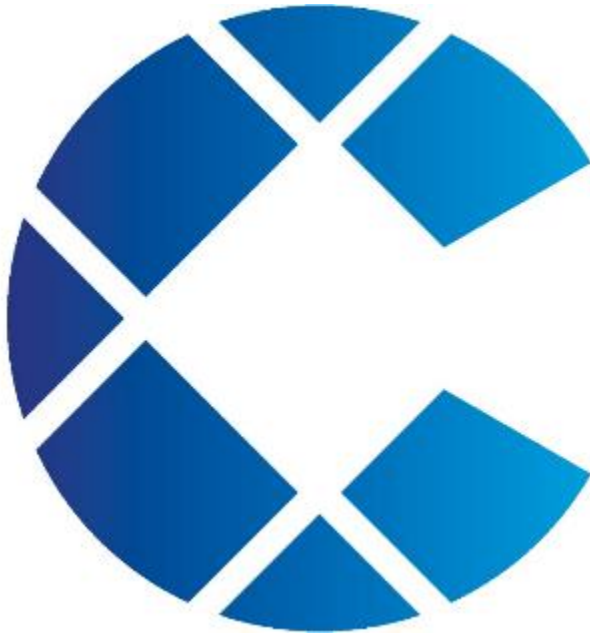




User's guide

Instructions for C-MobILE apps





C-Mobile

The [C-Mobile](http://www.labur.eus/cmobilBilbao) project (Accelerating C-ITS Mobility Innovation and deployment in Europe) is deploying cooperative intelligent transport systems (C-ITS) and services designed to address specific mobility challenges across Europe.

Bilbao is one of the eight cities participating in this project.

(+ info www.labur.eus/cmobilBilbao)





What is C-ITS?

A set of technologies and applications that enable road users to connect and interact with each other and with traffic managers by exchanging data through wireless communications.



1.

Collision warning

2.

Traffic event notification

3.

Information on parking spaces for trucks

C-ITS Services

This user guide presents **three C-ITS services** that have been launched in **Bilbao** within the C-Mobile project.

In the following pages you will learn how to benefit from these services.



IF YOU ARE GOING TO USE THE TRUCK
PARK



https://ts.dlr.de/survey/cmobile_BCN/?q=BIL_6

IF YOU ARE A STANDARD USER

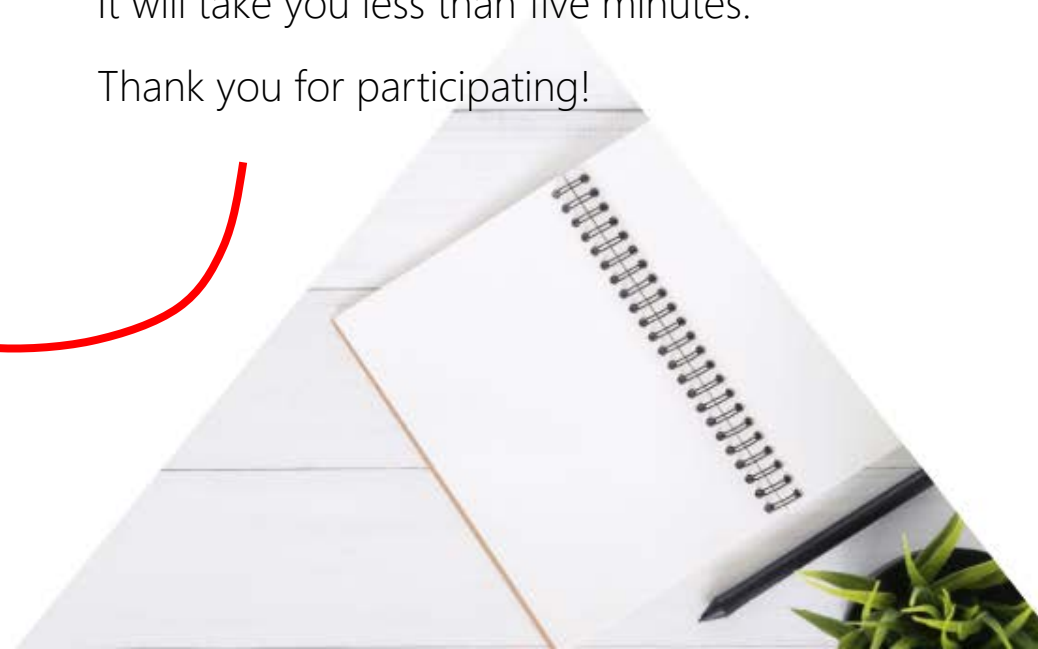
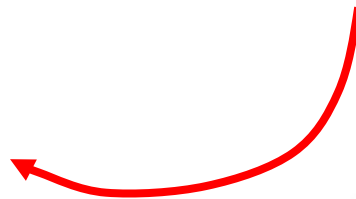


Before you start

We would like to ask you to complete the following **anonymous survey** which will help in the evaluation of the services implemented within the C-Mobile project. It is important that you do it **before using the applications**, we want to know your expectations.

It will take you less than five minutes.

Thank you for participating!



Blind Spot Detection

This is a service focused on vehicle-to-vehicle safety.

It aims to warn cyclists of the possible risk of collisions with other vehicles in trouble spots in the city.

1.



What is BSD?

The BSD service - *Blind Spot Detection* - aims to warn cyclists of the possible risk of collision with other vehicles in city hot spots.

What are the points of conflict?

There are currently 20 active points defined as "dangerous" in different roundabouts and junctions in the urban area of Bilbao

How does the notification system work?

A **low-priority** alert is sent to the cyclist user when he or she approaches a hot spot. If at the same time a dangerous vehicle is also found to be in that hot spot, a **high priority alert is sent** to warn of the possible risk of imminent collision.

Types of users

There are two typical users of this service:

1. Cyclist, who receives alerts
2. Dangerous vehicle, which generates alerts



Dangerous vehicle app

For a vehicle to be identified as dangerous in the BSD service, the vehicle must be fitted with the **C-Mobile Bilbao - Risky vehicle**. This app collects the current location and sends it to the server where it is checked against the hot spots to generate the alerts. The location of this device is collected only in these putnos, and will be stored for project evaluation purposes always encrypted. At no time is personal data collected that may relate to the user of the application.

Each application user will be registered with a random identifier automatically when the application is installed. The main screen will show the latitude and longitude in which the device is located, no extra interaction is needed. This screen can be closed and the app will run in the background. To know if the service is running, you should check the notification bar of the device. The message "*C-Mobile Dangerous vehicle in operation*" will be displayed.

