

eMall – e-Mobility For All

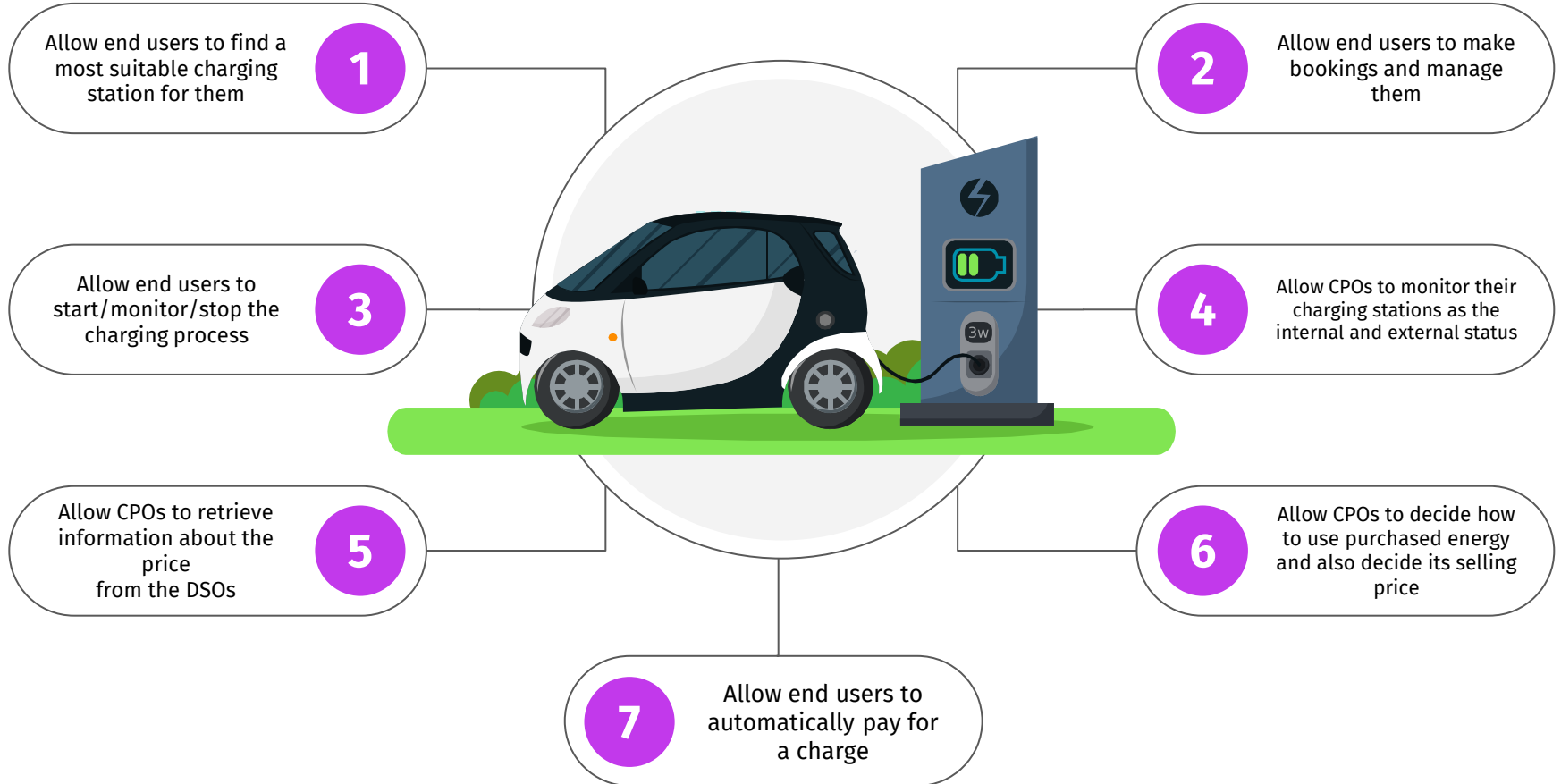
R&DD



