

Case study

Combined Range

km



Locate
Vehicle

Get the most up to date
location



Vehicle



Map



Profile

My BMW and MINI

Your vehicle is being located..

Vehicle Finder in non-LSC BMWs

GPS is Currently Off

Turn on location services in your phone
settings to determine your location.

CANCEL

SETTINGS

65 % / 388 km

Enable Vehicle's GPS

GPS positioning deactivated in the vehicle. In
order to use the mobility functions, activate
GPS positioning in your vehicle by going to
the Settings menu. Further information can
be found in your vehicle's Owner's Manual.

OKAY

OKAY

Vehicle is in motion

Couldn't refresh vehicle's location while
vehicle is in motion. Vehicle Finder will be full
available once the vehicle is parked.

status updated 2 hrs ago

Fuel Level

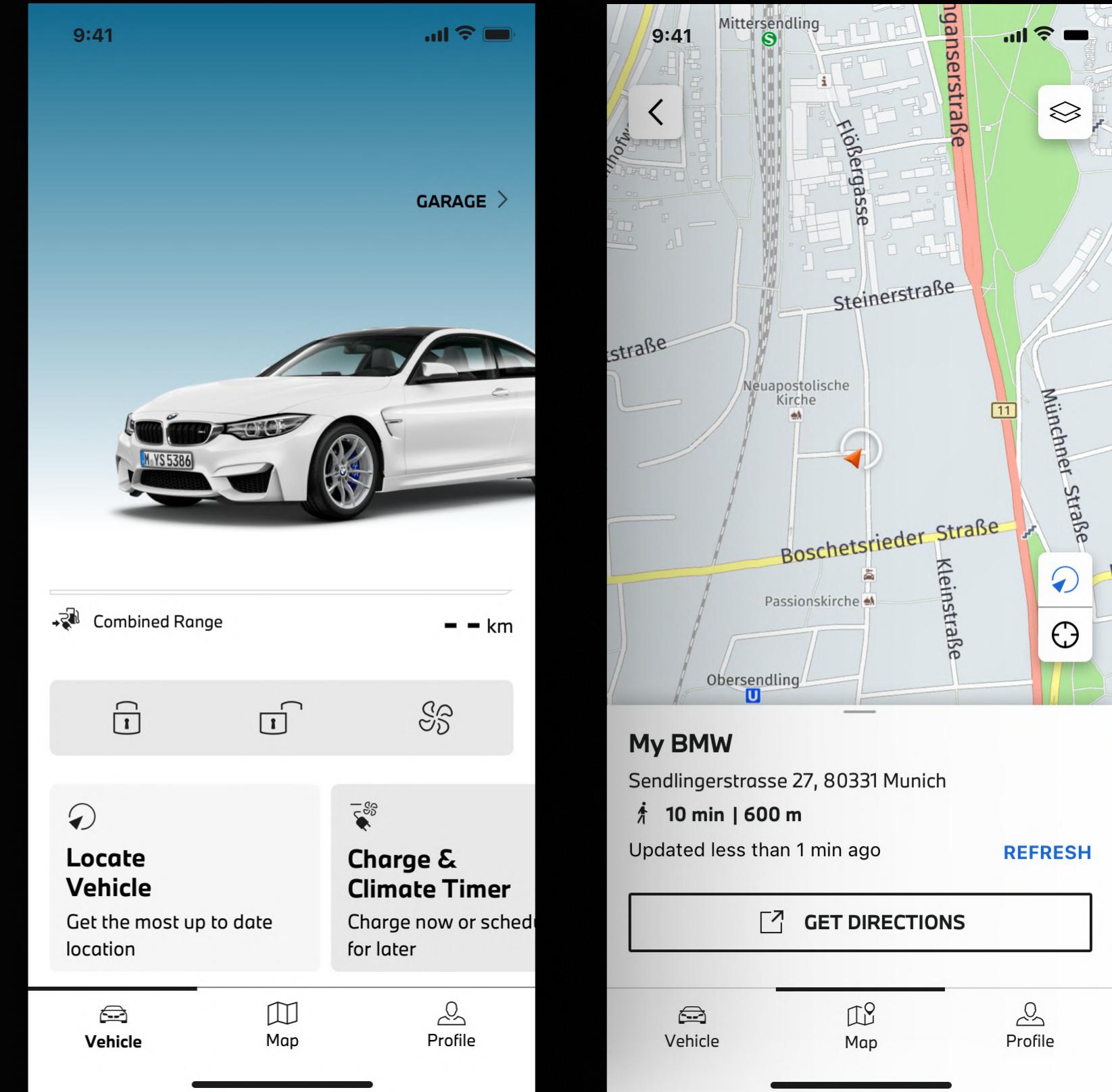
65 % / 388 km



The Problem

MY BMW app users owned cars that didn't have the (LSC) Last State Call function in their hardware.