**IF YOU WANT TO REGISTER YOUR VEHICLE AS
DANGEROUS**



C-Mobile Bilbao - Risky vehicle



Evaluation period

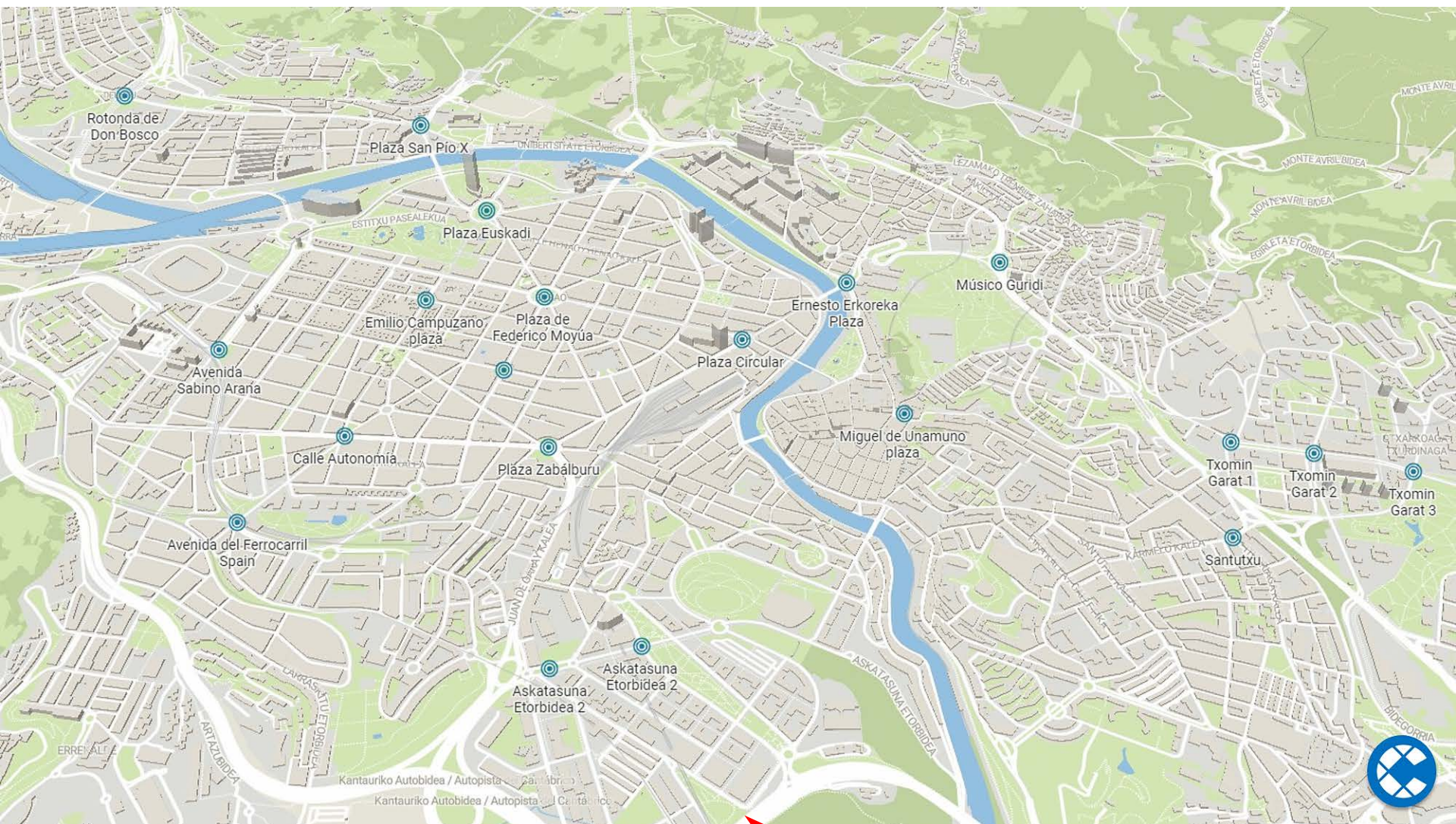
September 2020 - May 2021

Expected tracks

Vehicles passing through any of the 18 points defined on the following map (see next Slide).



