

# 49<sup>th</sup> ASECAP DAYS

*Decarbonizing Road Infrastructure : Challenges,  
Perspectives and Actions in Tough Economy*

**ASECAP DAYS**



**BRUSSELS 2022**



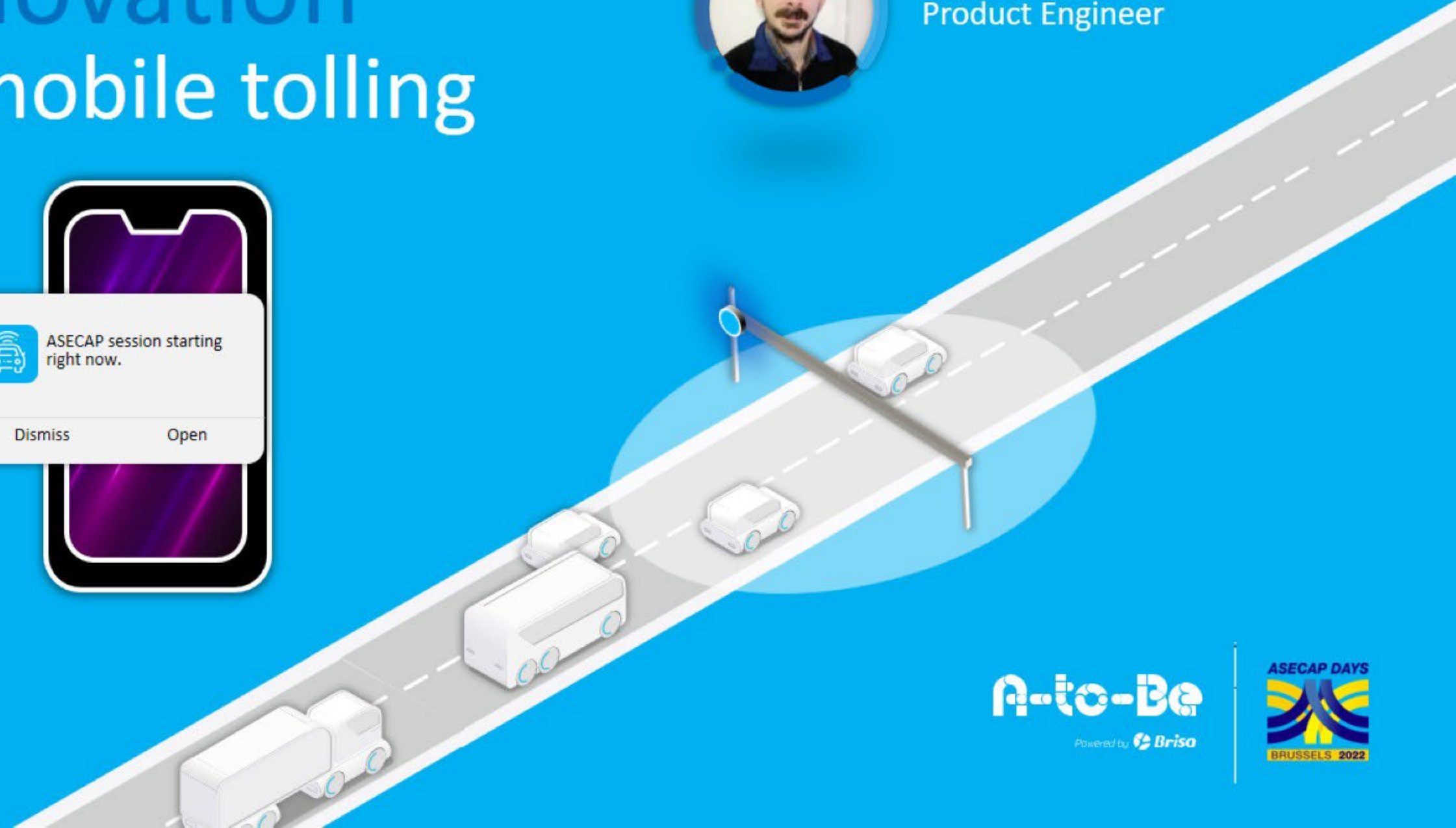
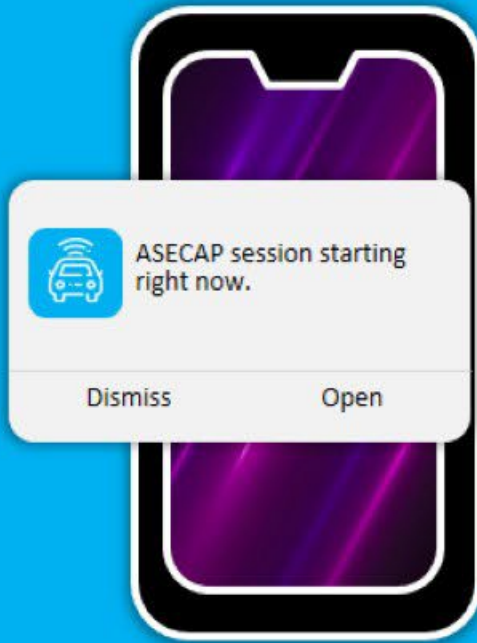
Hotel Marriott Grand Place, Brussels  
24 – 25 November 2022