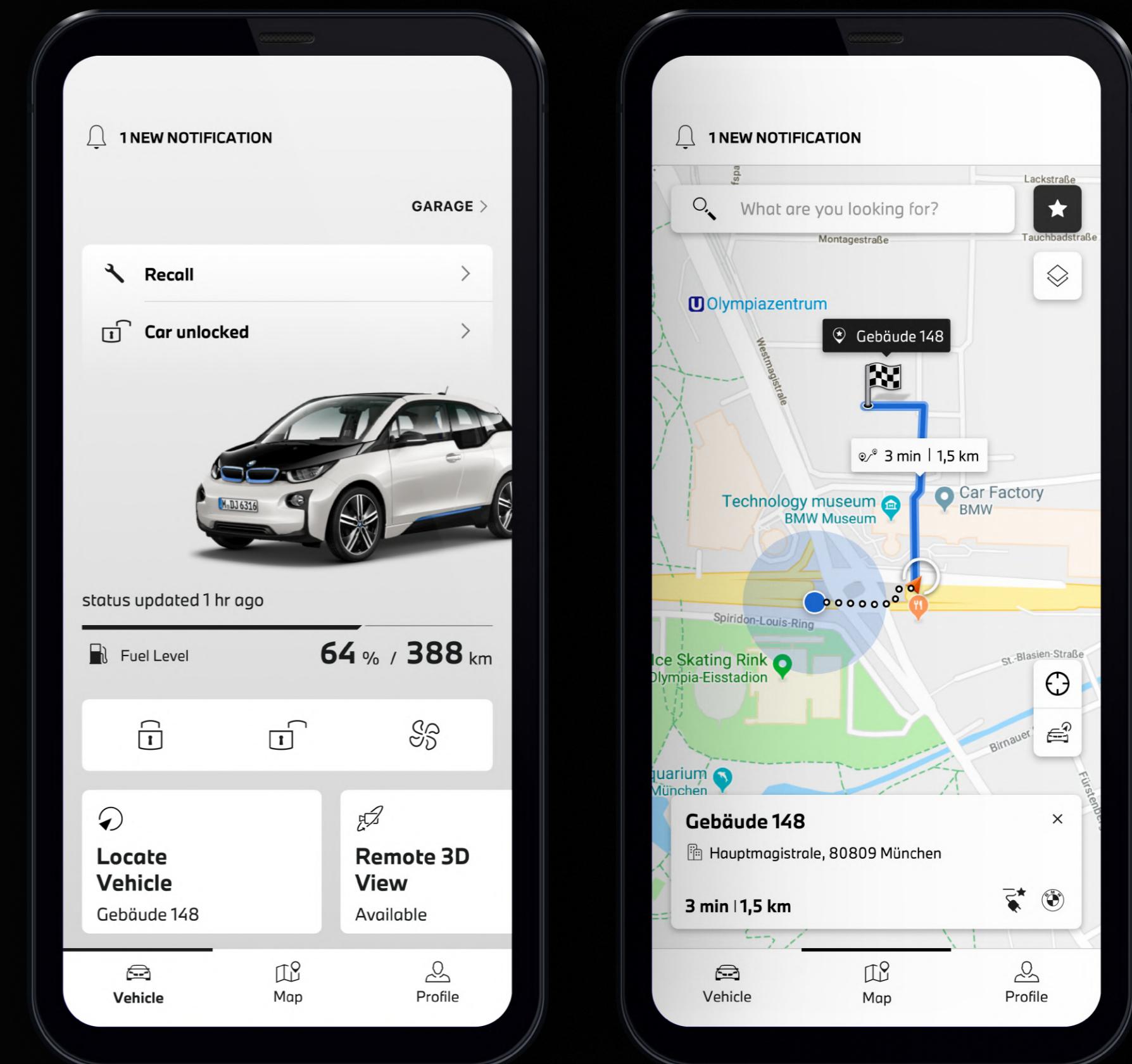
Knowing their exact cars' location was sometimes slow and unreliable.



Insights

The percentage of users that owned BMW cars without the Last State Call was approximately ~20%.

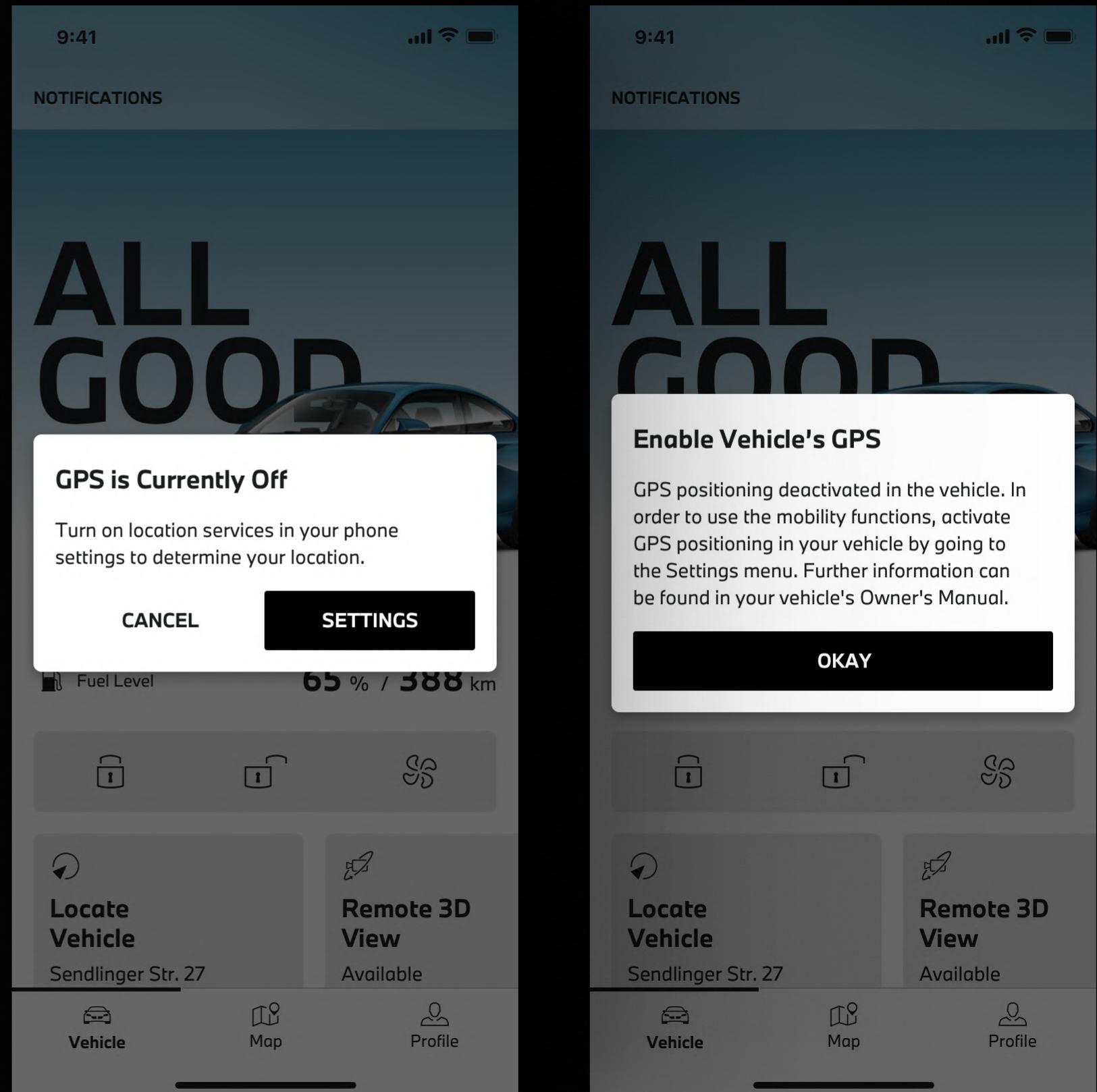
Also, there were **some use cases** could lead to being completely impossible to get the vehicle's position on the map when users tried to locate it.



