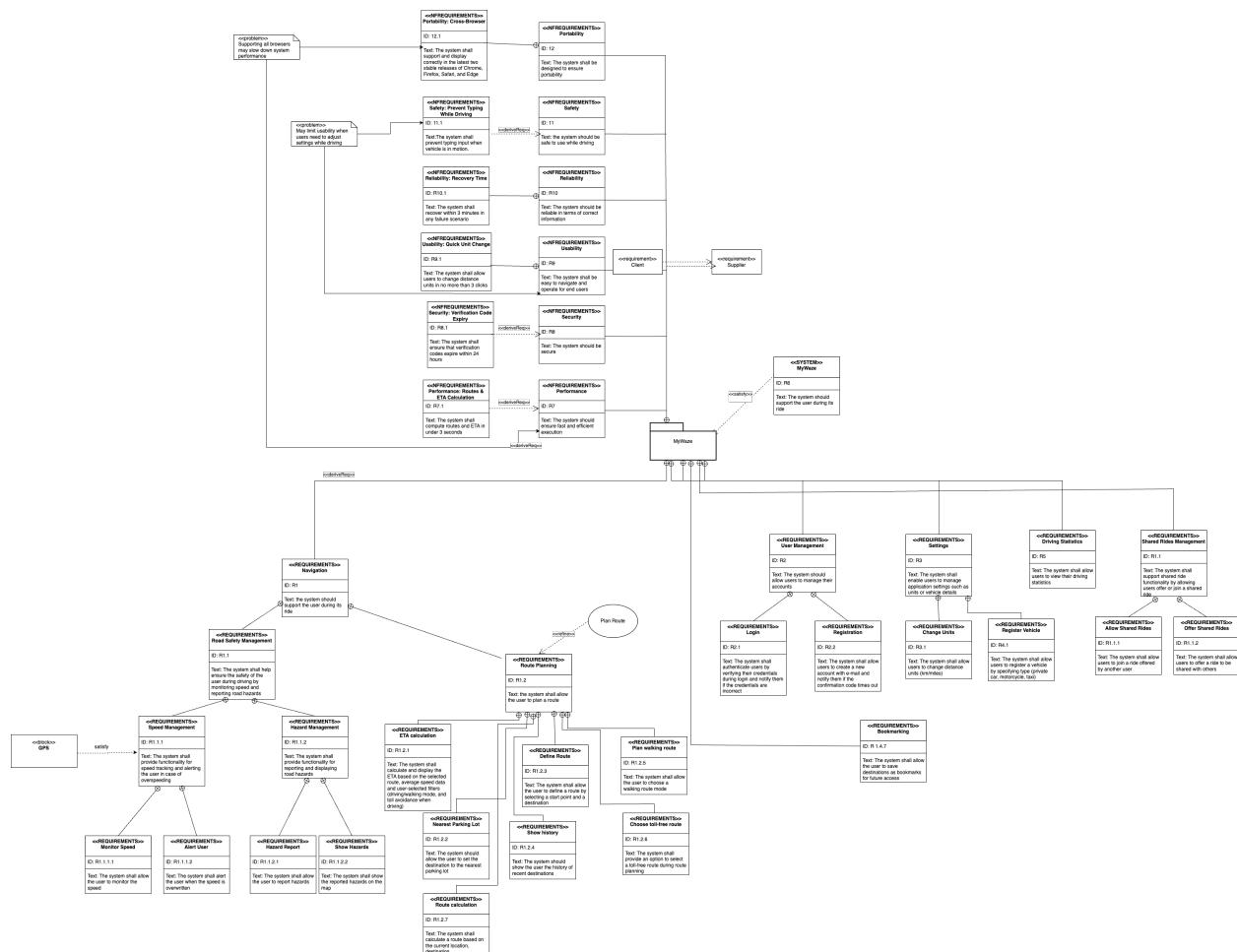


Figure 3: Requirements Diagram