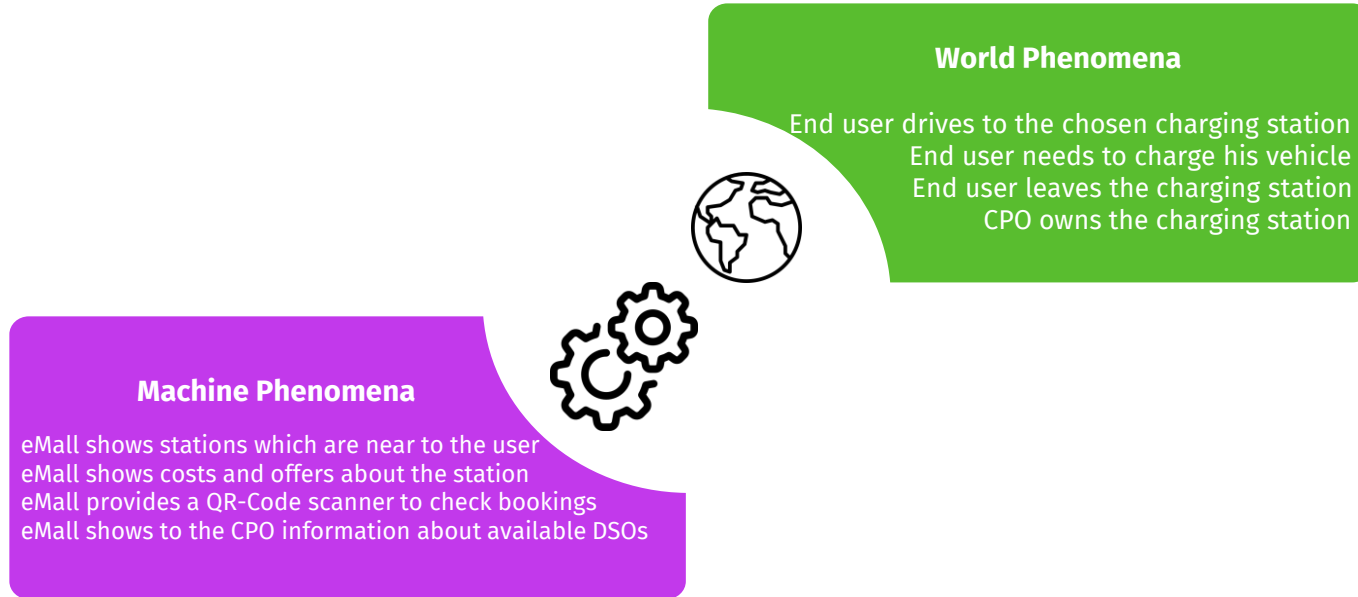
*Software Engineering 2 Project
Academic year 2022 – 2023*