# Innovation in mobile tolling



André Costa  
Product Engineer



**A-to-Be**  
Powered by  **Brisa**



# All Electronic Tolling

Reduce  
gas emissions



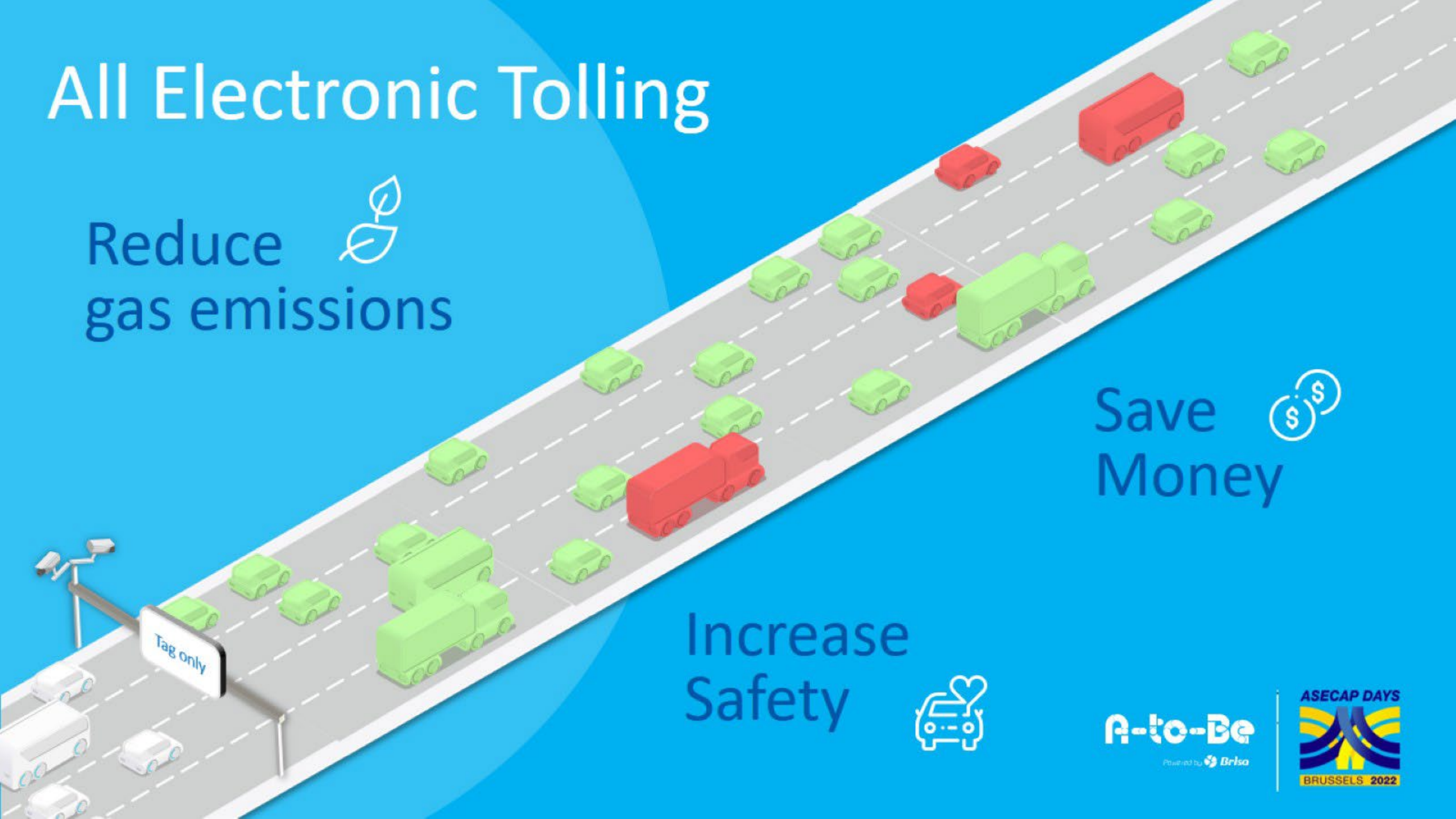
Save  
Money



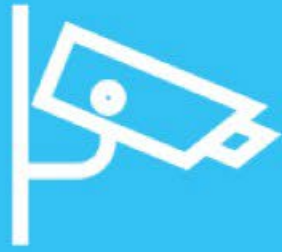