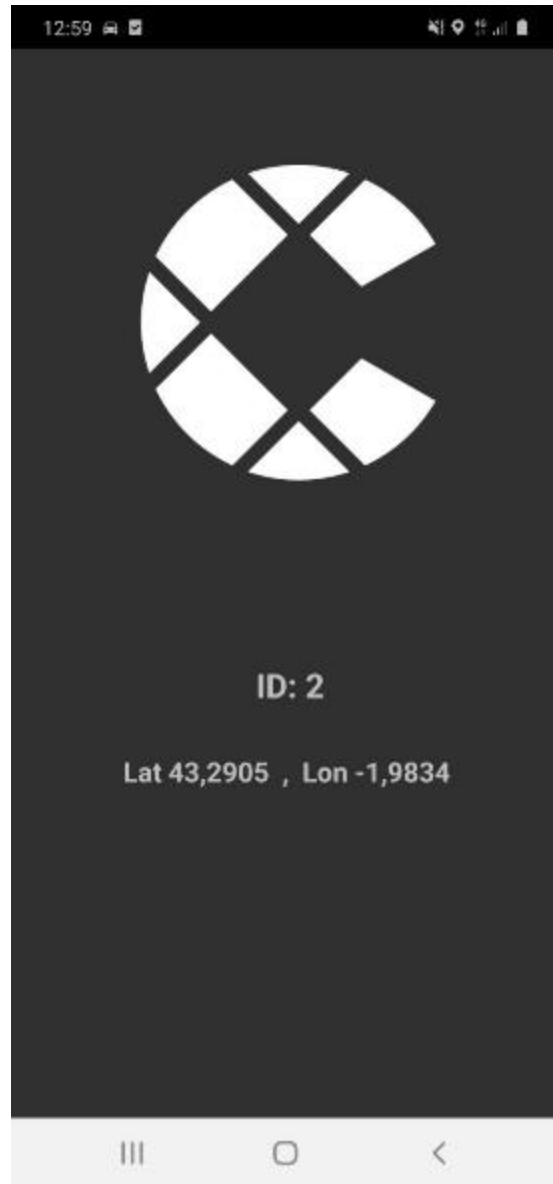
Coverage area



Instructions



Main application screen





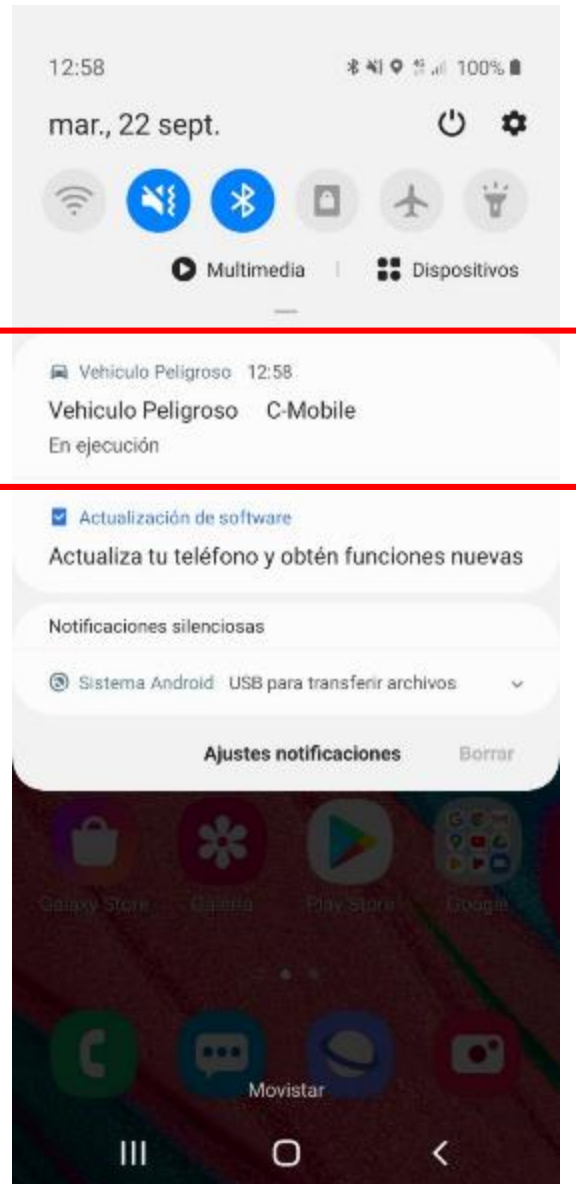
Instructions



Main application screen
- error without location -



Instructions



Device notification menu.
App running in the
background.



App for cyclists

In order to receive geo-localized collision risk alerts, the user must have the **C-Mobile Bilbao BSD** app installed. This app warns by means of screen, sound and vibration when the user approaches a conflictive point and if there is also a dangerous vehicle in the vicinity.

The location of this device is collected only at the hot spots, and will be stored for project evaluation purposes always encrypted. At no time is personal data collected that may relate to the user of the application.

IF YOU ARE A CYCLIST



C-Mobile Bilbao BSD



Evaluation period

September 2020 - May 2021

Expected tracks

Routes that pass through any of the points:

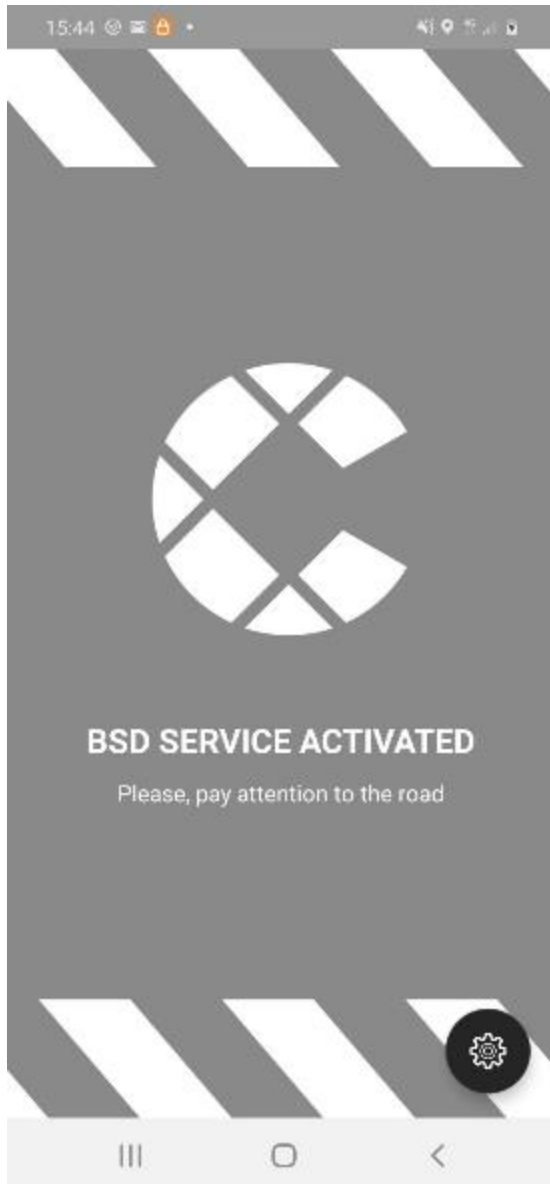
- Erkoreka
- Plaza Circular
- Campuzano
- Arriquíbar