Error states

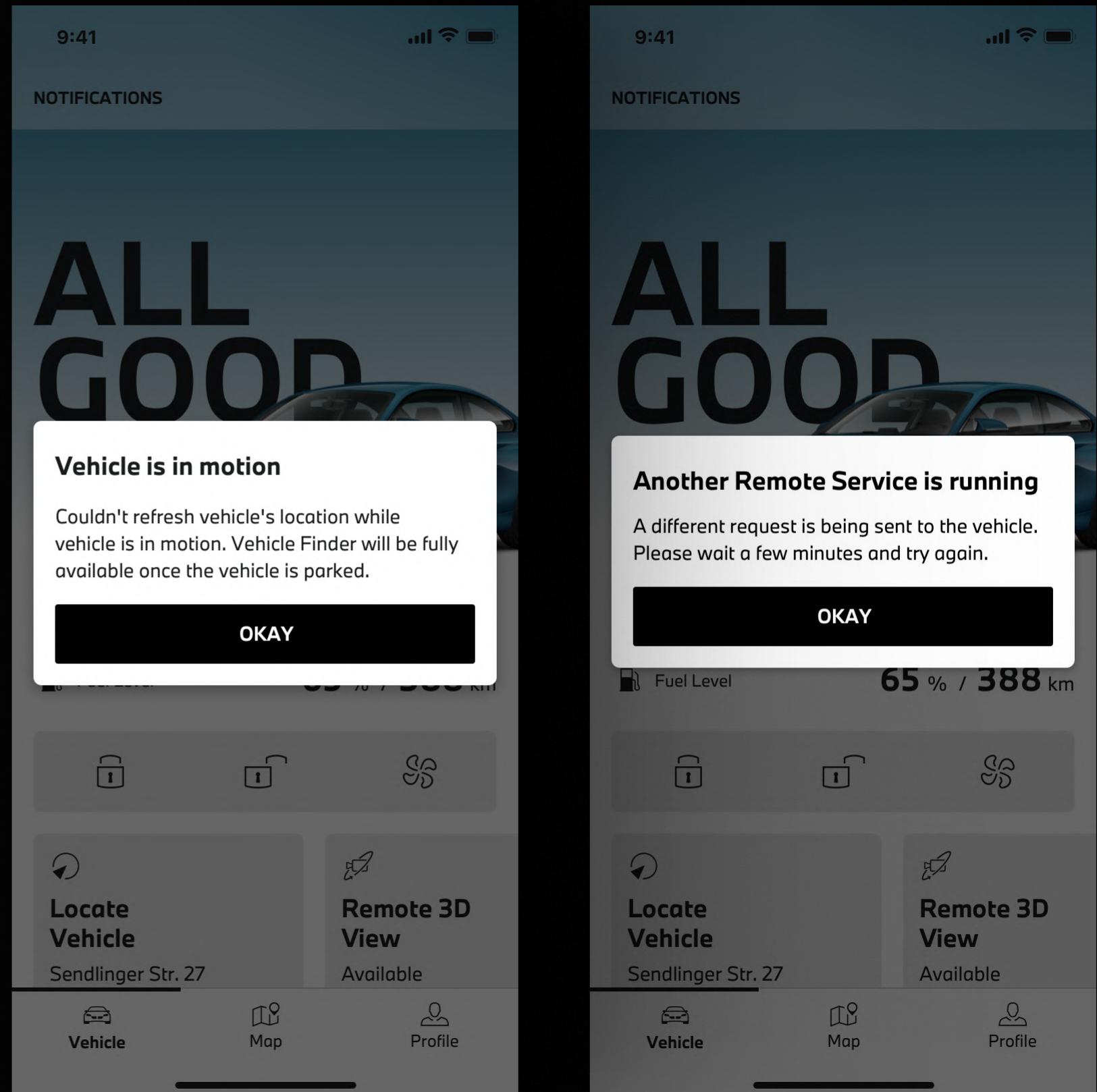
Started defining all possible error use cases.

The first two were when **GPS was turned Off**, either on the mobile phone or on the vehicle itself.