Increase  
Safety



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# Different solutions



ALPR



Bluetooth



Satellite

# Different solutions



ALPR



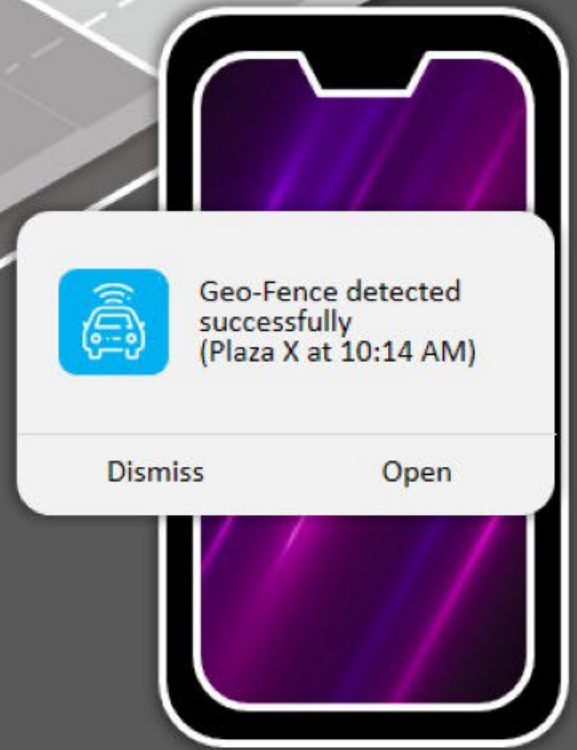
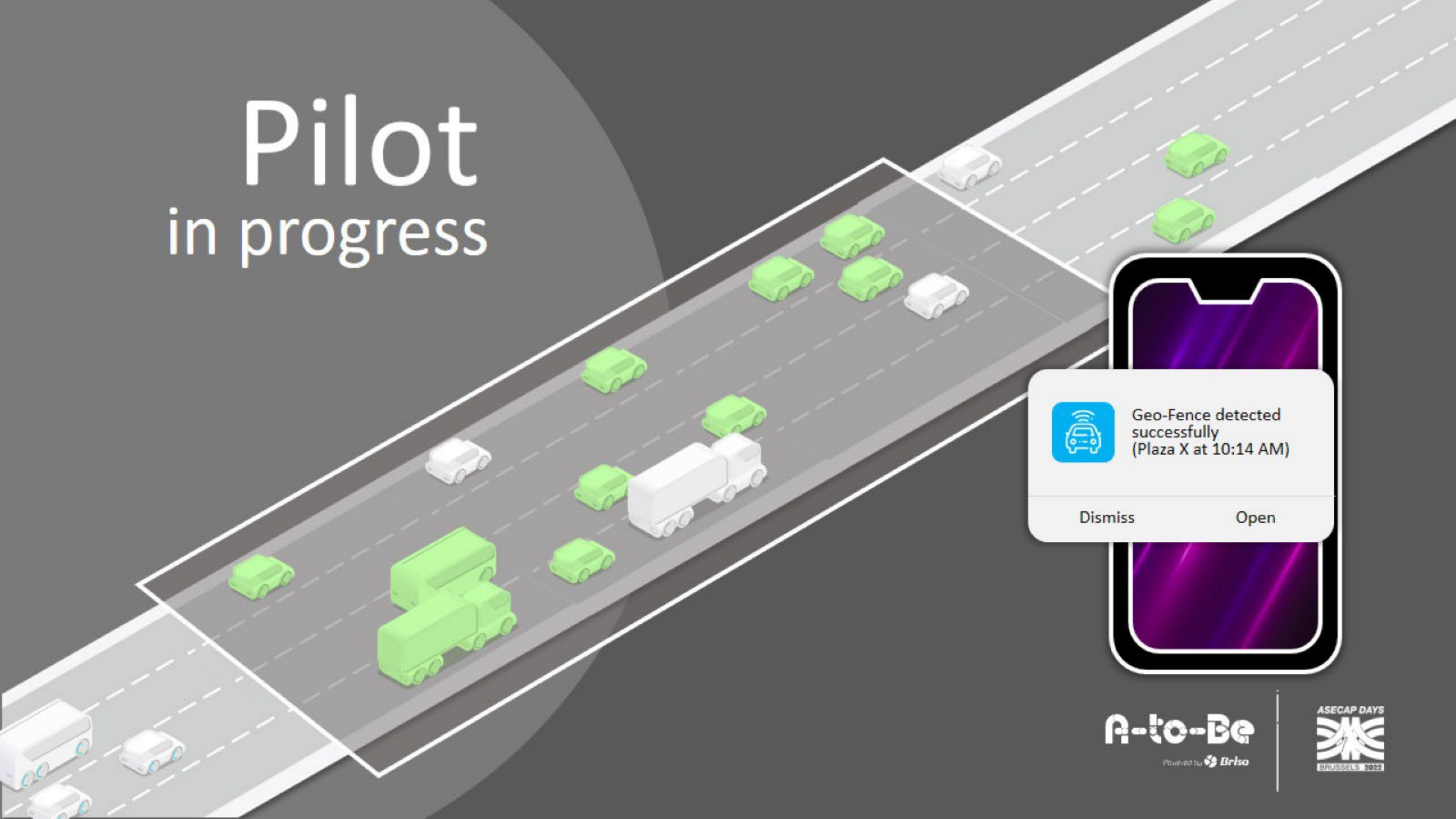
Bluetooth