*Balestrieri Niccolò
Bertogalli Andrea
Tombini Niccolò*

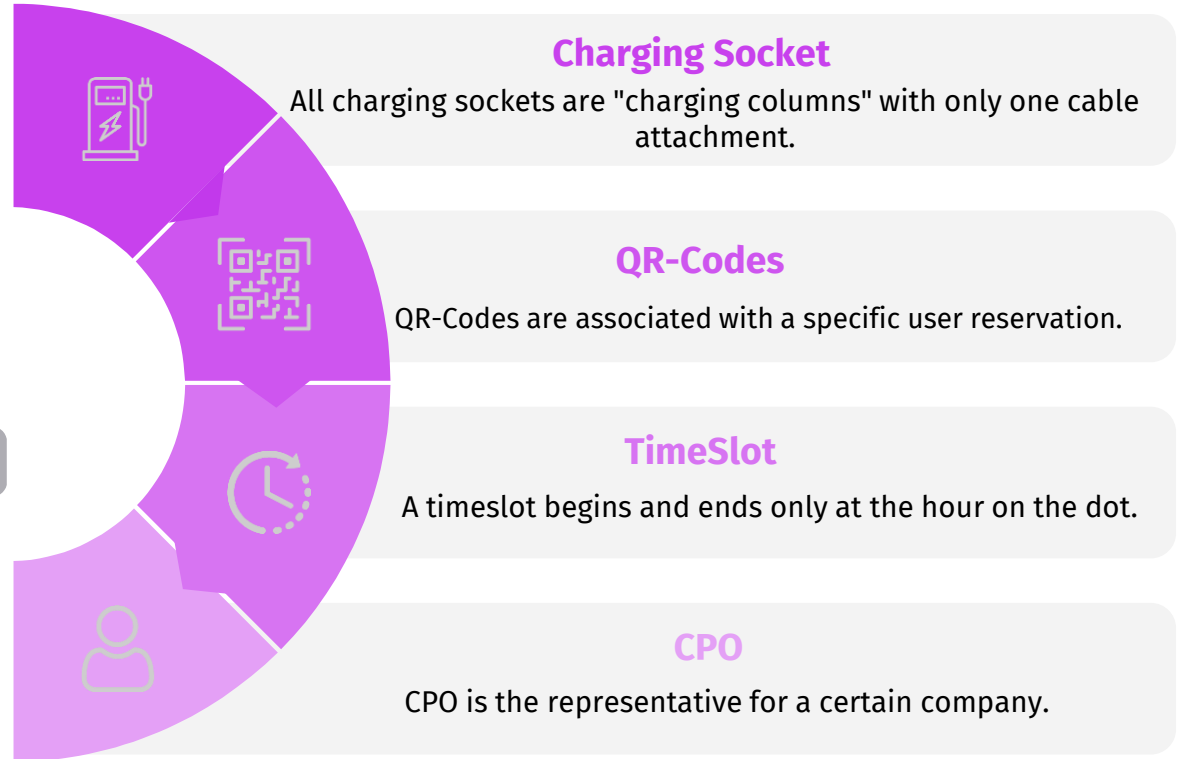
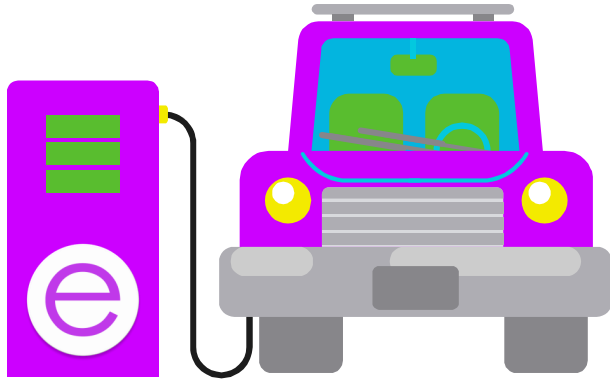
GOALS