Instructions



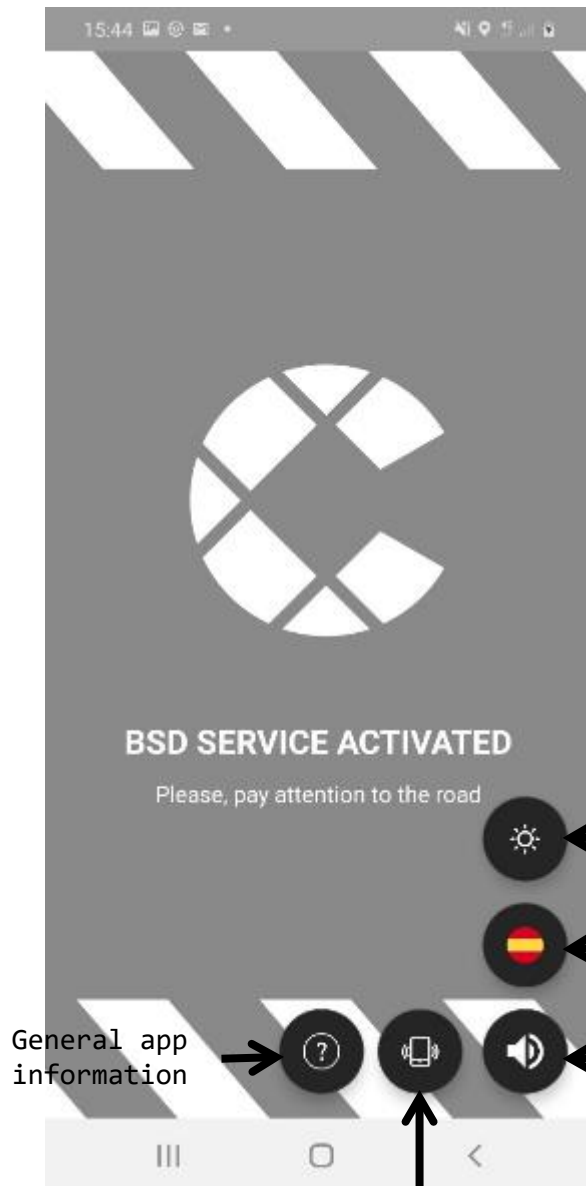
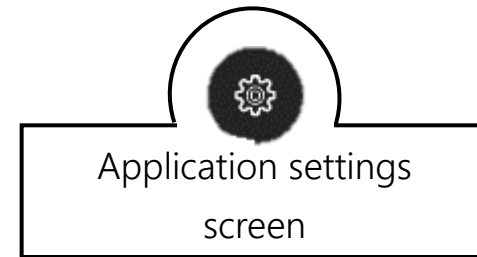
Main application screen



app menu



Instructions



General app
information

Day/night mode
selection

Language
selection
(EN/ES)

Alert volume
adjustment

Vibration
ON/OFF



Instructions



HELP SECTION

Purpose

Blind Spot Detection (BSD) service is intended to warn the cyclist (Vulnerable Road User) about a collision risk. This would be covered when a vehicle is approaching a Blind Spot of the city. There are two levels of warning, in yellow when the user is approaching the relevance/risky zone and in red when the collision risk is imminent.

Data Privacy

This application uses GPS data to locate the user and activate the warning according to their position. This data will only be stored in the project evaluation period (Sept. 2020 - May 2021). All data will be encrypted and no personal data will be stored.

Use of 3G/4G network

This service may have indirect costs due to the use of the 3G/4G network.

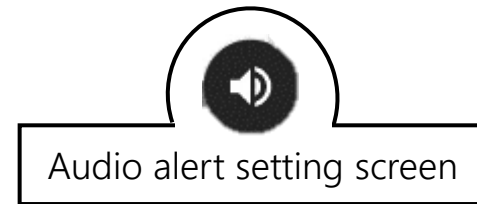
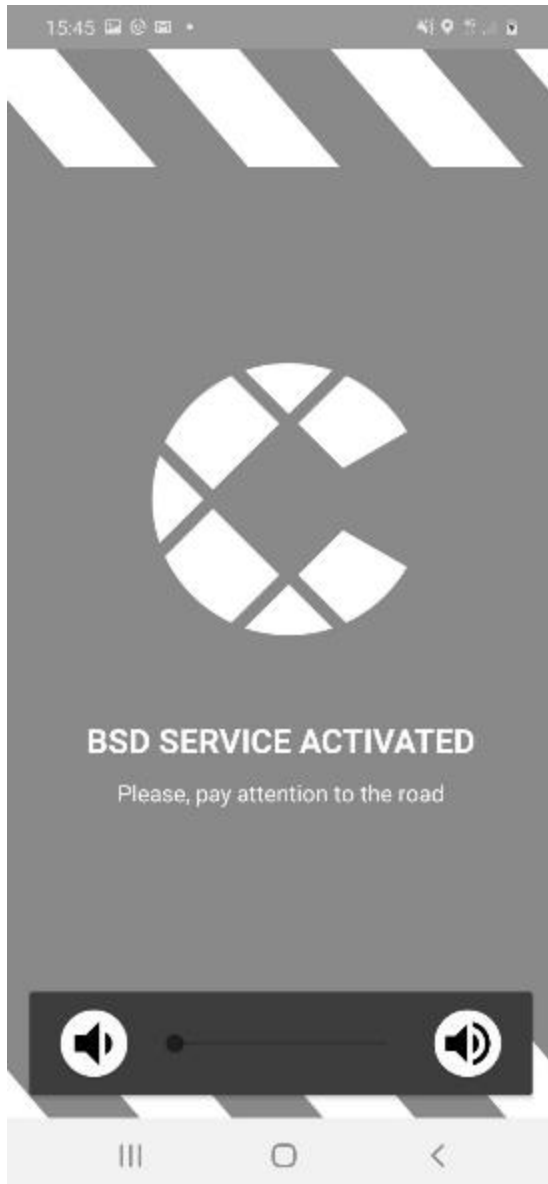
BACK