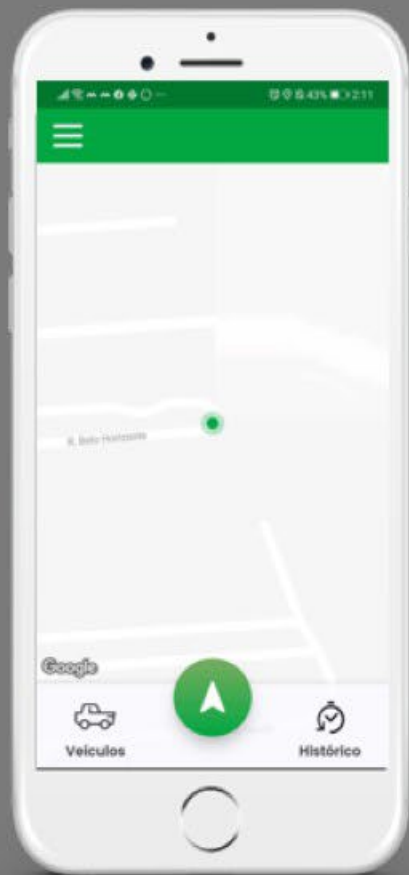


Satellite

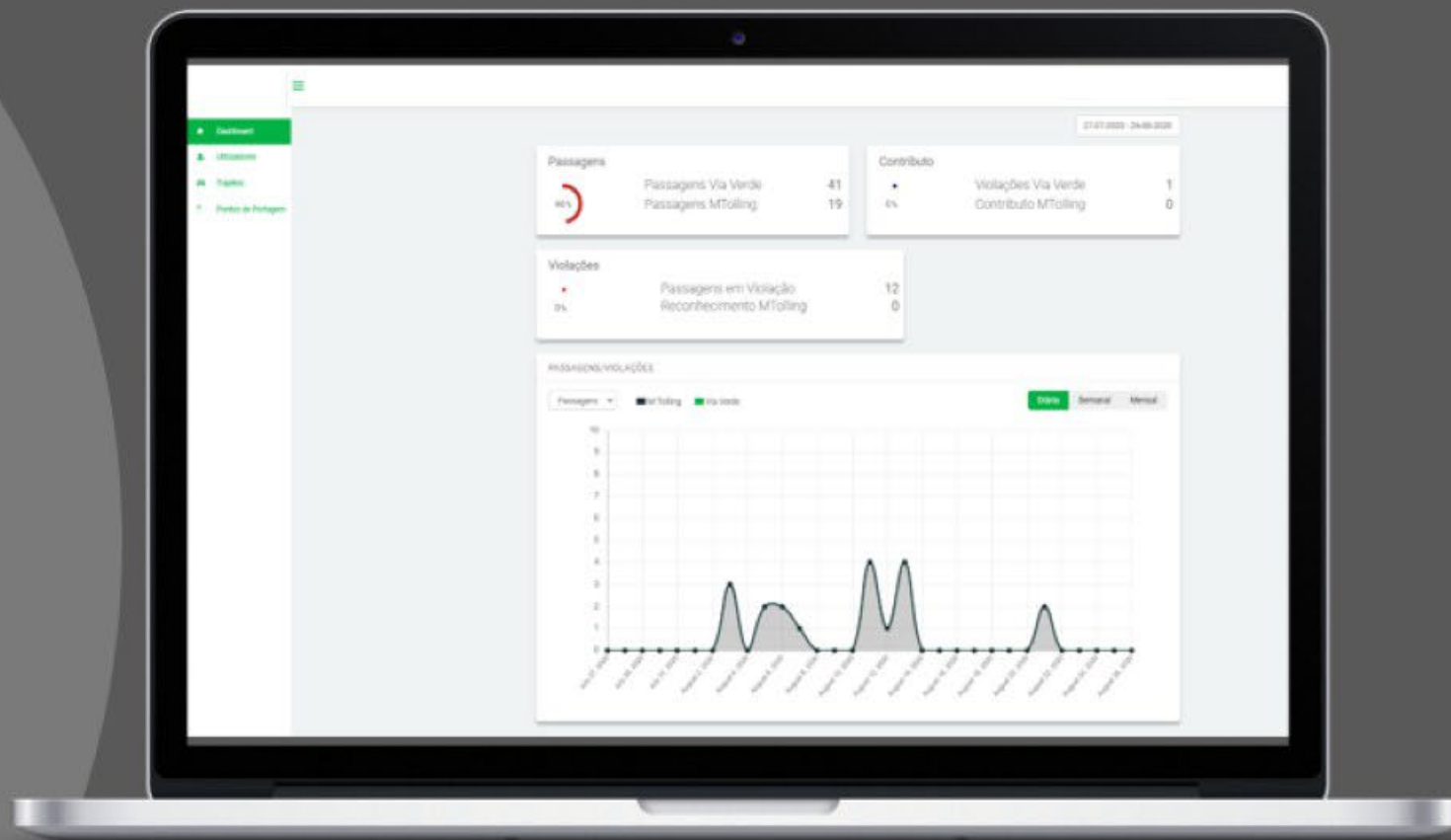


# Pilot in progress



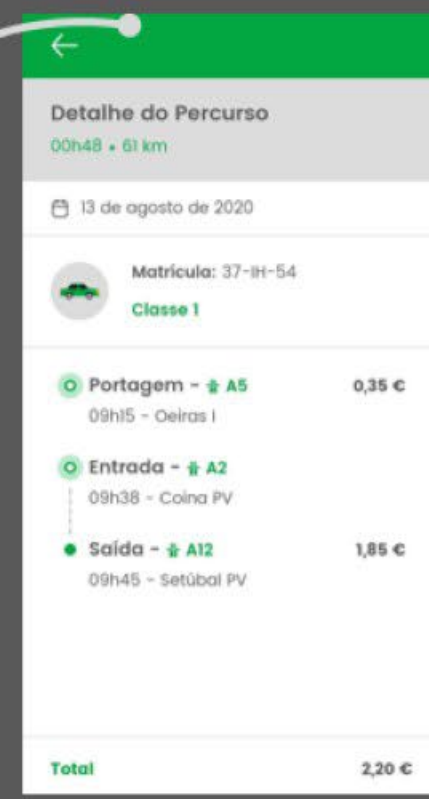
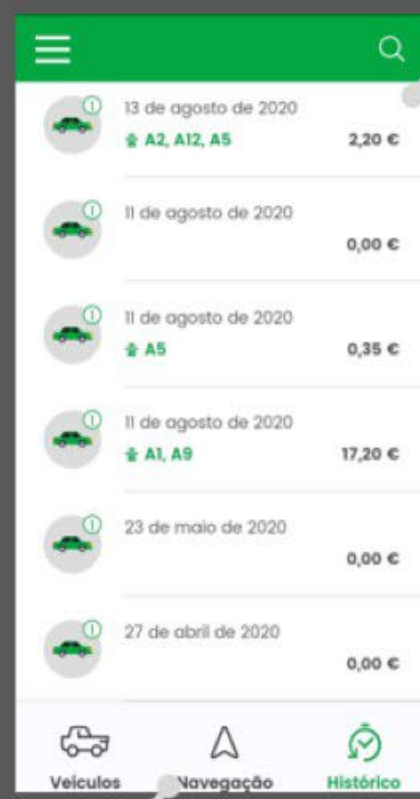