## BPMN Models

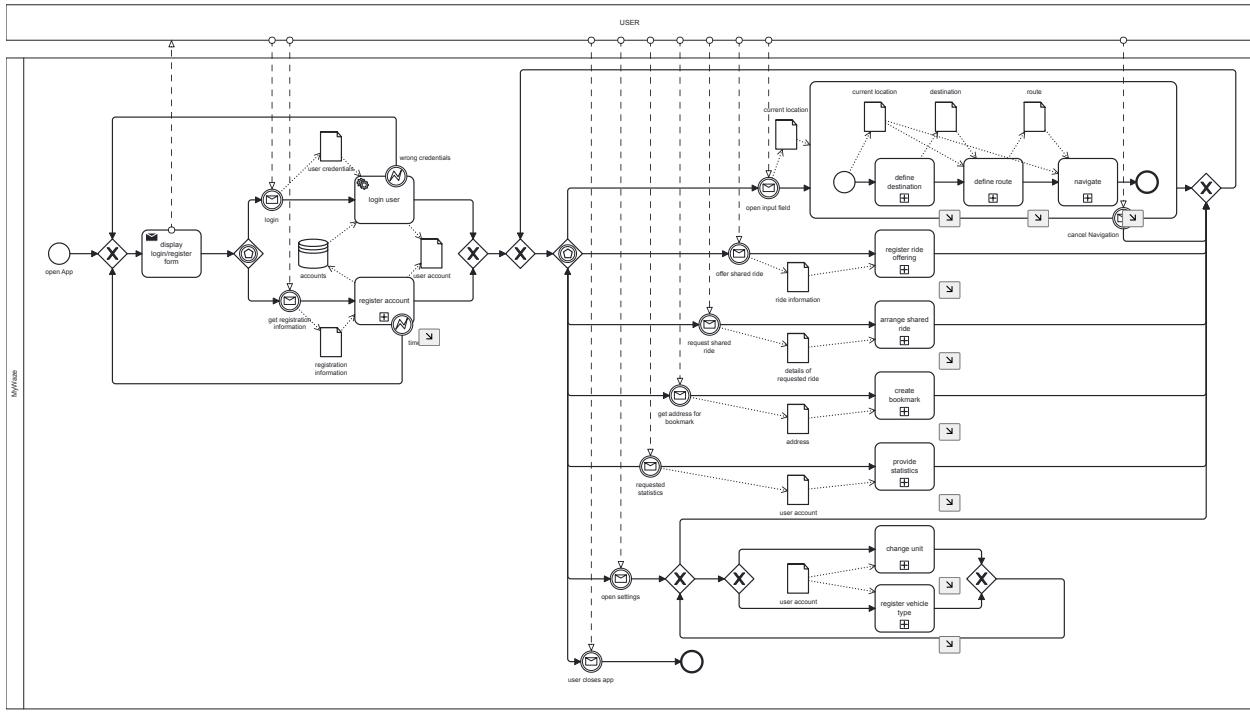
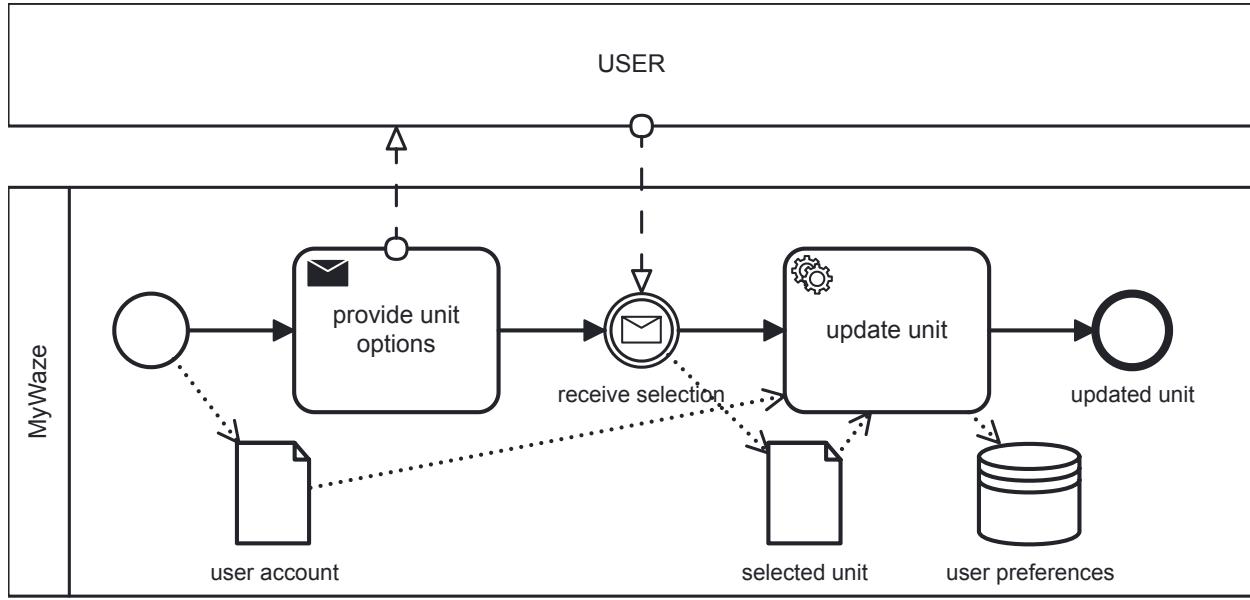