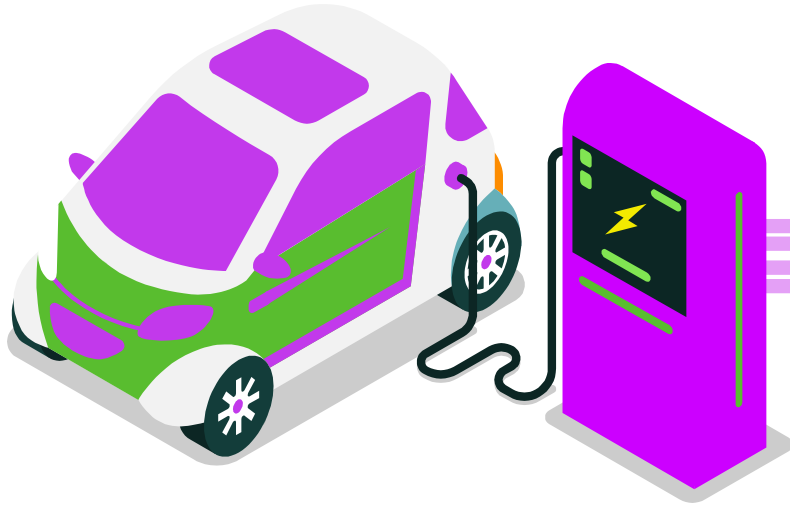
WORLD & MACHINE PHENOMENA



DOMAIN ASSUMPTIONS



REQUIREMENTS



1

The system must show to the end user the suggested charging stations

2

The system must allow the end user to start the charging process

3

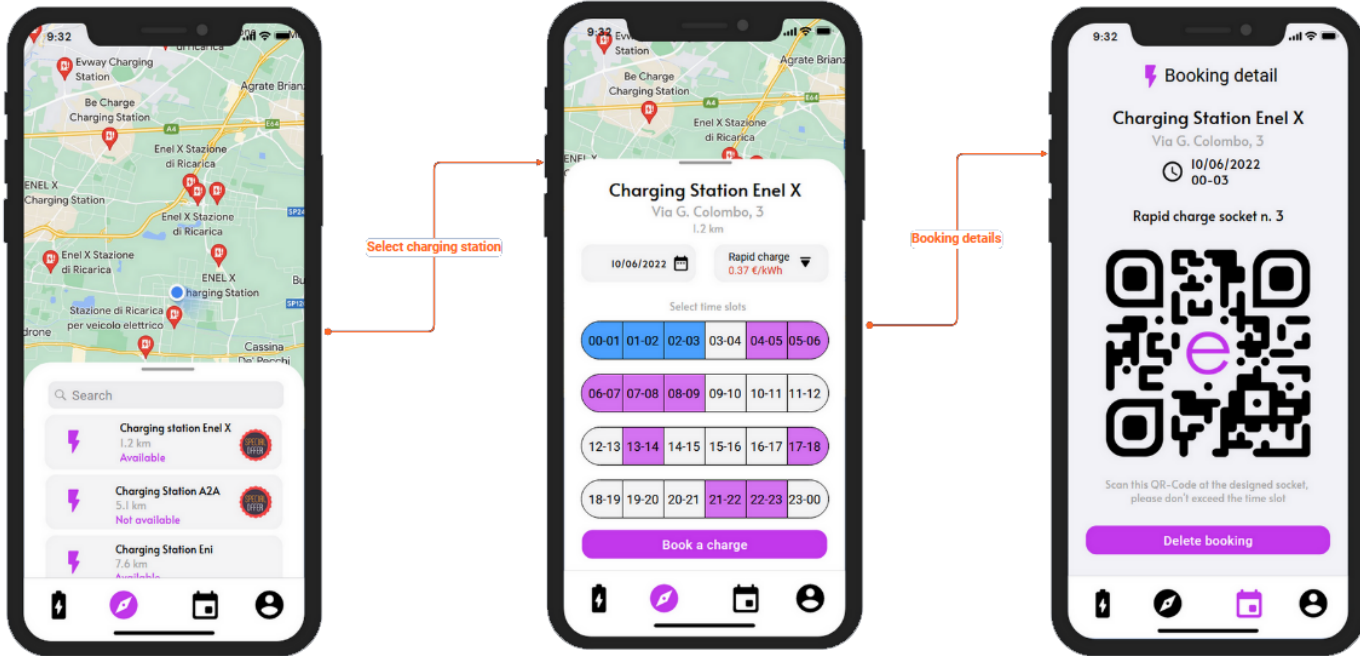
The system must allow the CPO to monitor the charging process

4

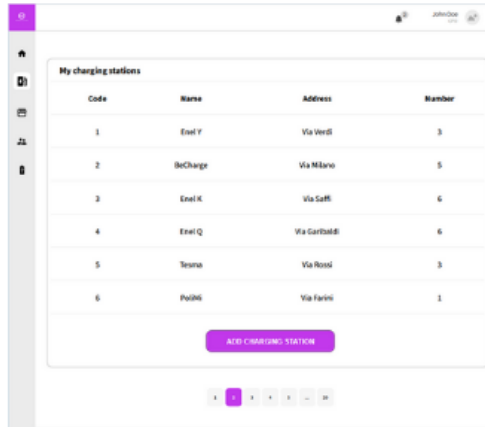
The system must allow the CPO to acquire energy from DSOs