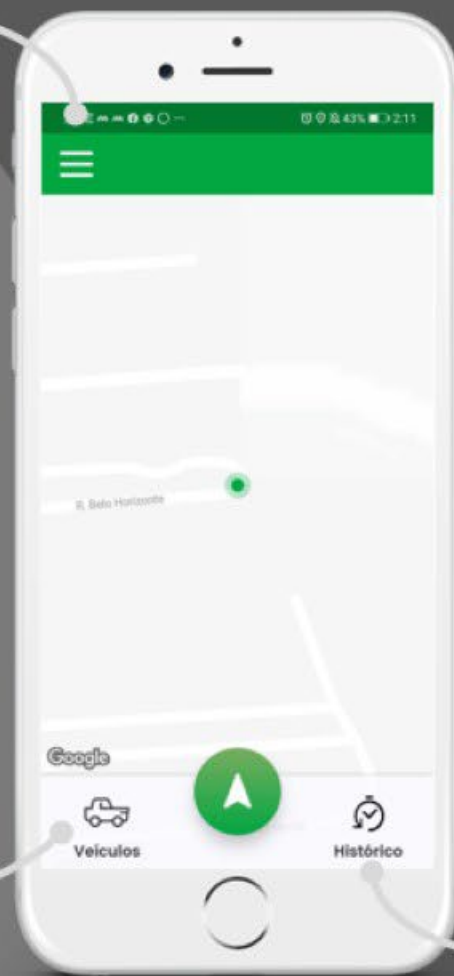


 Mobile app



 Operational Backend

Pilot  
in progress



Vehicles & Classes

Feedback;  
Logout

Trip start / stop;  
Manual & Automatic

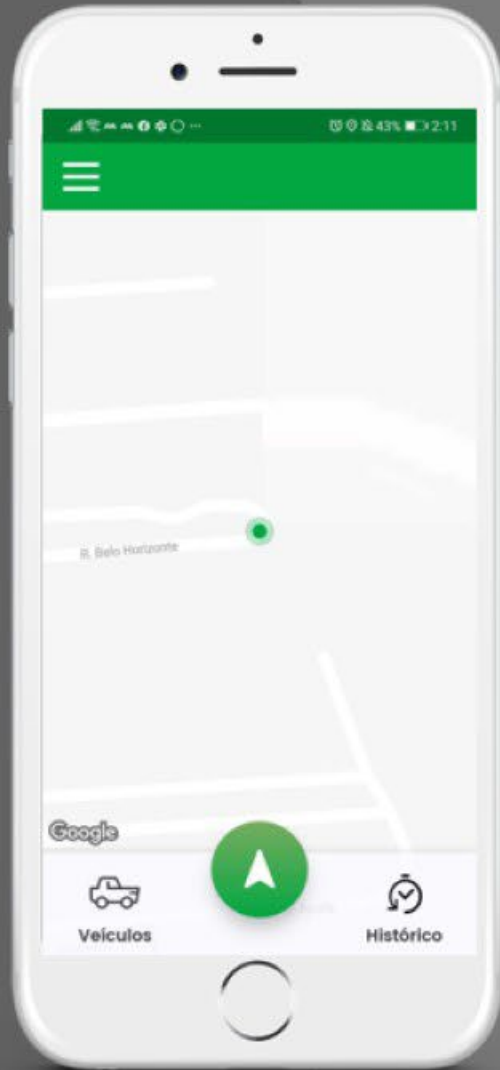
Transaction history;  
Tolls charged

Trip details

Pilot  
in progress



Pilot  
in progress



- Track & Trace
- Auto Start & Stop
- Geofencing
- Android Auto / Car Play
- Voice Messages

