

Iso-distance map for Electric Vehicles

My job at Enedis was Project Leader to develop electric mobility internally. To sum it up, my mission was to make Enedis' employees adopt electric vehicle since they spotted that this kind of vehicle were not used as much as the gasoline powered one. It was a 3 months internship which means that the work was very condensed.

By talking to Enedis' employees, I quickly understood that they were not using the company's electric vehicles because their autonomy where hazardous and limited. Indeed, they couldn't know if the place they wanted to reach was in the range of action of the electric vehicle. Therefore, they preferred to take a gasoline powered vehicle.

Therefore, one of the measures I took was to build an application to solve the issue of the autonomy. I can't provide the apk because of the information it contains, but I can present screens.

I made this application as simple as I could.

The screenshot shows the Enedis mobile application interface. At the top, the status bar shows the time 12:52 and various icons. The Enedis logo is prominently displayed. Below the logo, a heading reads "Je planifie mon trajet en véhicule électrique !". A paragraph follows: "Finis le problème de l'autonomie incertaine avec cette appli ! Suivez les étapes pour connaître votre rayon d'action!".

Véhicule	Autonomie moyenne (chargé à 100%)
Kangoo V1 (Tarbes)	65 km
Kangoo V2	75 km
Zoe V1	100 km

Below the table, there are two links: "J'indique d'où je pars :" and "J'indique l'autonomie de mon véhicule". Under the first link, there are two buttons: "A partir d'un site de la DR" and "Géolocalisation". Under the second link, there is a text input field containing "50" and "km", followed by a button labeled "Connaître l'autonomie de mon véhicule". Below this is a "Valider" button.

At the bottom, there is a map showing several blue location pins and black car icons with charging symbols. The Enedis logo and copyright "enedis © 2019" are visible at the very bottom of the screen.

1. First you have to indicate if you want to be geolocated or if you want to plan a trip from one of the company's building

The goal was to enable the employees to check the autonomy ability of their vehicle once they're on a mission, but also to plan trip from a company building (where they have to go to take an electric vehicle) even though they're not in this building already.

2. Then you have to indicate the exact autonomy of the vehicle

Either you're in the car and therefore you can read this autonomy, either you're planning a trip and thought about putting a table summarizing the average mean autonomy for each type of vehicle.

I choose this way to proceed because if the company change the model of their electric vehicle, the change in the table would take less than a minute and the employees are able to recheck the range of action with the exact autonomy once int the vehicle.

I also put a reminder on how to read the autonomy in the vehicle since it isn't as easy as it can seem in some model.

Then you validate the information with "Valider".

3. Finally, the application displays the map



You can see that the application plots the iso-distance from the place you selected (or your position, it depends on what you chose).

The lighter blue displays a one-way trip, which means that you'll have to recharge your vehicle to do the round trip. The darker blue shows you the places you can reach and do a round trip, without recharging.

You can also have information such as the name of the city and the different charging abilities to plan your trip easily.

Obviously, the map is interactive, you can zoom in and out. As you zoom in the name of the different cities appear. I used Leaflet and Geoservice to build this application.