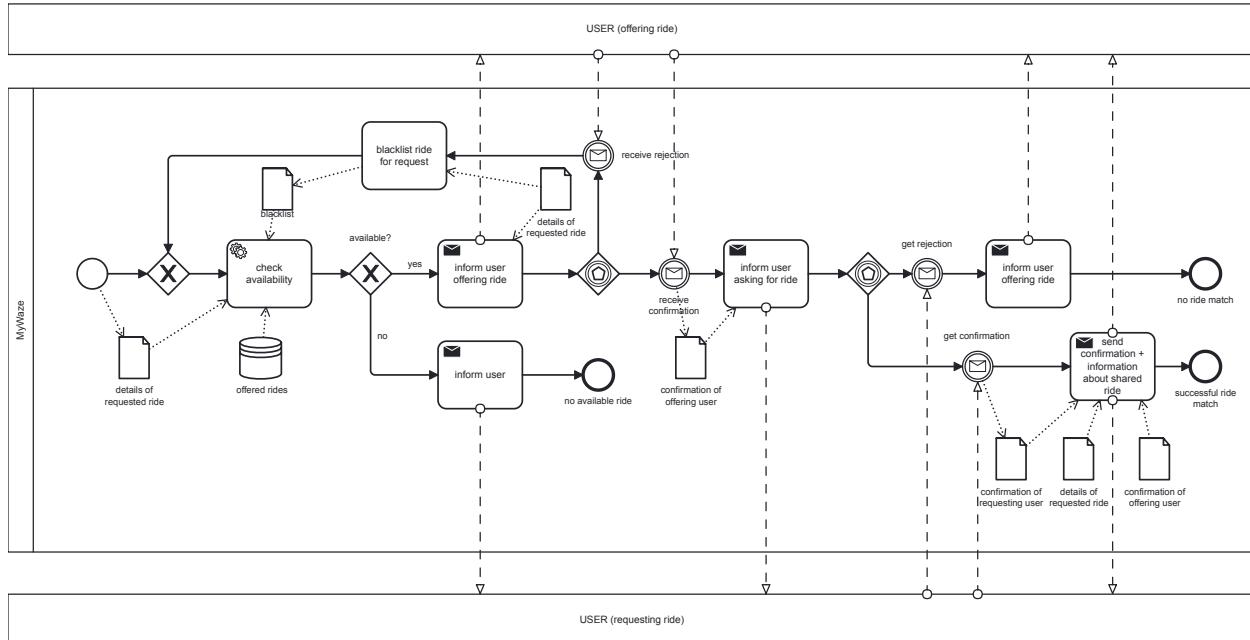
Figure 4: Model: MyWaze



MyWaze\_ChangeUnit.bpmn

BPMN.io

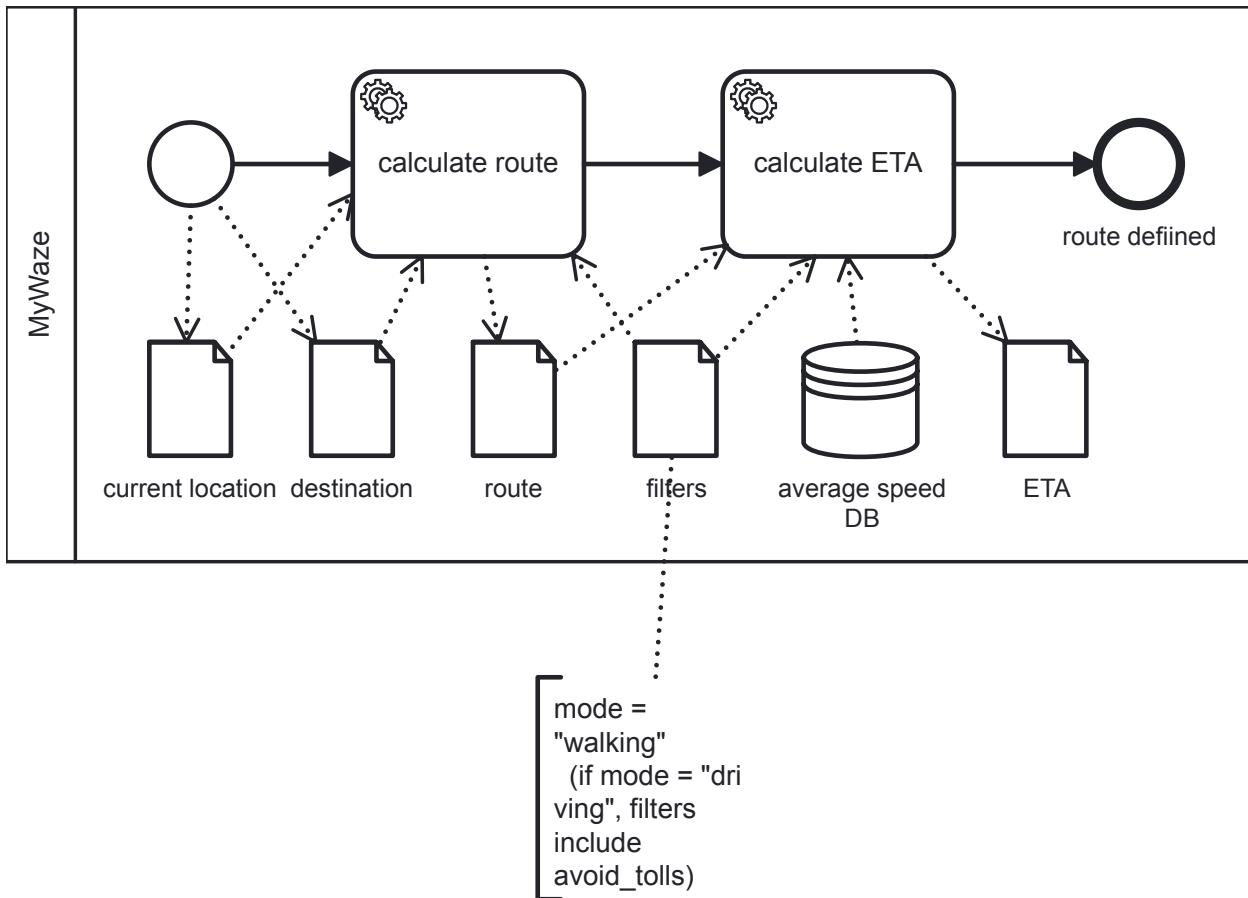
Figure 5: Model: MyWaze'ChangeUnit



MyWaze\_arrangeSharedRide.bpmn

BPMN.io

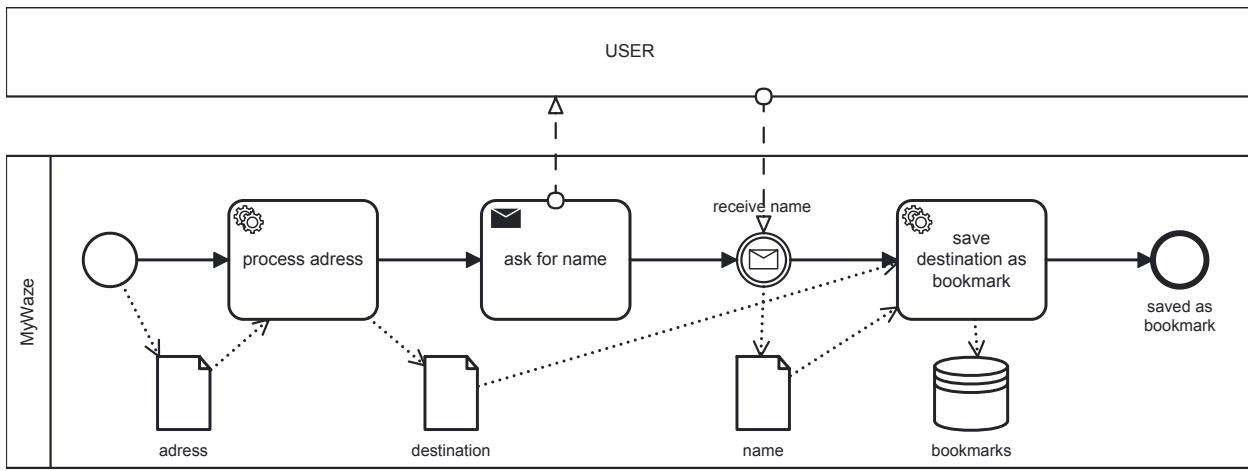
Figure 6: Model: MyWaze'arrangeSharedRide