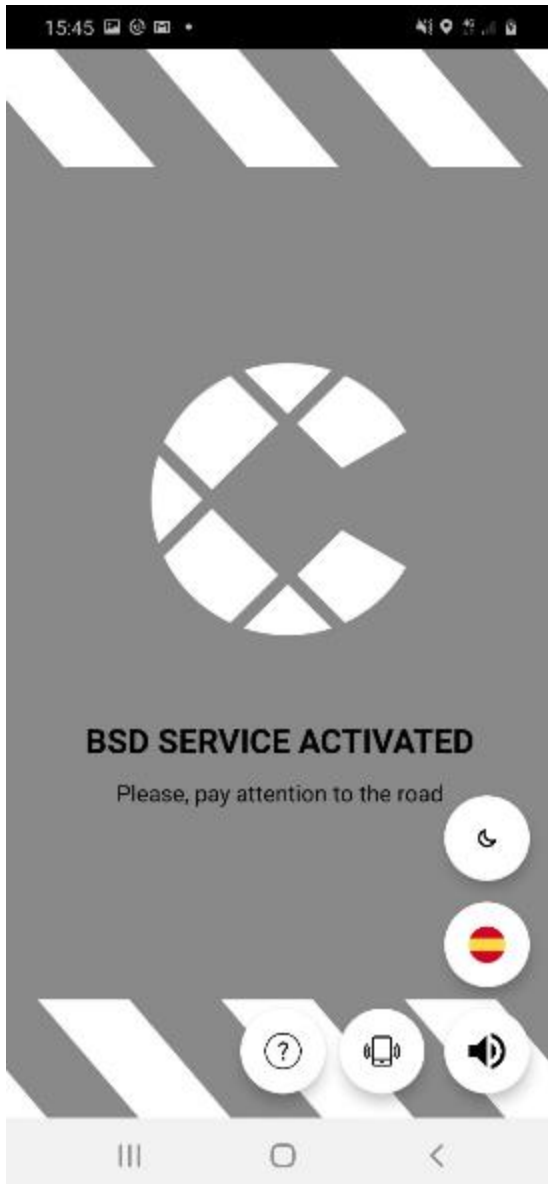


General information
screen of the application

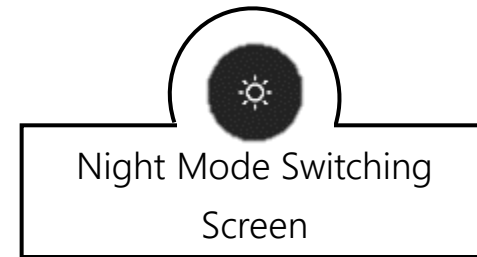


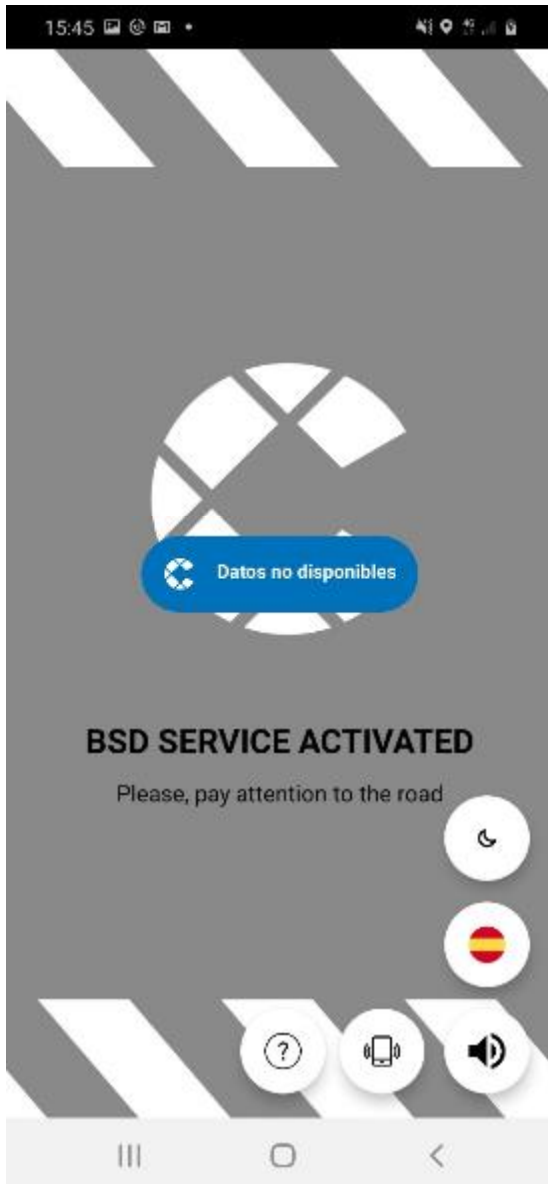
Instructions





Instructions





Instructions



*

Main screen in evaluation
mode

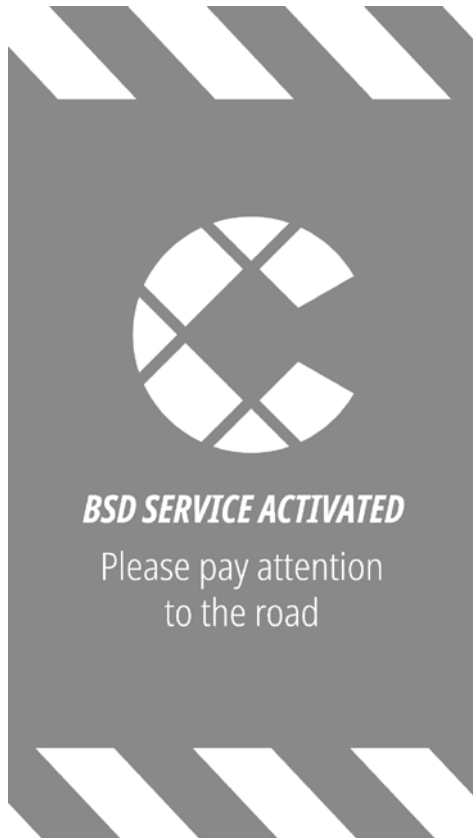
* For the evaluation of the project sometimes events are randomly hidden. The user will not receive any alert but will be able to see the following message "Data not available" on the screen.



Instructions



Active service
- without notice -



Low priority
warning



High priority
warning



Road Work/Hazard Warning

This is a service focused on infrastructure to vehicle safety.

It aims to warn drivers of traffic events such as construction sites, accidents, cuts etc.

2.



What is RWW/RHW?

The RWW/RHW service - *Road Works/Hazard Warning*- aims to warn drivers of traffic events such as construction sites, accidents, cuts etc.

Where to use this application?

These notices are given in the urban centre of Bilbao.

How does the notification system work?

The application shows a default browser and on it will appear the graphic warnings (signs) indicating the meters left to reach the indicated event. There is also the option of superimposing the alerts on another browser such as Google Maps or Waze.