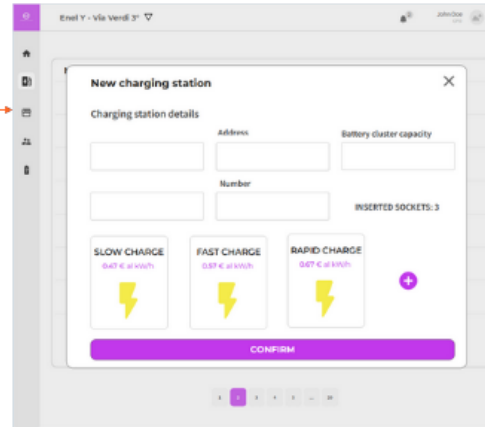
USE CASES – New Booking



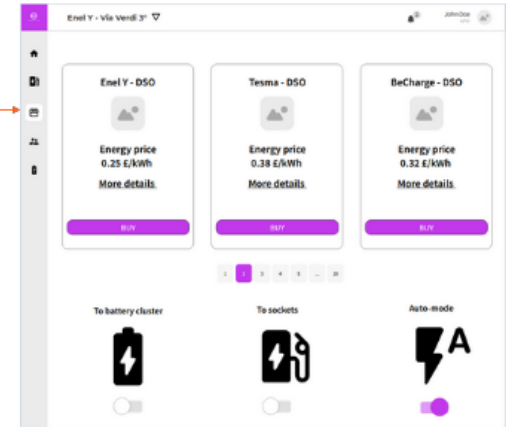
USE CASES – Charging Stations Management