MyWaze\_calculateRoute.bpmn

**BPMN.io**

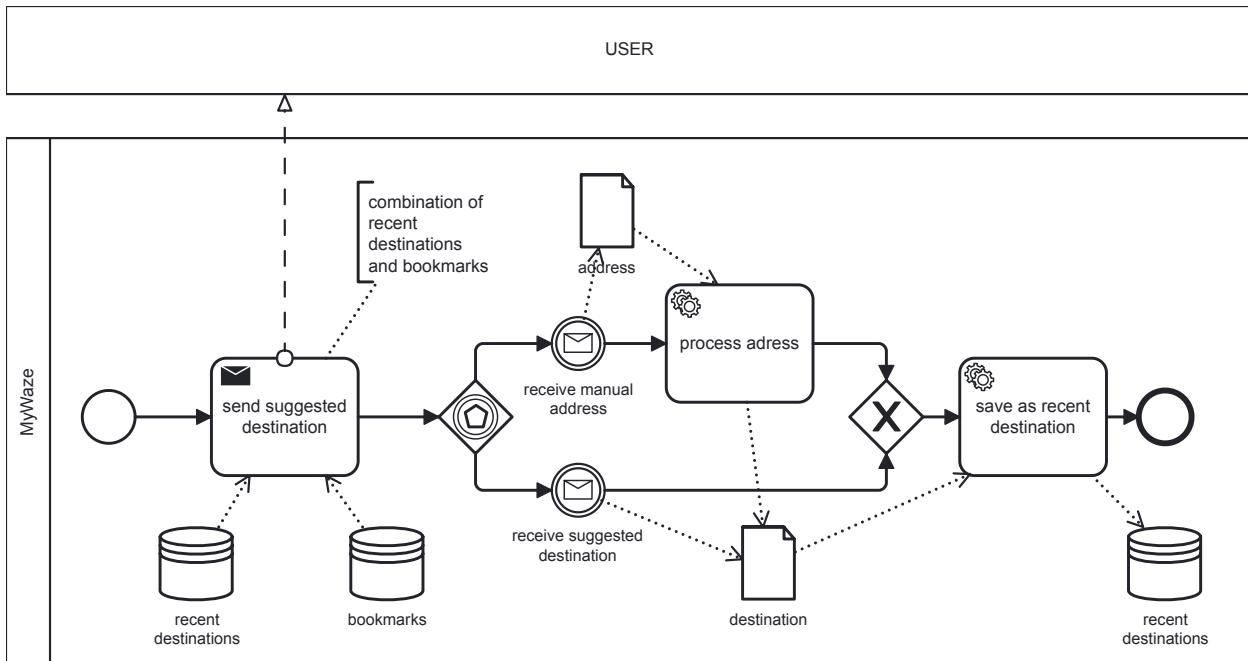
Figure 7: Model: MyWaze`calculateRoute



MyWaze\_createBookmark.bpmn

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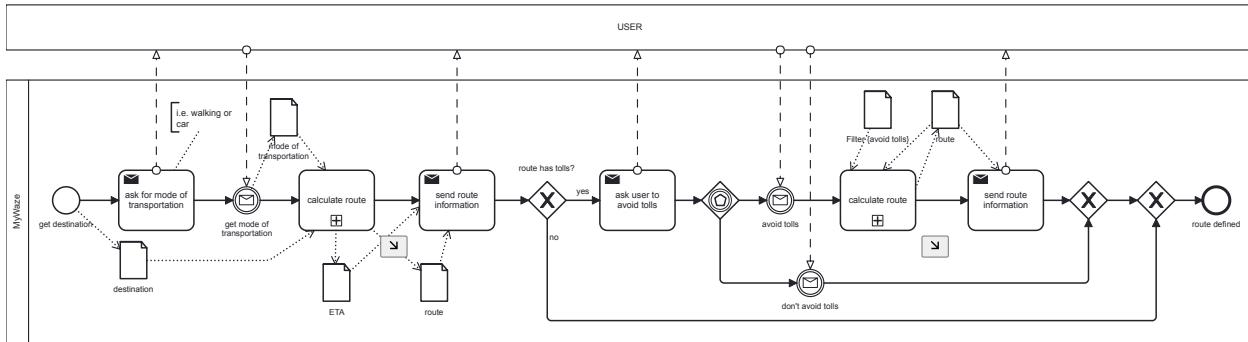
Figure 8: Model: MyWaze\_createBookmark



MyWaze\_defineDestination.bpmn

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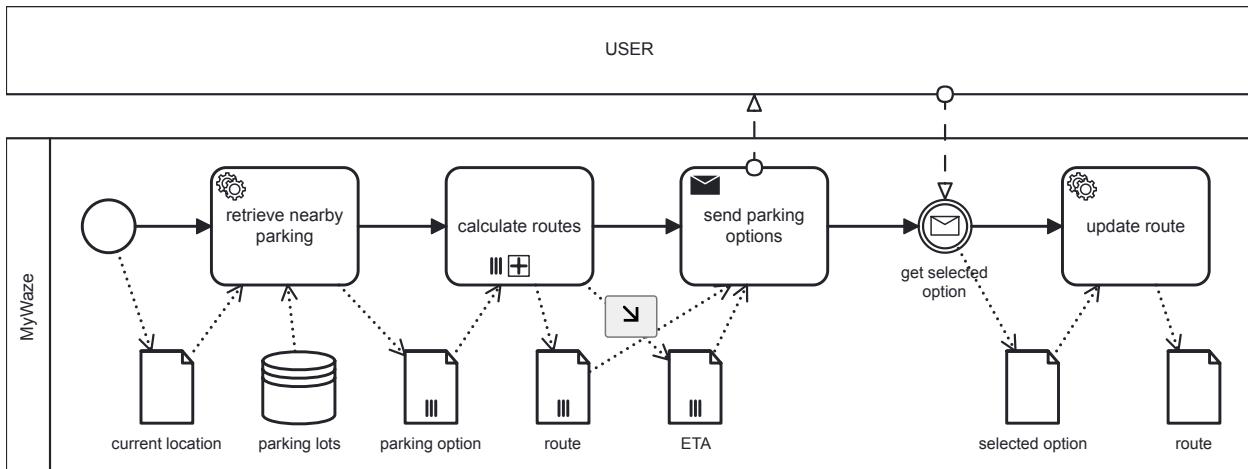
Figure 9: Model: MyWaze\_defineDestination