Further information

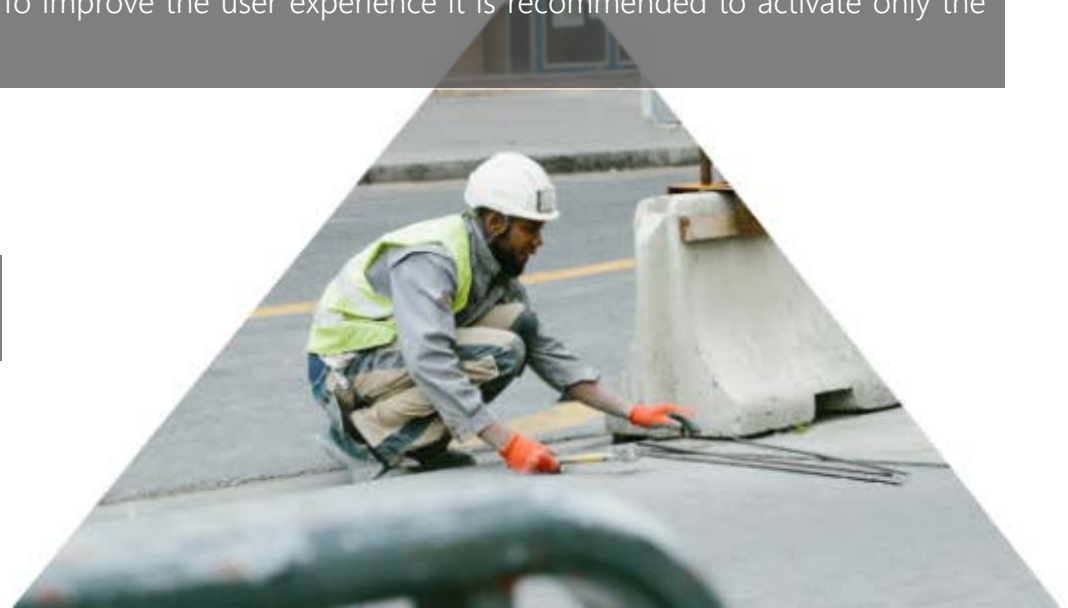
This application has been developed by another member of the consortium (NeoGLS) for the city of Bordeaux. Therefore it has additional services that are not yet available in Bilbao. To improve the user experience it is recommended to activate only the APC/AOC function in the Settings menu.

Evaluation period

September 2020 - May 2021

Expected tracks

Urban centre of Bilbao.



Coverage area

Bilbao city centre



Download the application



CTD - Mobilité connectée



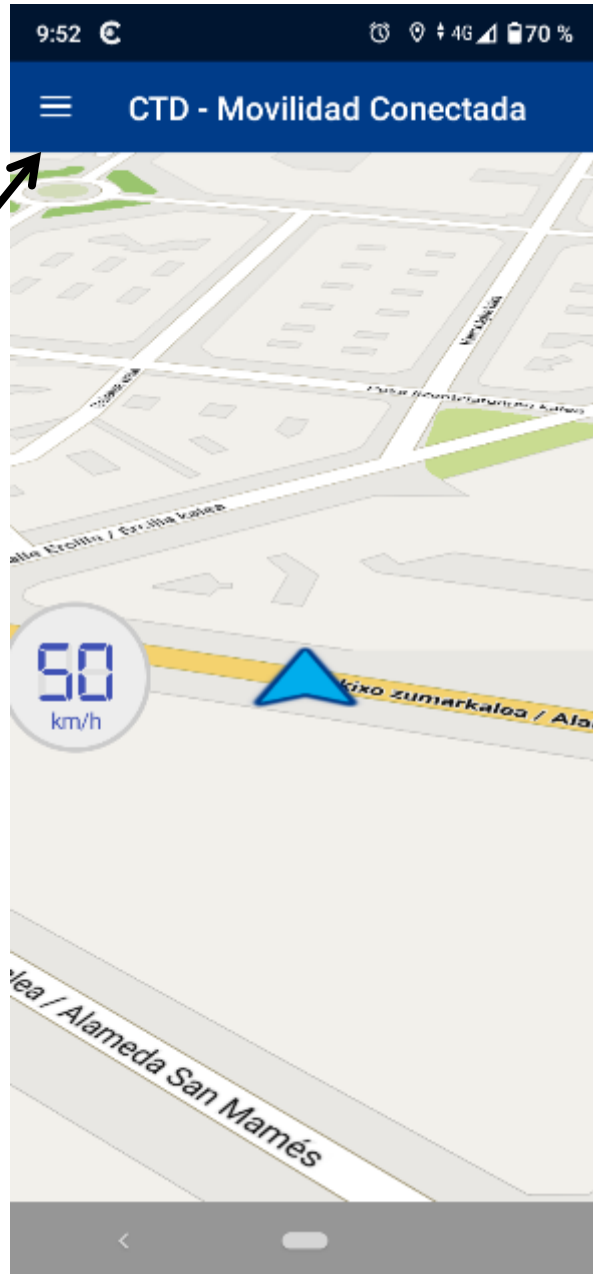
NOW ALSO AVAILABLE FOR iOS!



Instructions

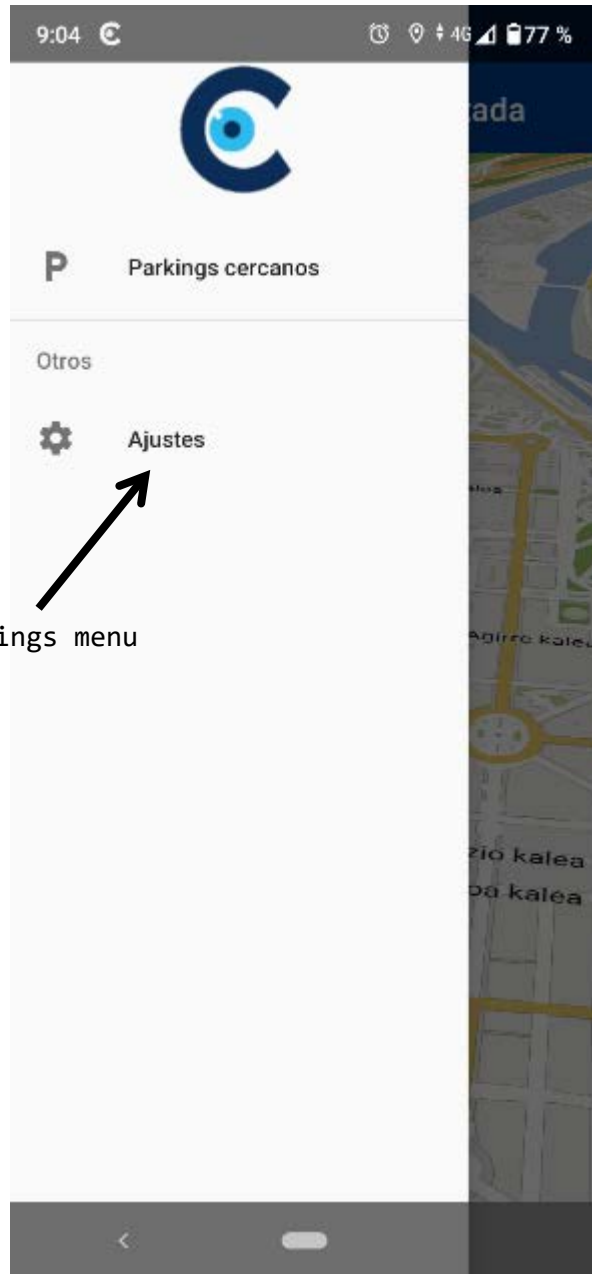


app menu



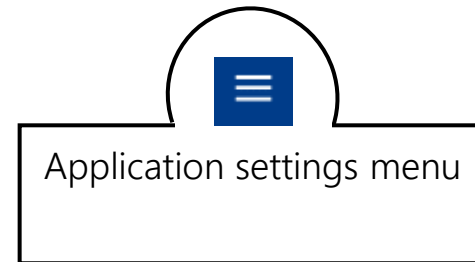
Main application screen
- default browser -