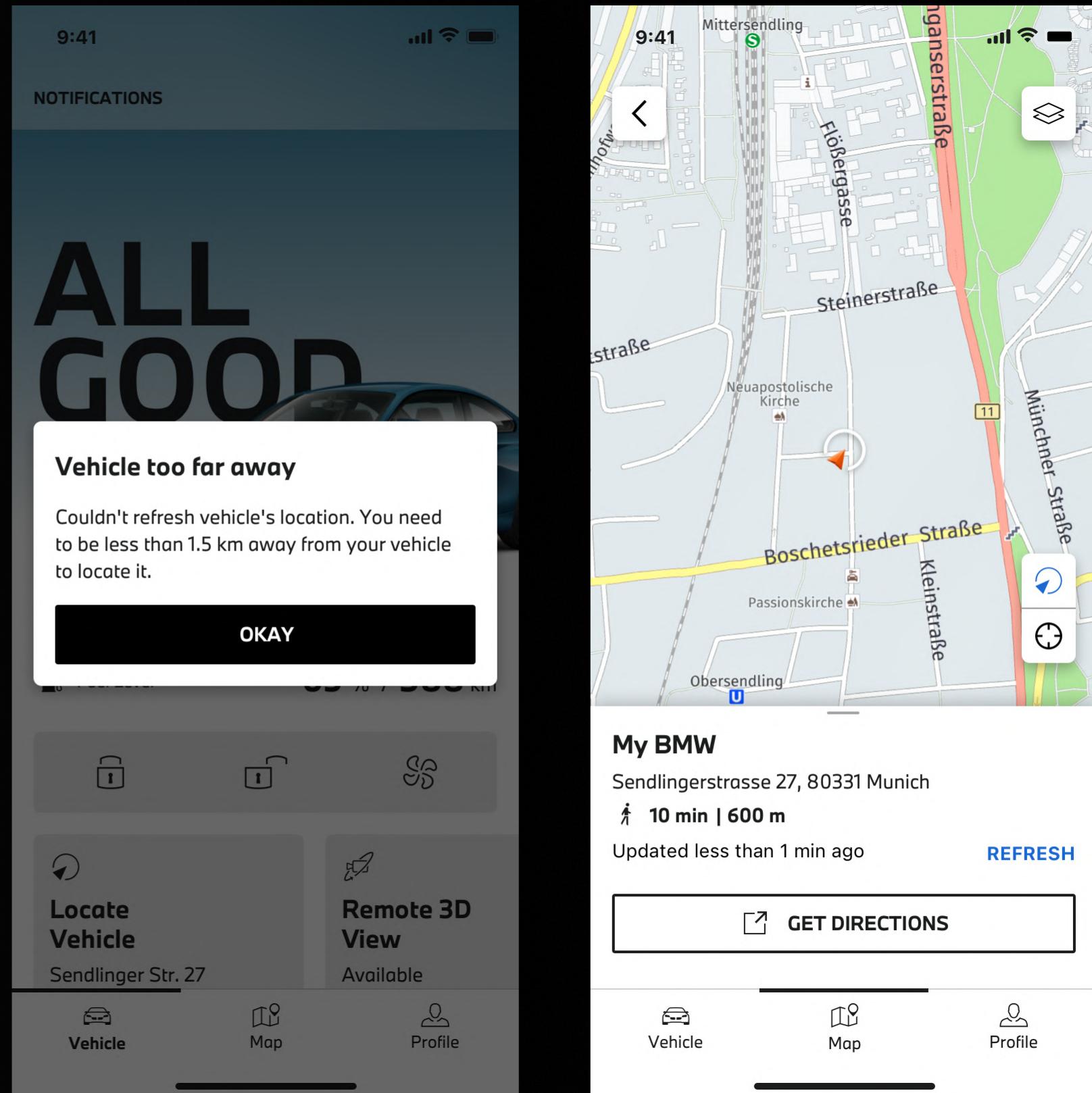
Error states

When the vehicle was in motion, or when another remote service was running - such as starting climate control or getting a Remote 3D View - it was also impossible to retrieve the vehicle's location.