MyWaze\_defineRoute.bpmn

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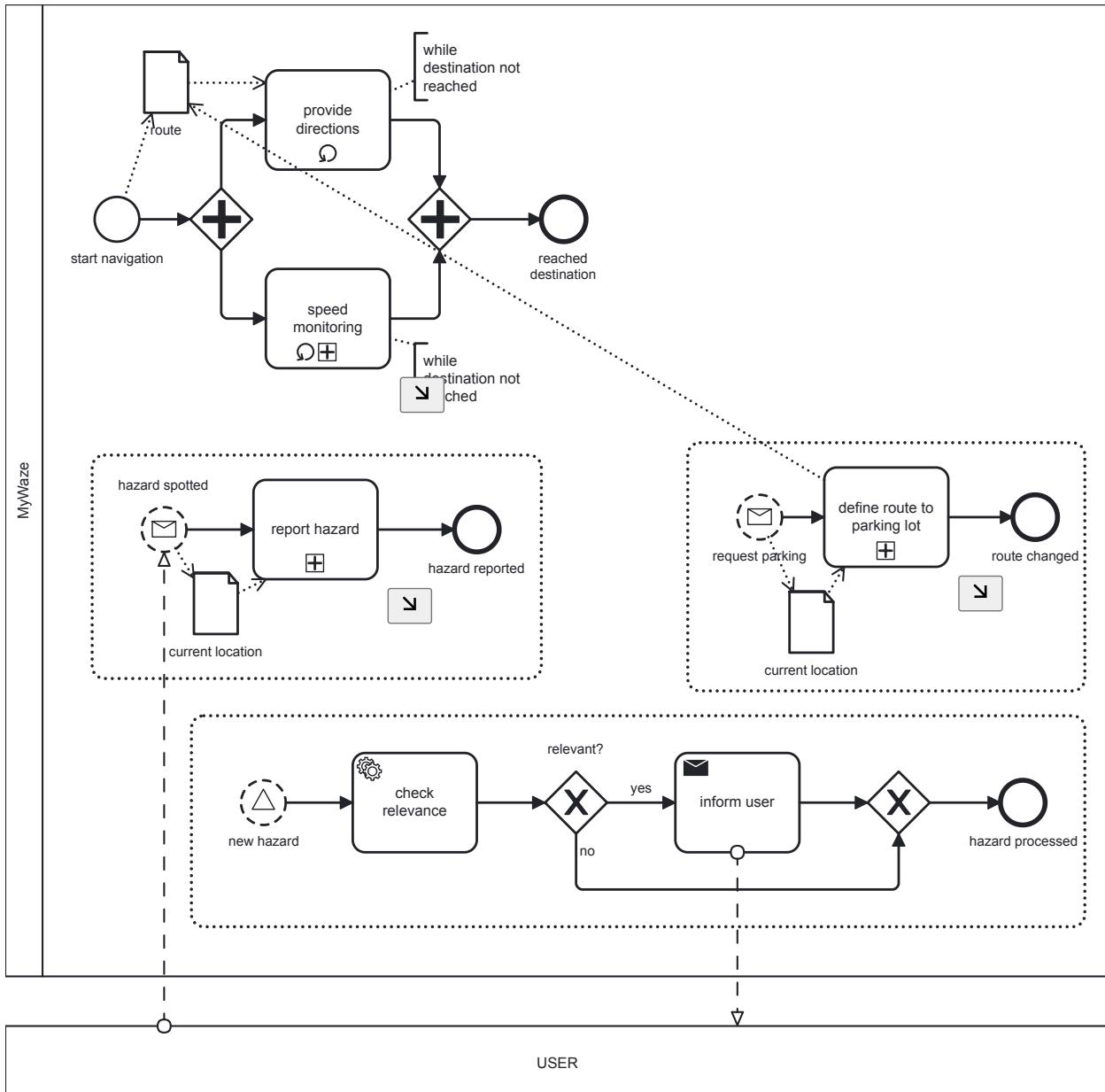
Figure 10: Model: MyWaze`defineRoute



MyWaze\_defineRouteToParkingLot.bpmn

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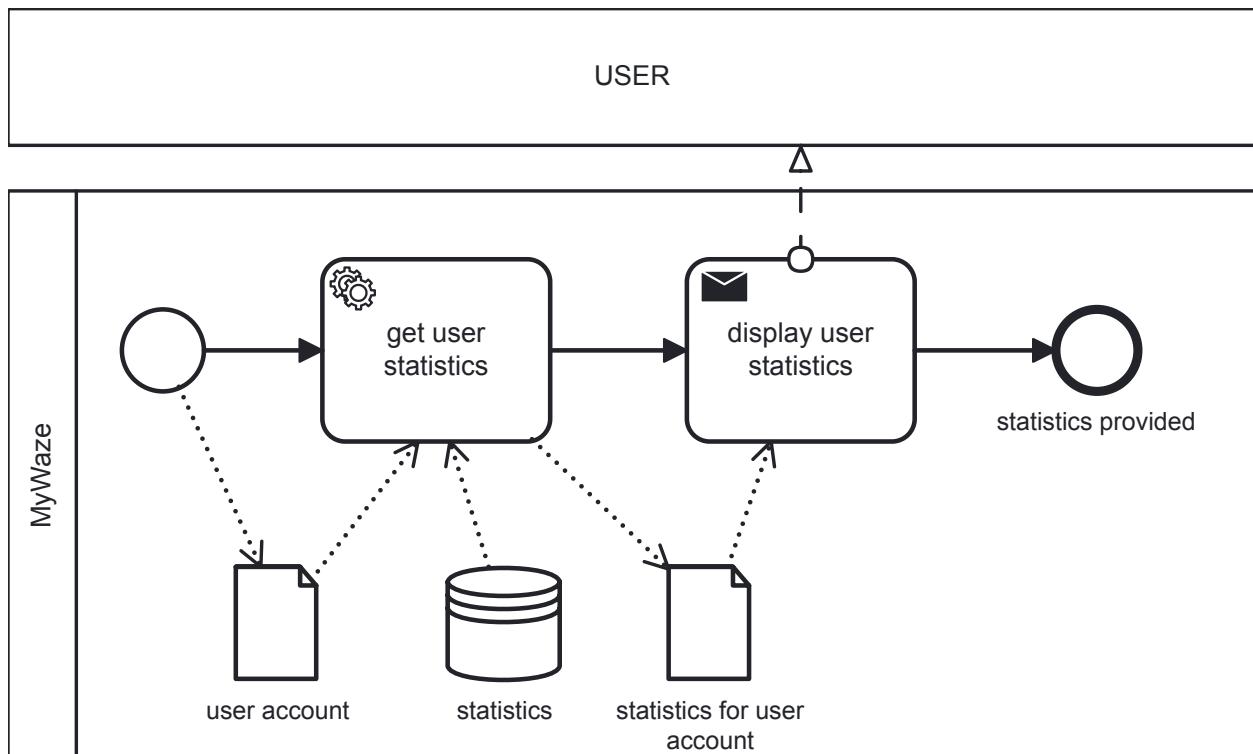
Figure 11: Model: MyWaze`defineRouteToParkingLot