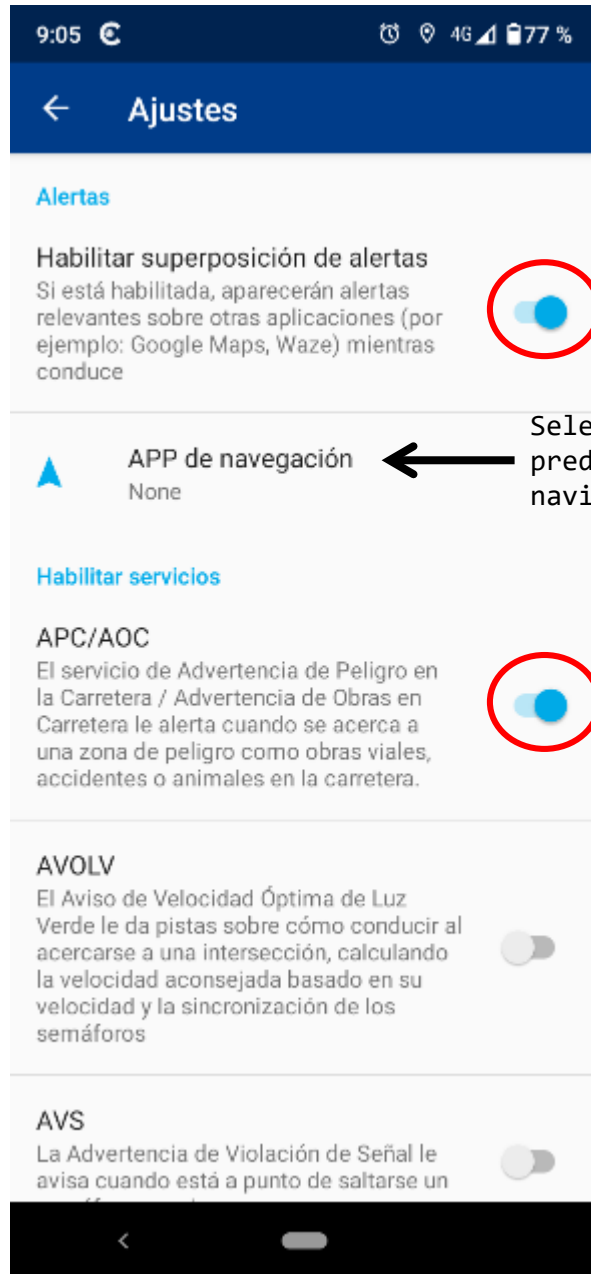




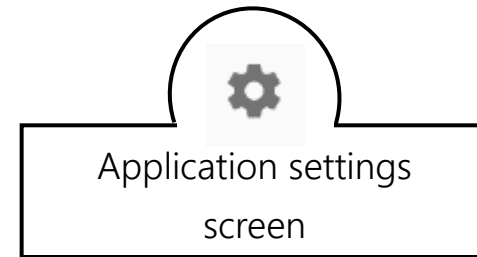
settings menu

Instructions



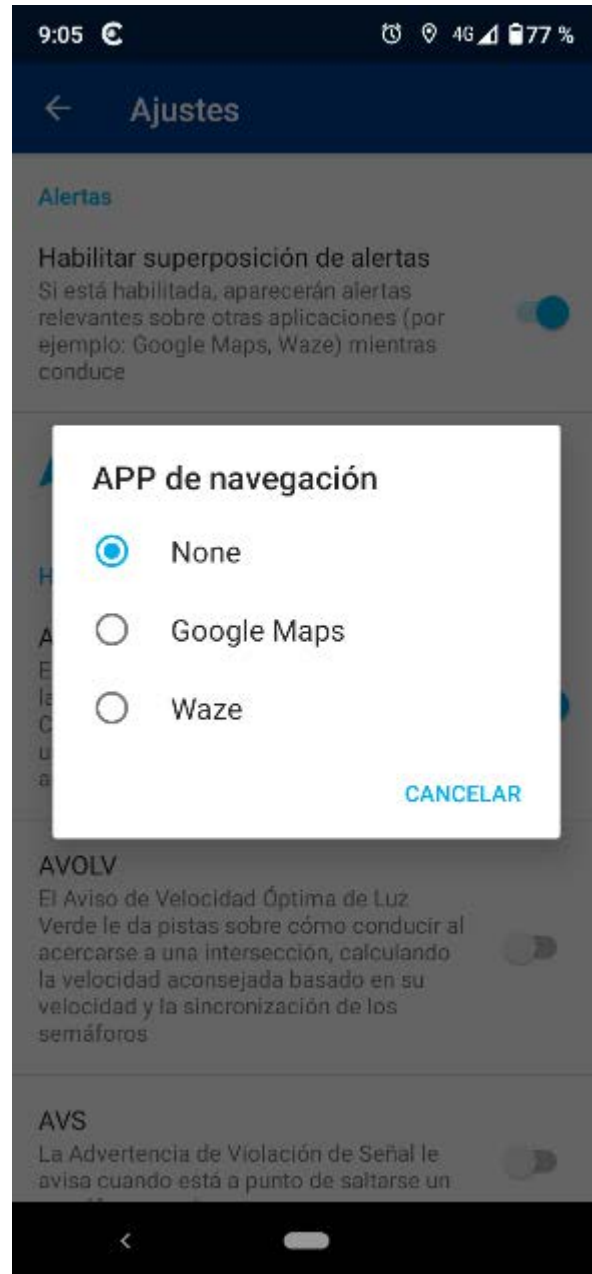


Instructions

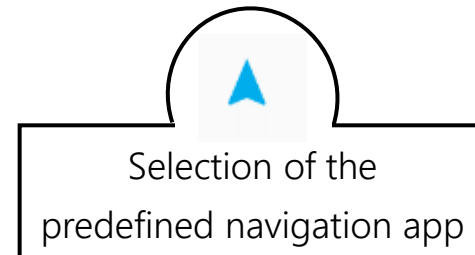


Selection of the
predefined
navigation app





Instructions





Instructions



Main screen
- Construction works and
On Street parking alert
(not available) -





Instructions

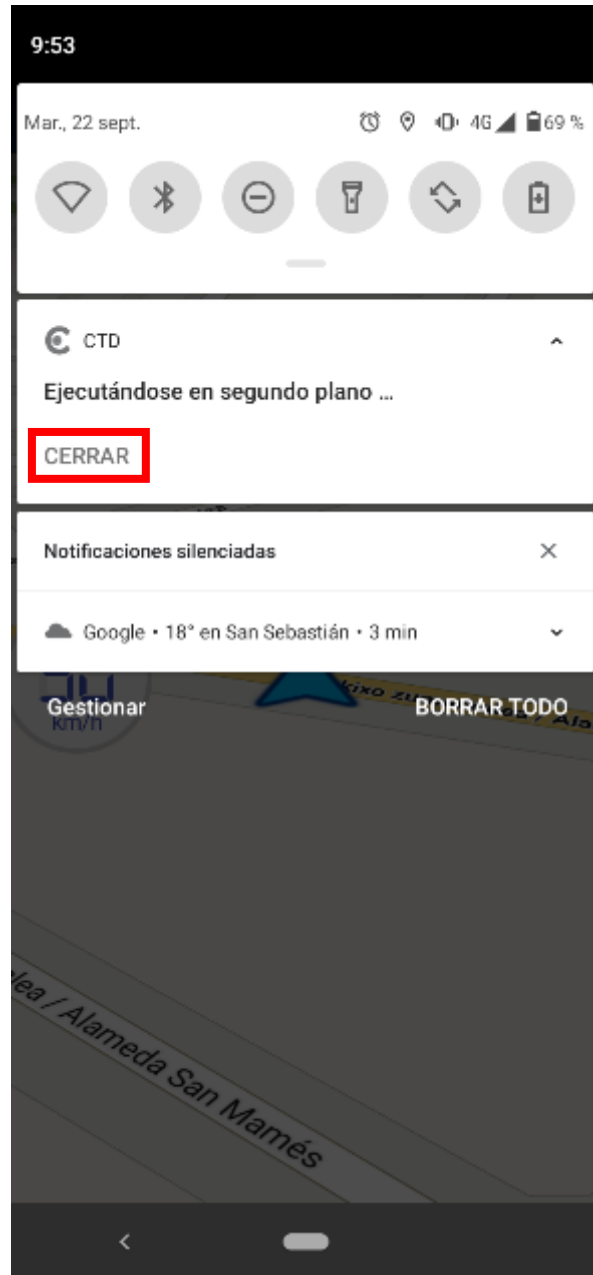


Main screen in evaluation mode

* For the evaluation of the project sometimes events are randomly hidden. The user will not receive any alert but will be able to see the following message "Data not available" on the screen.



Instructions



Device notification menu.
Closing the application.



Motorway Parking Availability

This is a service focused on parking efficiency.

It aims to advise professional drivers of the number of parking spaces available.

3.



What is MPA?

The MPA service - *Motorway Parking Availability* - aims to inform professional drivers of the number of parking spaces available and to guide them (facilities available, vehicles allowed, etc.) in order to make better decisions when planning their route.

Where to use this application?

This service has been implemented in the CTVi truck park, which has a capacity of 180 spaces in Vitoria - Gasteiz. CTVi completes the intermodal network of the North of the Peninsula (E-5, E-80)

How does the notification system work?