OBJETOS

← Back

Detalhe do Trajeto

ESTATÍSTICAS

MATRÍCULA  
37-IH-54

EMAIL  
andreamaralcosta@gmail.com

DATA E HORA DE COMEÇO  
15/08/2020 13:55:20

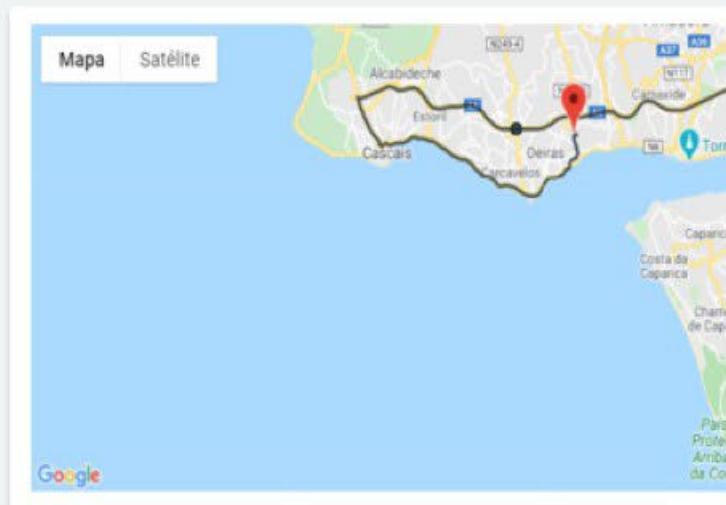
DATA E HORA DE FIM  
15/08/2020 14:53:14

DURAÇÃO  
00:57:54

DISTÂNCIA  
61.88 km.

CUSTO TOTAL  
-€1.00

ESTADO  
Sem Sucesso



User & Operator Portal



Toll Fences Management



Trip Management Details



User Management



Dashboard & Reports



Cloud Native

# Pilot in action



Pilot  
in progress

## WATCH THE VIDEO

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ASECAP DAYS  
  
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# Different solutions



ALPR

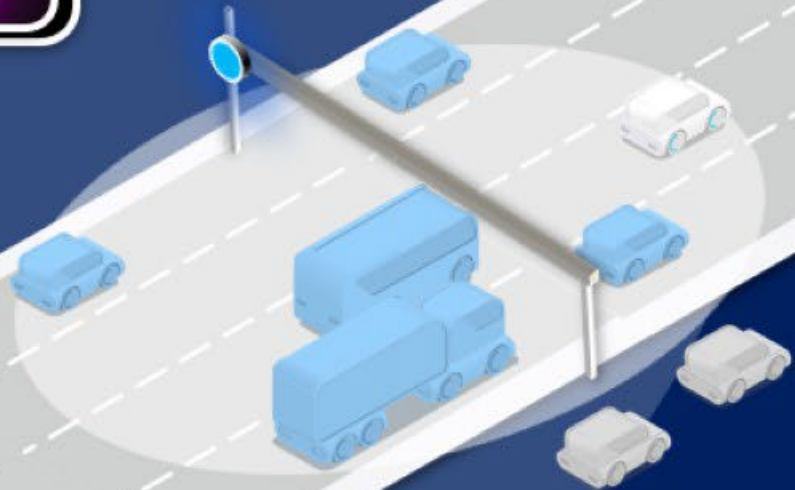
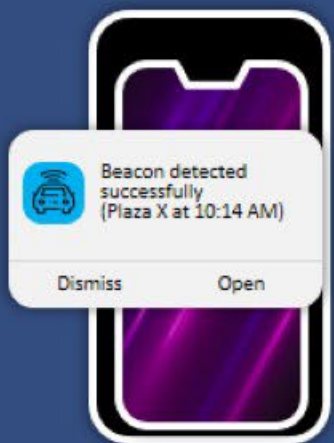


Bluetooth



Satellite

# Bluetooth



## Adjacent

The Bluetooth power allows to isolate adjacent roads

# Bluetooth

## Stop'n'Go

Patron stops at the toll lane, opens the app and confirms the amount.

CHANNELLED TOLL SITES

## Slow'n'Go

Patron has the app open, in foreground. At toll lane, patron slows down, and payment is done using the default vehicle selected

CHANNELLED TOLL SITES

## Go!

Patron keeps going, the app works in the background when entering toll region, considering the default choices for vehicle and payment method.