MyWaze\_navigate.bpmn

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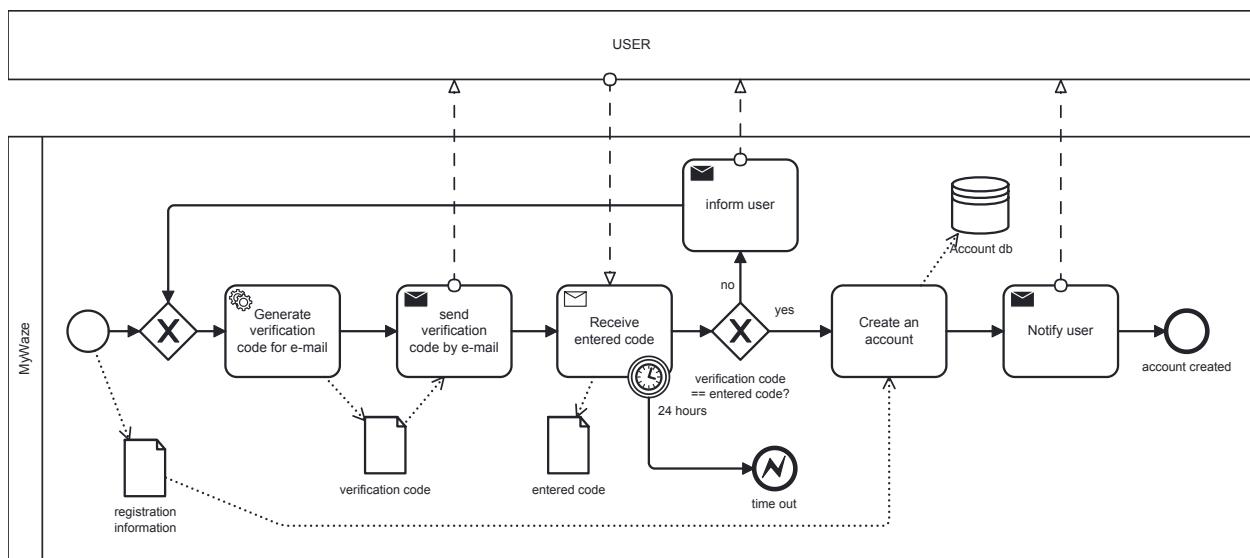
Figure 12: Model: MyWaze.navigate



MyWaze\_provideStatistics.bpmn

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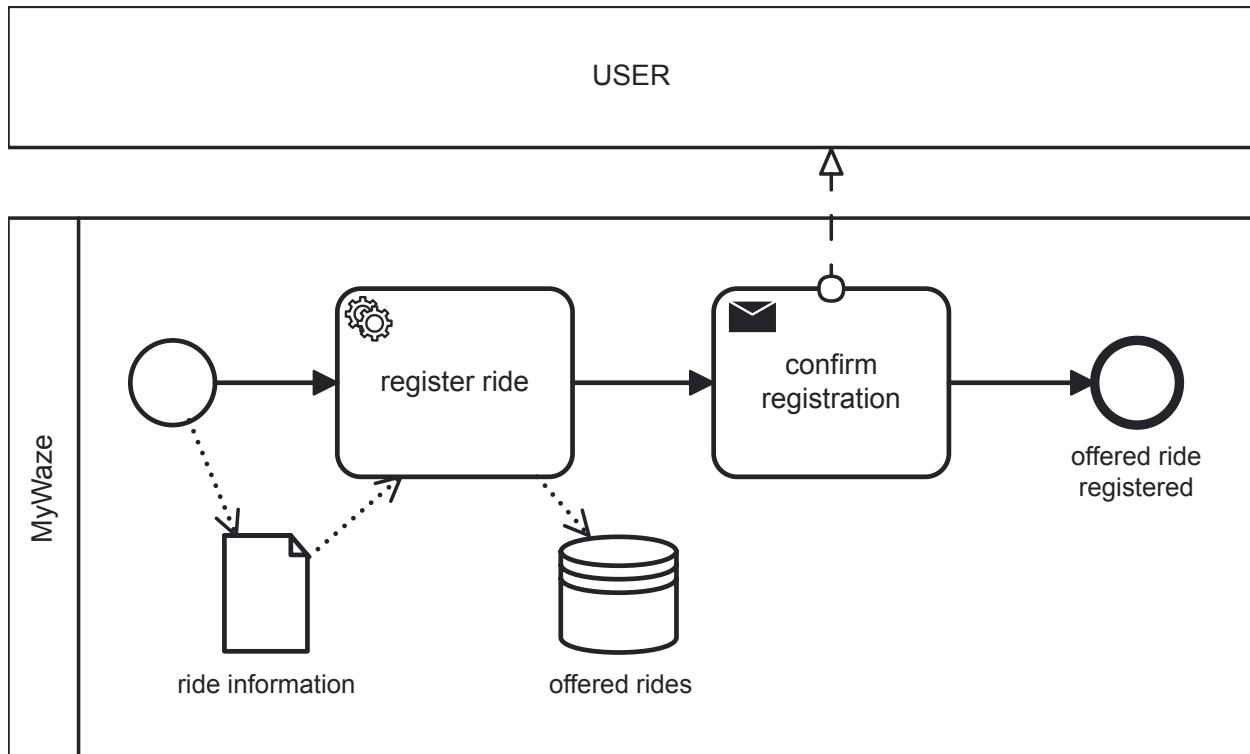
Figure 13: Model: MyWaze\_provideStatistics