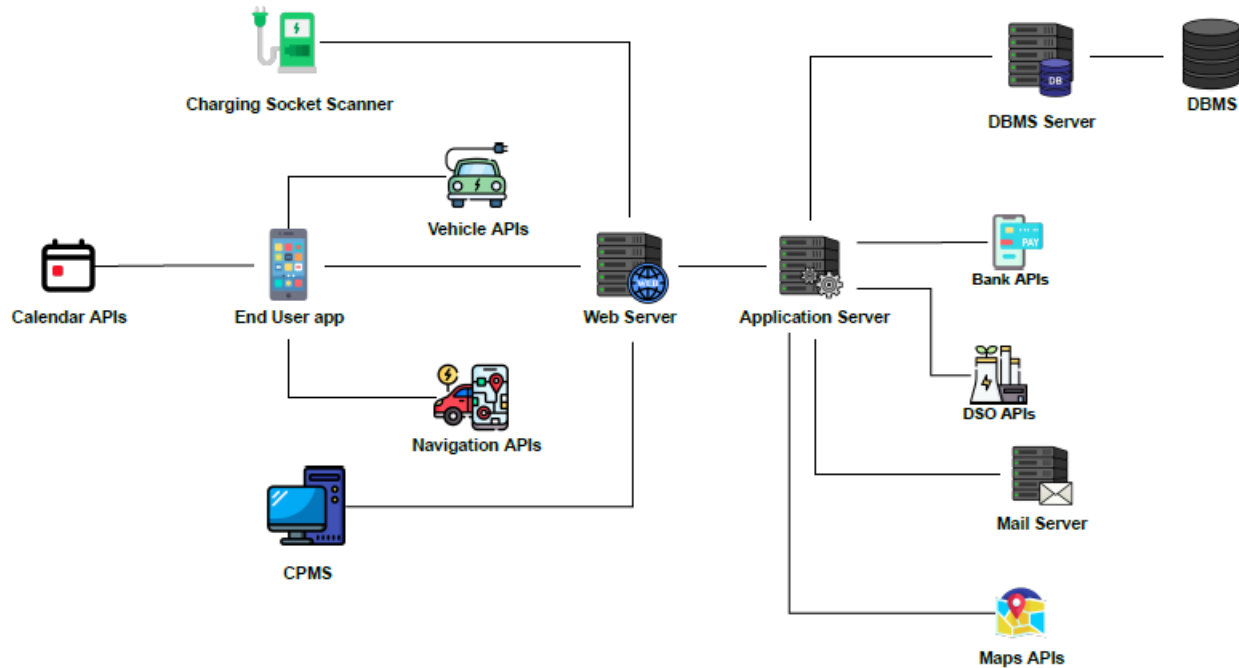
Add charging station



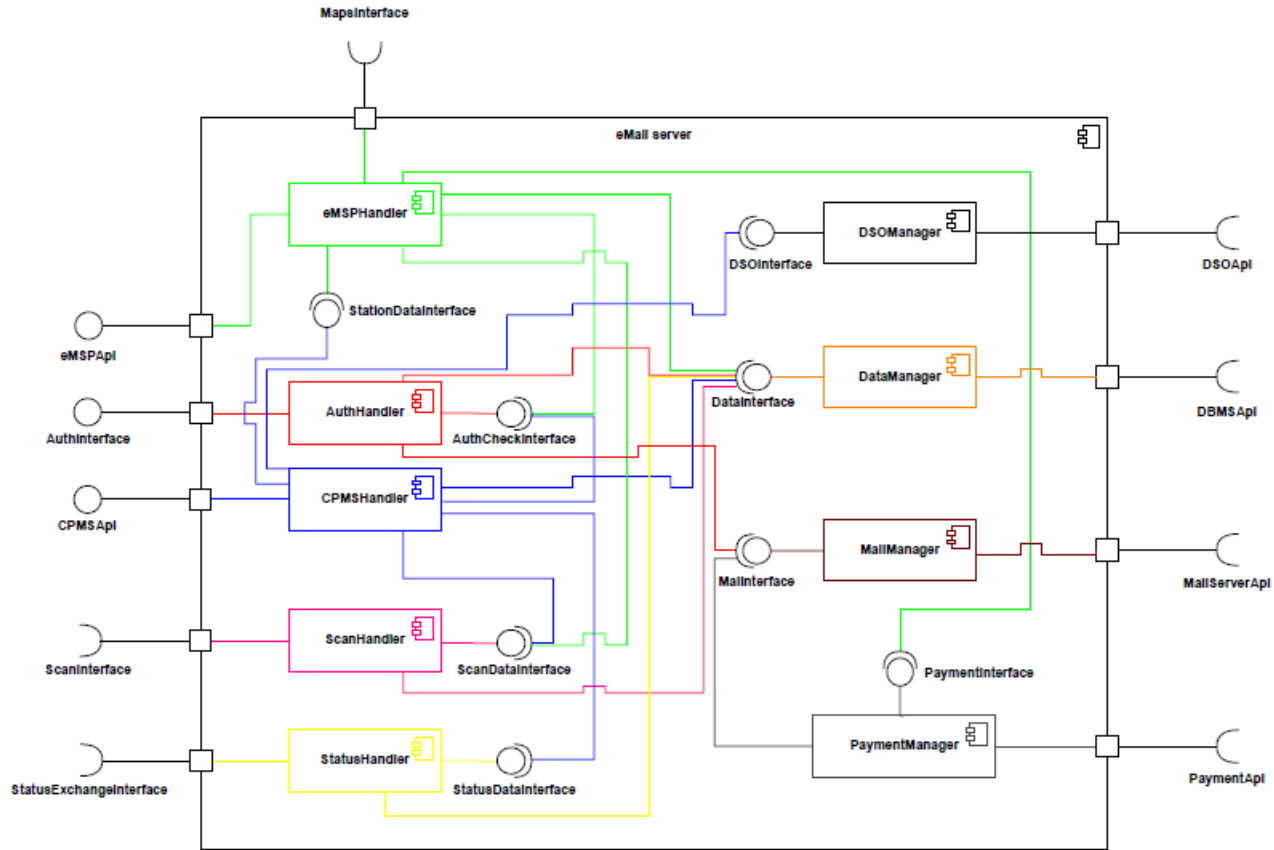
DSO market