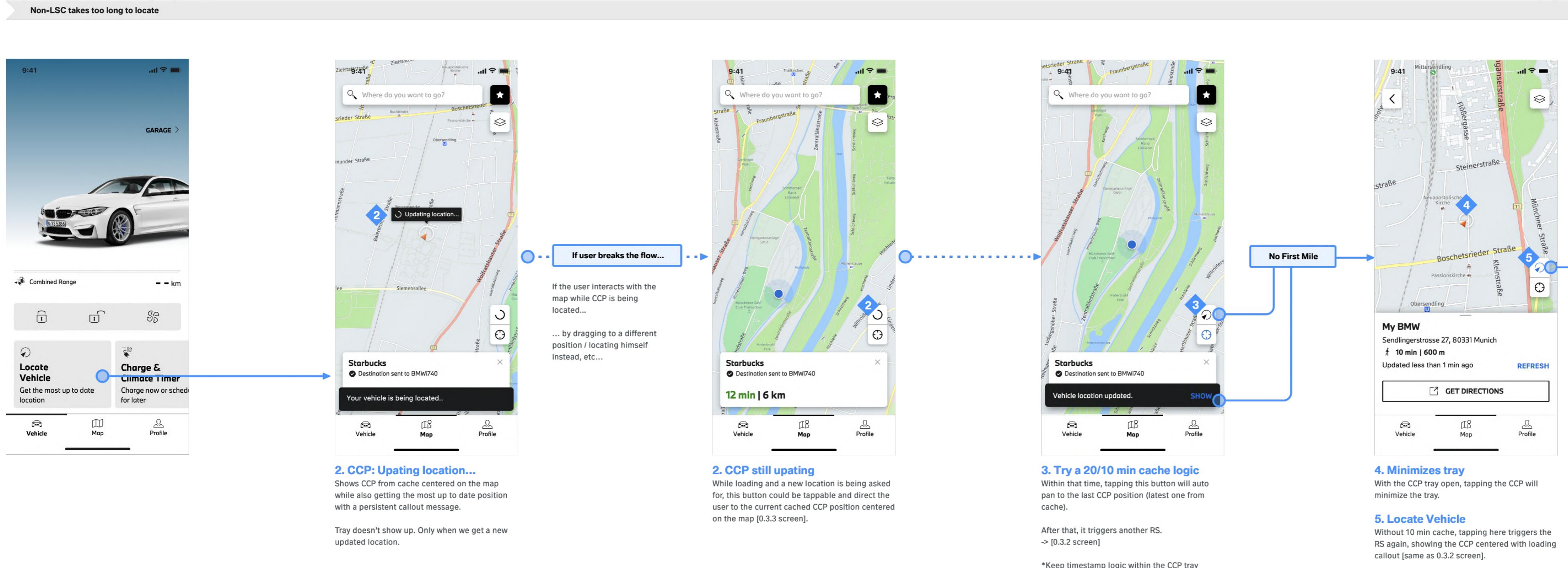


Error states

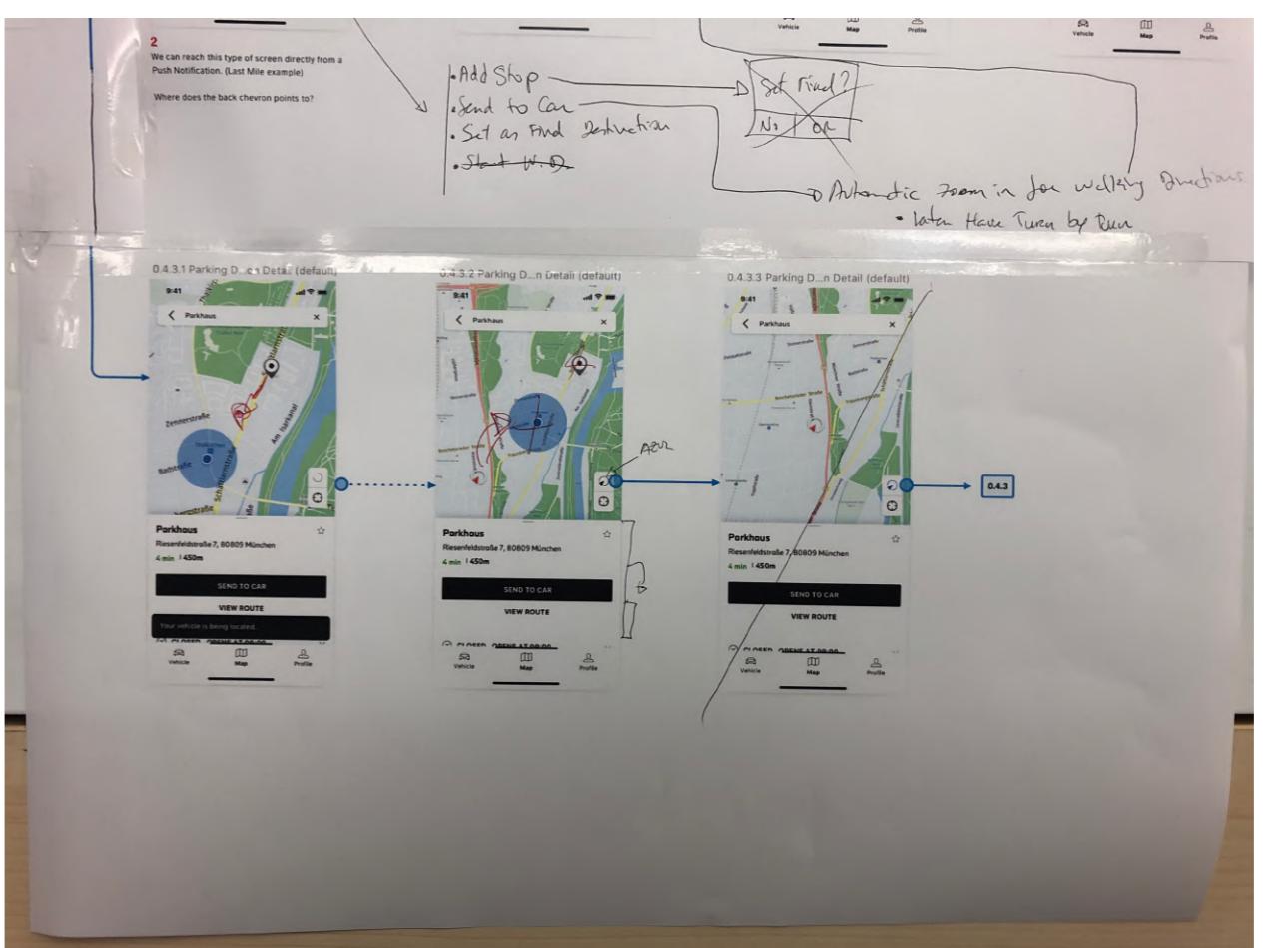
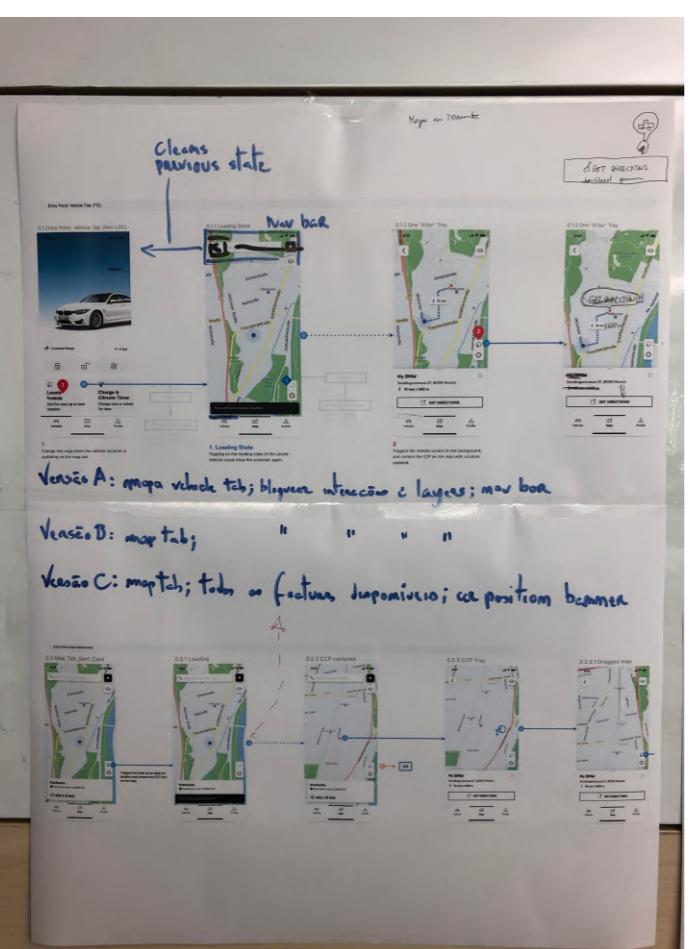
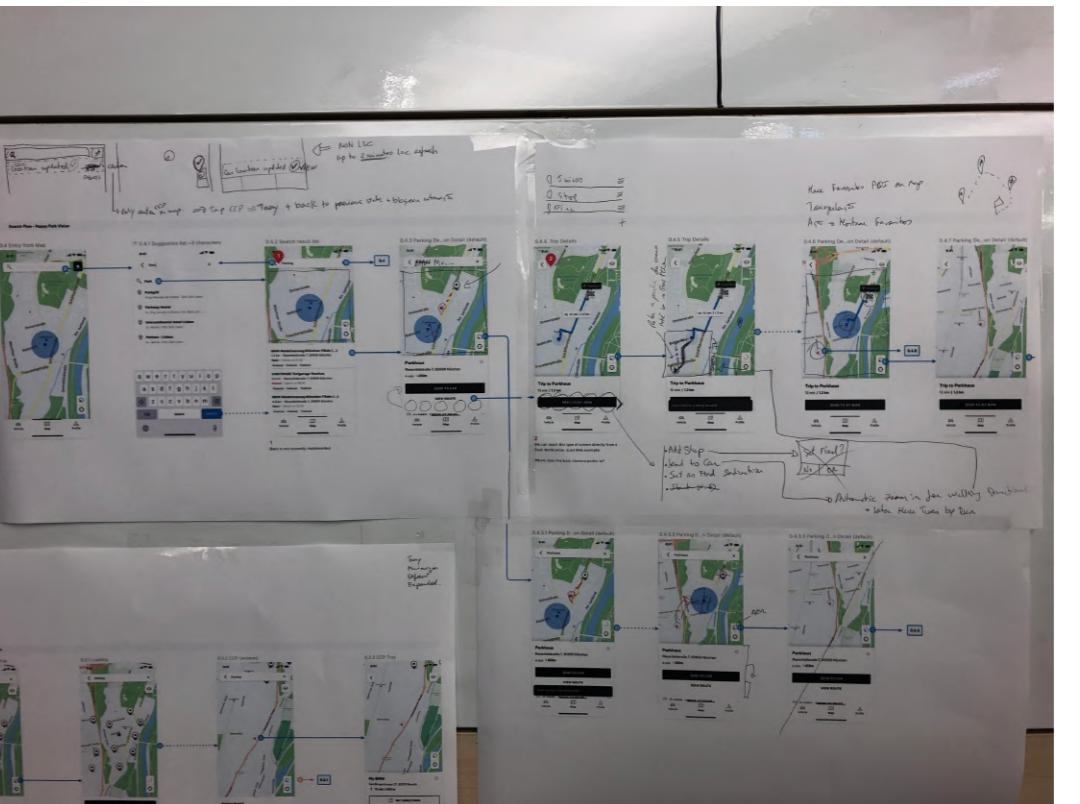