The application shows on its main screen the number of seats available in real time. It also has an information window about the car park and the option to open the browser to get the "how to get there" instructions.

The application also provides information on occupancy trends and warns on the main screen if the truck park is expected to be full/free in the next few hours.

Evaluation period

September 2020 - May 2021

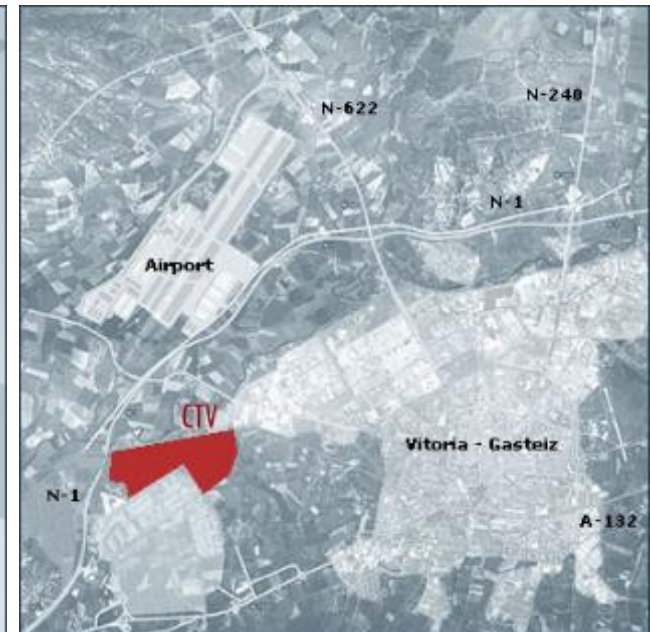
Expected tracks

The application always displays CTVi's occupancy data regardless of its location.



Coverage area

Intermodal Transport and Logistics Centre of Vitoria-Gasteiz - CTVi -



Download the application



C-MobILE CTVi MPA





Instructions



Pop-up window
- successfully connected
to the server -





Instructions



Startup pop-up window.

* The option chosen does not affect the use of the application is necessary only for the evaluation of the project.





Instructions



Main application screen

Instructions
"how to get
there"

CTVi car park
information

General
information
about the app

Settings menu

Instructions



Application settings screen

*The message "no parking around"
may appear if the location of the
device is not available

Language
selection
(EN/ES)

Day/night mode
selection



Instructions

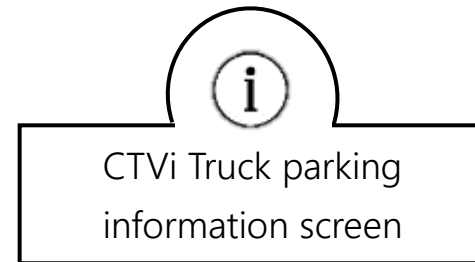


General information
screen of the application





Instructions





Instructions





This user guide has been prepared by:



V19012021

contact: oiparraguirre@ceit.es