MyWaze\_registerAccount.bpmn

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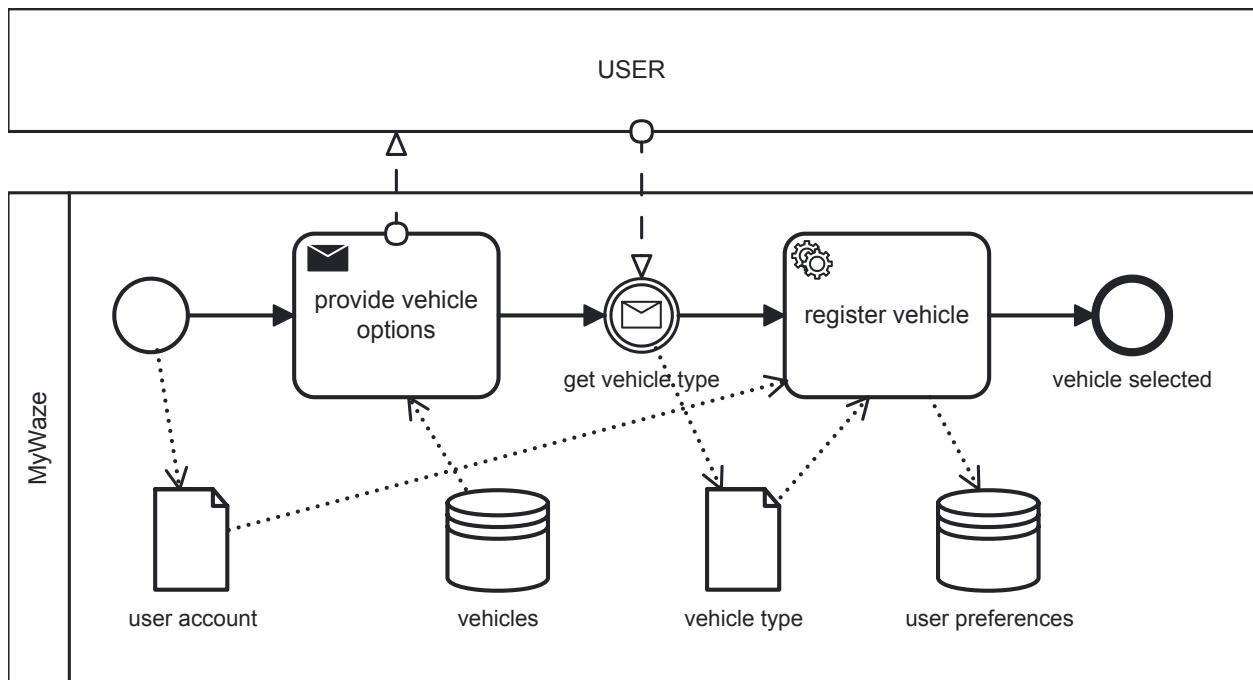
Figure 14: Model: MyWaze registerAccount



MyWaze\_registerRideOffering.bpmn

**BPBMN.io**

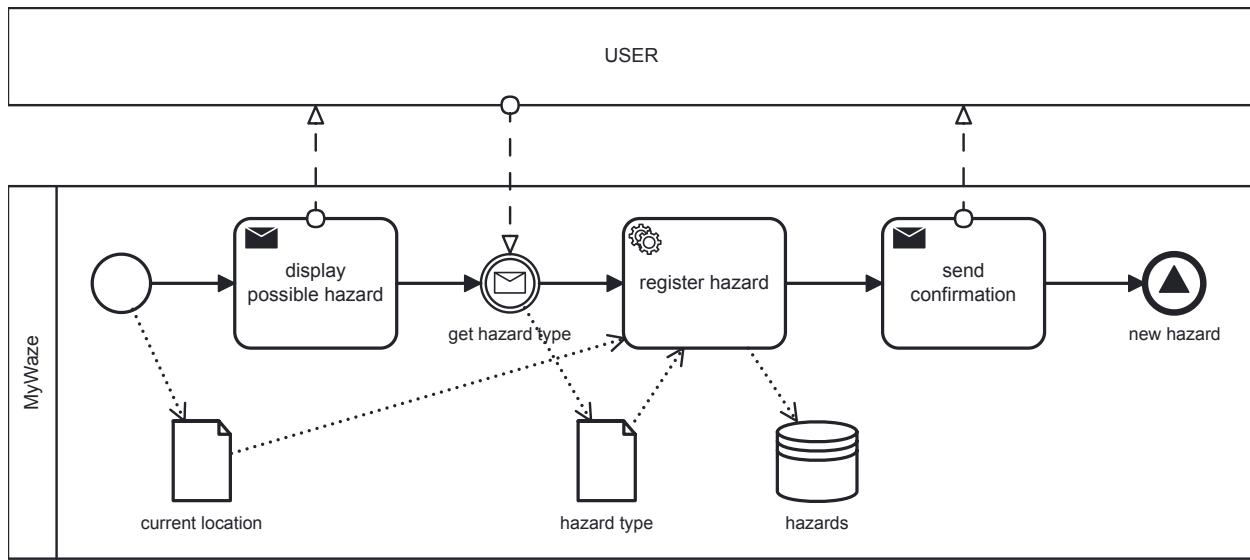
Figure 15: Model: MyWaze' registerRideOffering