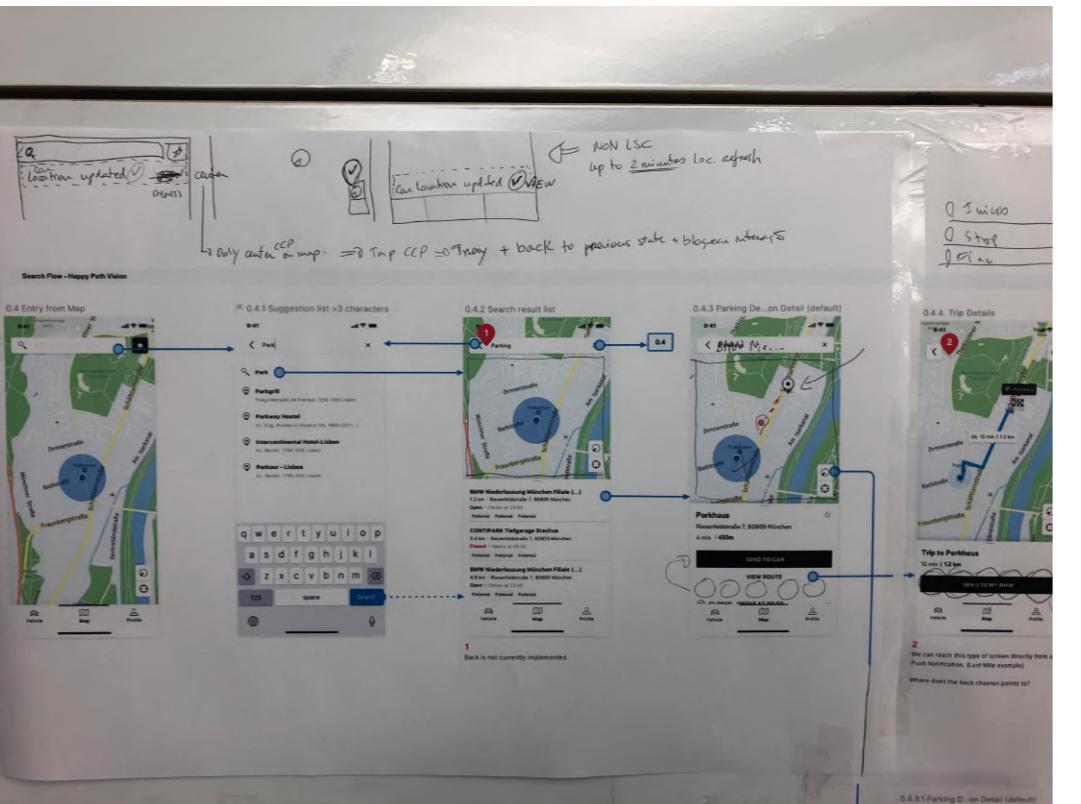
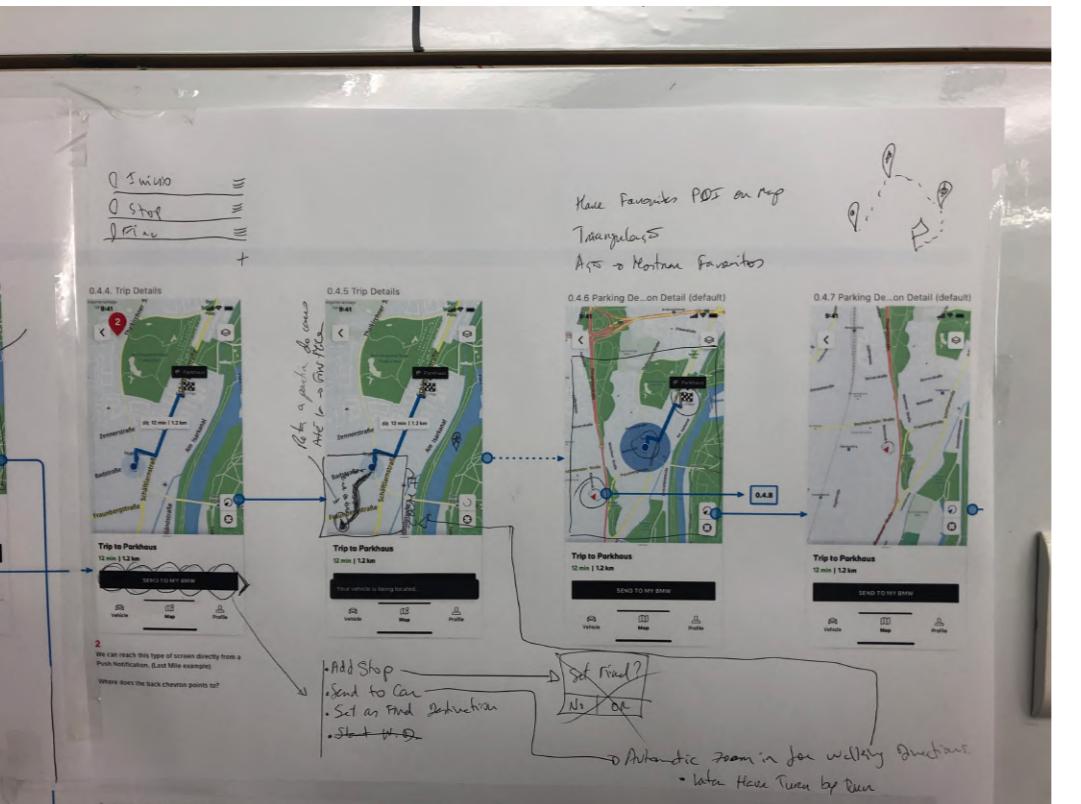
When the user was more than 1.5 kms away from the vehicle, the app wouldn't be able to get the car's location too.