OPEN ROAD TOLL SITES



# Bluetooth

## WATCH THE VIDEO



MOBILE TOLLING APP

now

Toll Operator

Payment with success: \$3.50 at  
tolling plaza 5.

## AUTOMATIC PAYMENT

Payment is processed  
without interaction from  
the driver

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# Next Steps



## Connected Cars

Use location information from car data platforms to generate the toll transactions



## Lane Detection

Implement algorithms to detect the lane in which the user has passed

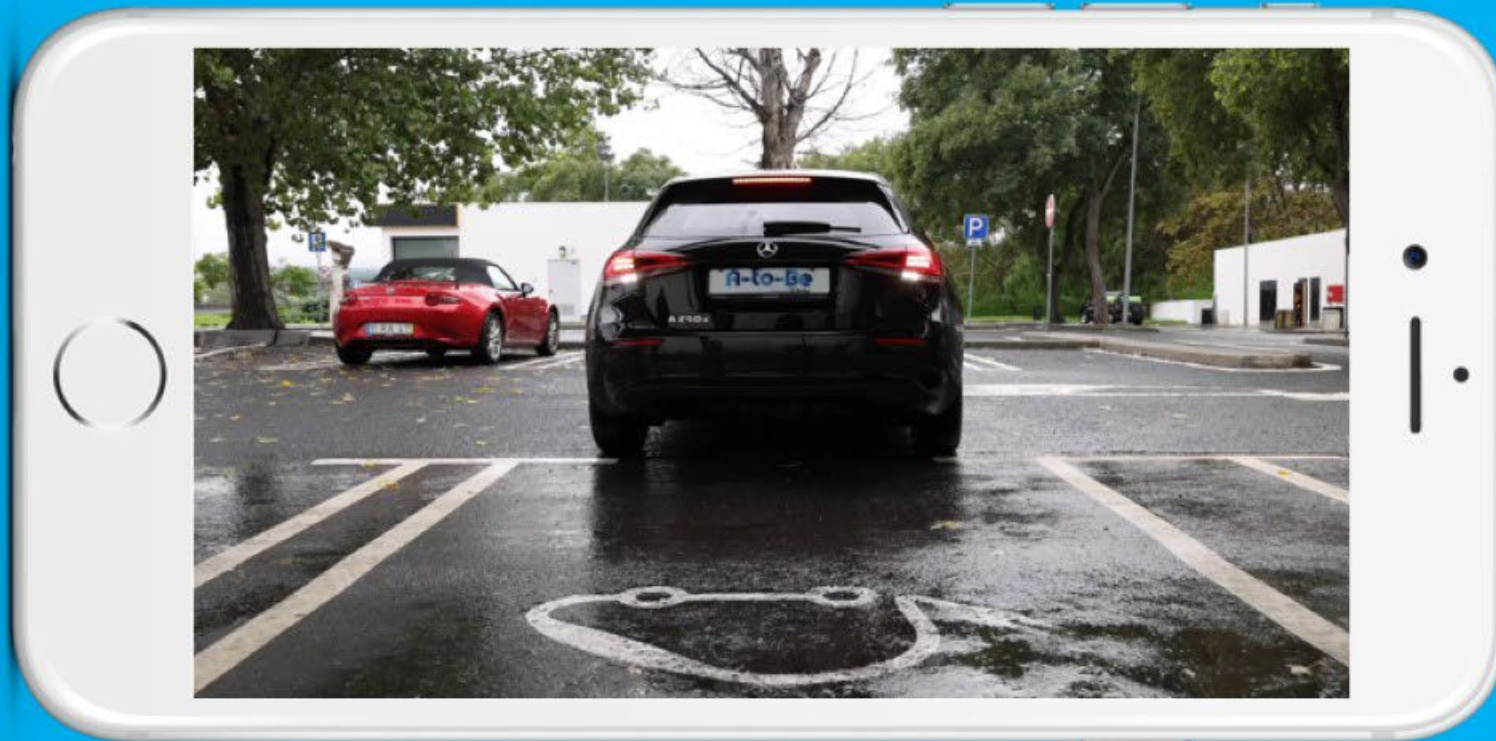


## Car Play

Just like with Android Auto, integrate the application with Apple Car Play

# The future is being built right now.

## WATCH THE VIDEO



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