MyWaze\_registerVehicleType.bpmn

**BPMN.io**

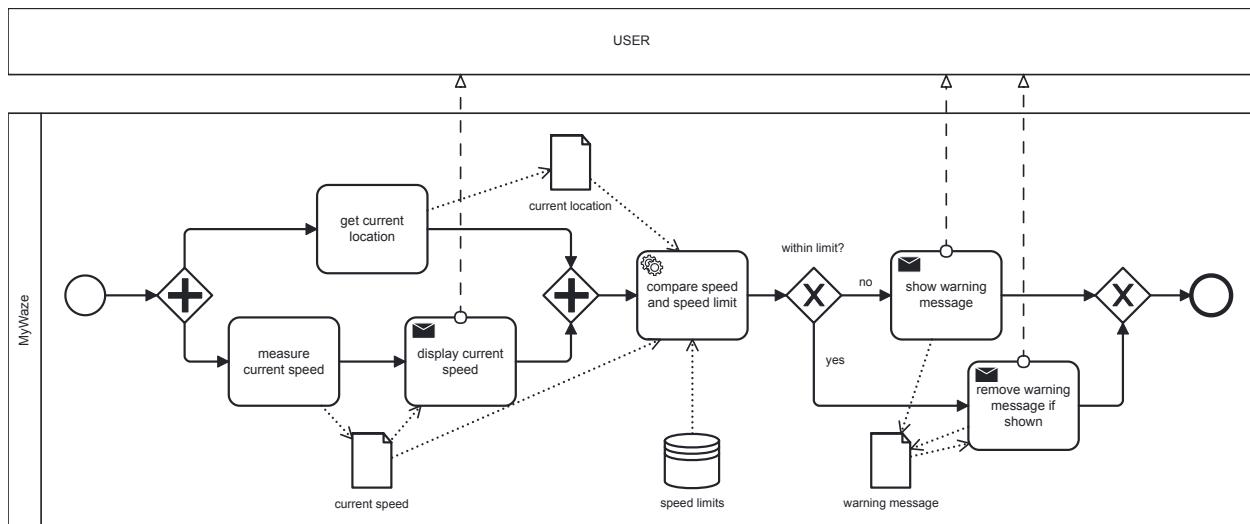
Figure 16: Model: MyWaze' registerVehicleType



MyWaze\_reportHazard.bpmn

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Figure 17: Model: MyWaze reportHazard



MyWaze\_speedMonitoring.bpmn

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Figure 18: Model: MyWaze speedMonitoring

# Prototype

## Running Instructions

```
cd msp-mywaze-backend  
npm i  
npm run dev
```

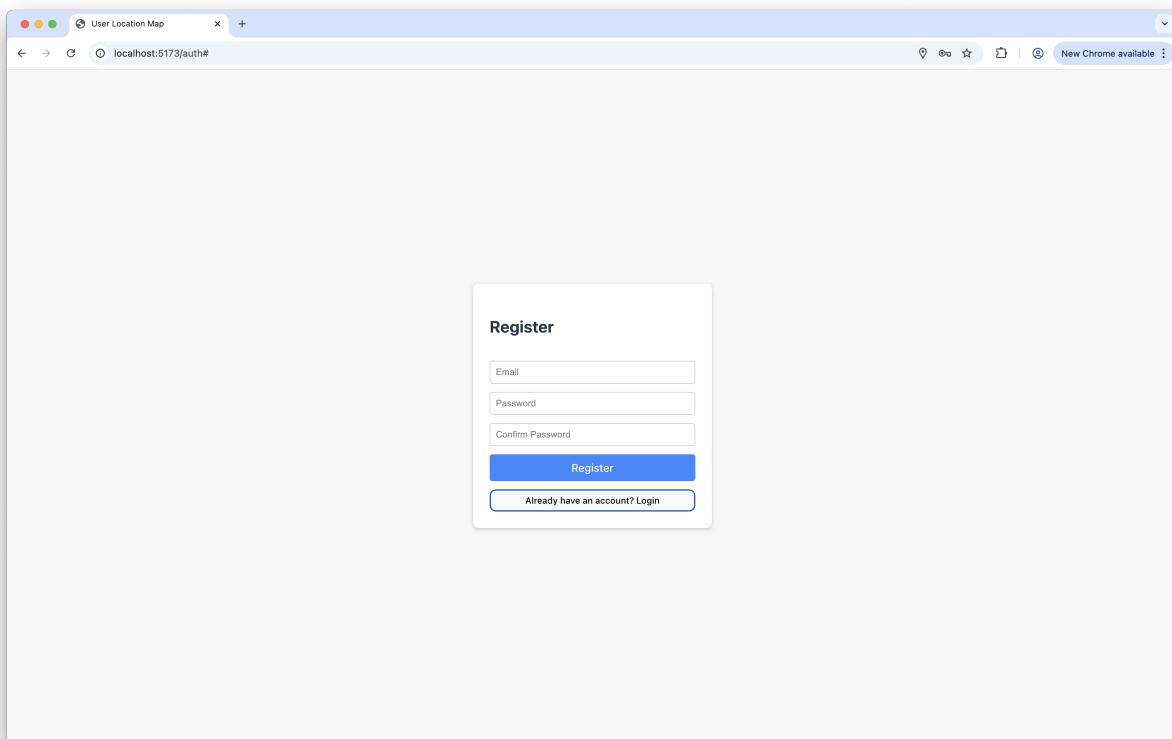
```
cd msp-mywaze-frontend  
npm i  
npm run dev
```

The only prerequisites are a current version of `node` and `npm`. The database is implemented as SQLite, so no manual setup is necessary.

Routing uses OpenRouteService, which is quota-limited (daily) in the free version. If it stops working, please wait one day or change the variable `ORS_API_KEY` in `msp-mywaze-backend/src/routes/routing.ts` to your own (free) API key obtained from <https://openrouteservice.org>.

## Features Implemented

- **Registration:** User can register and login on home page.



- **Vehicle Type Registration:** User can configure their vehicle type in the drop-down user menu on the top right of the screen.
- **Define Route:** User can define a route by entering the destination name or address into the text field at the top center and clicking *Go*.
- **ETA:** ETA is displayed in a popup above the destination after a route is defined.

- **Speed Warning:** Current speed will turn red if the user moves over 50 km/h. To test speed warnings on desktop, click on the speed value to generate a random speed around 50 km/h.