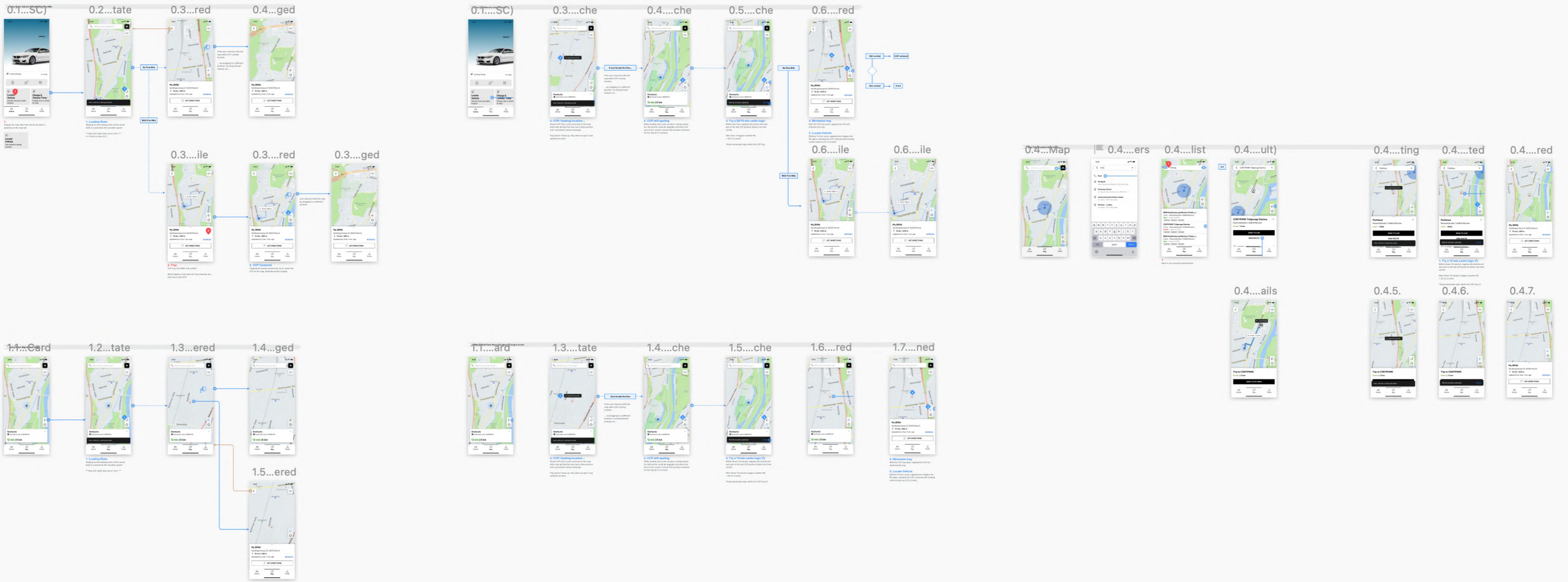
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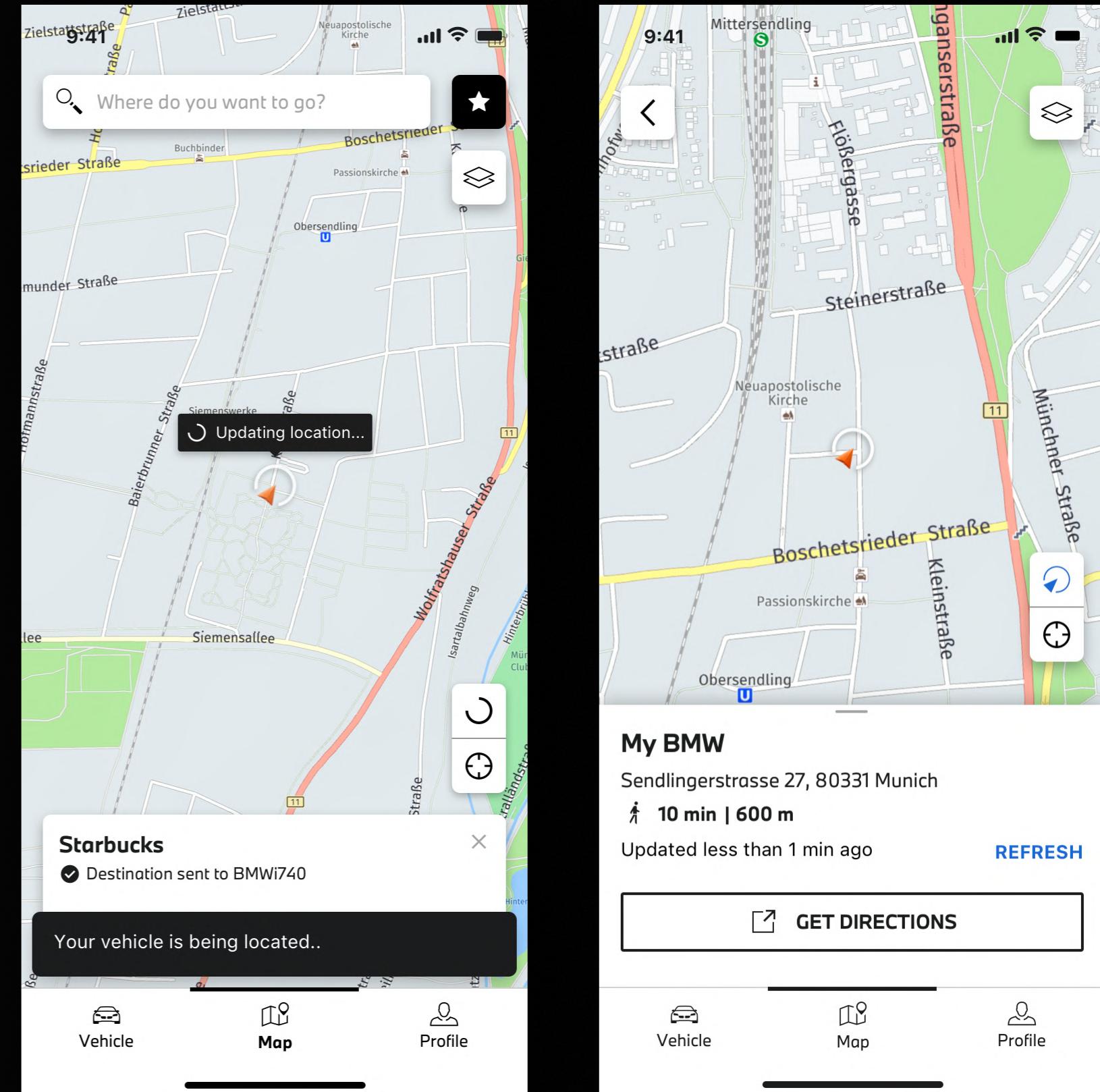
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Locating vehicle within 1.5 kms

To **not overload the system** - or minimize unnecessary data usage or battery drain - by allowing the user to frequently trigger a locate vehicle service, we thought about **adding a cache logic**.

But **for how much time?**

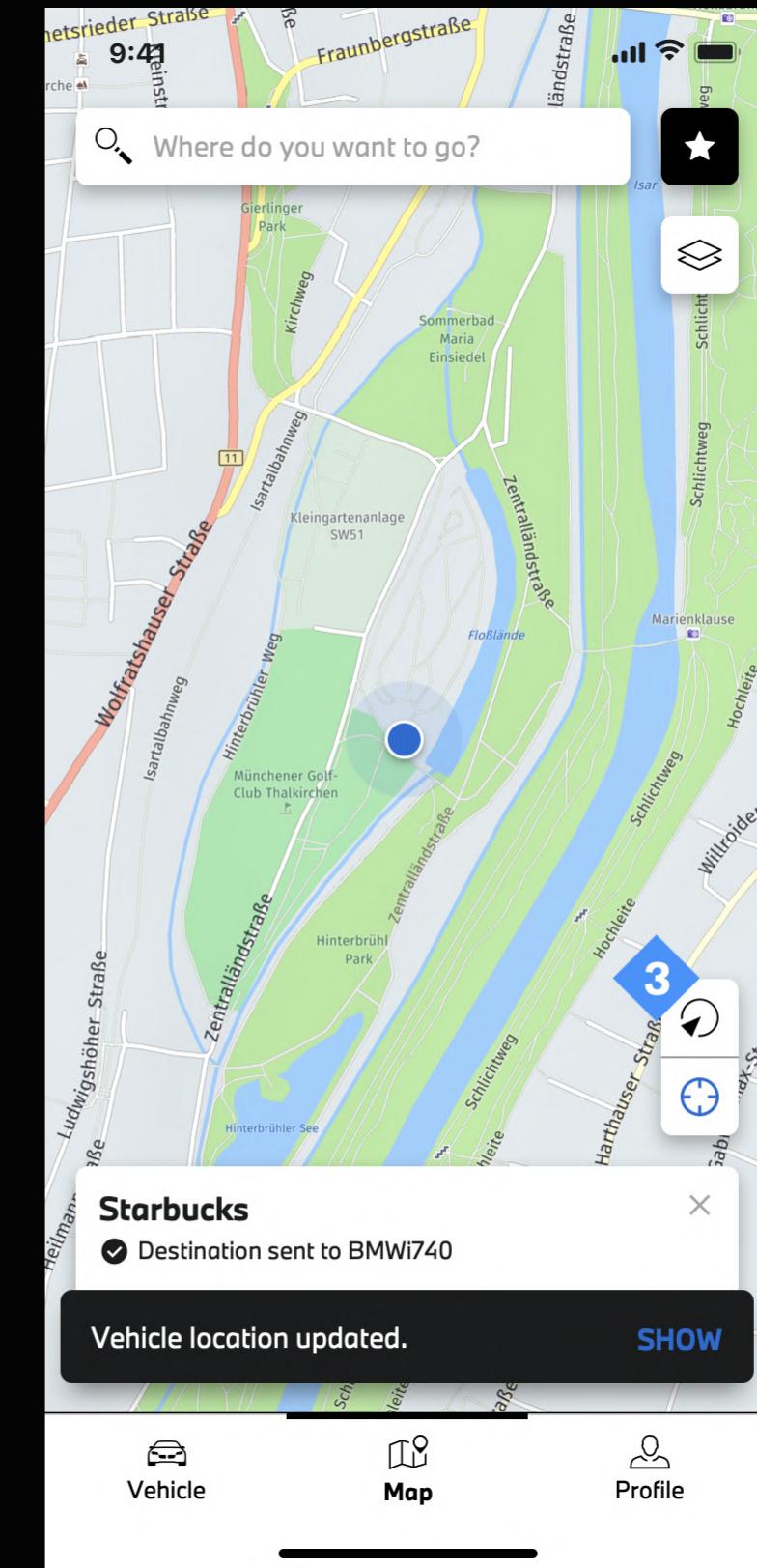


Locating vehicle within 1.5 kms

Based on the **average walking speed** for adults, which is around ~5 kms/h, it would take approximately ~18 minutes to walk 1.5 kms.

20 mins. cache could provide a buffer in case the user encounters delays or takes a longer route.

10 mins. cache aligns closer with the expectations of timely updates, reducing the risk of having outdated information. It also creates a perception of a more responsive and reliable app, contributing to overall satisfaction and loyalty.



3. Try a 20 or 10 minutes cache logic?

Within those 20 or 10 minutes, tapping the button will auto pan to the latest CCP position (from cache).

After that tapping it triggers another RS.

Measure

User Satisfaction

Measure Net Promoter Score and positive customer feedback ratings before and after implementing the Vehicle Finder feature. Higher ratings indicate the effectiveness of the improvements.

App Engagement

Monitor active users, app usage frequency, and time spent in the app. A rise in these metrics post-enhancements signifies increased user value and engagement.

Technical Performance

Assess technical metrics such as app responsiveness, uptime, and error rates. Improvements in these areas underscore the reliability and effectiveness of the enhancements.