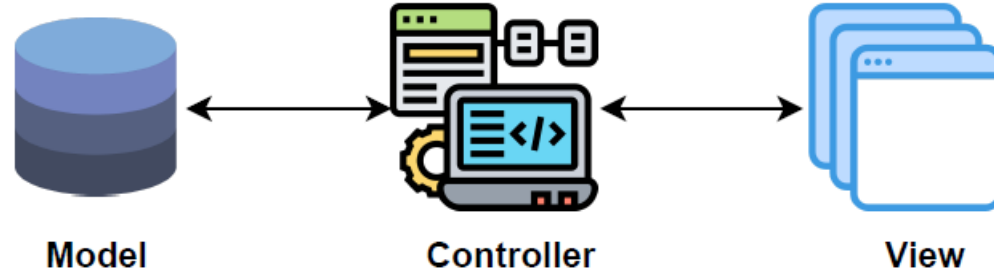
ARCHITECTURAL STYLE



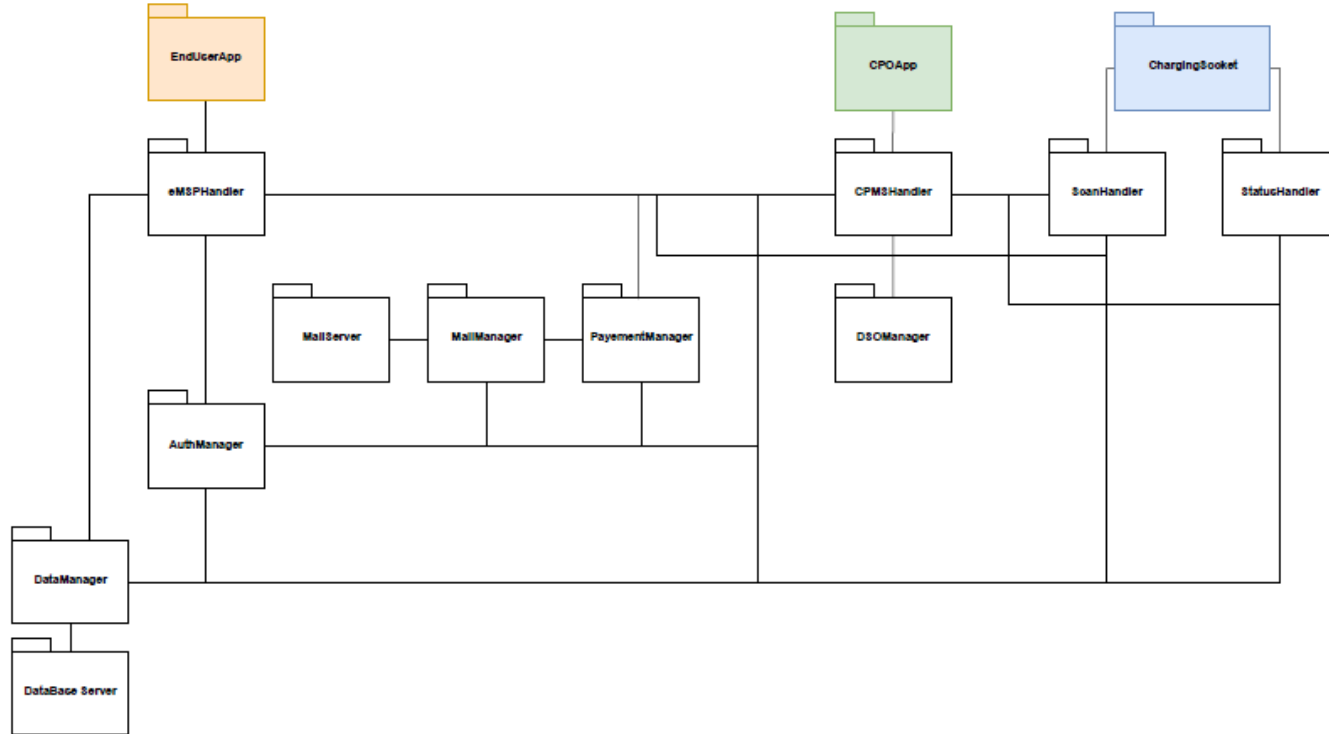
APPLICATION SERVER COMPONENTS



PATTERN - MVC

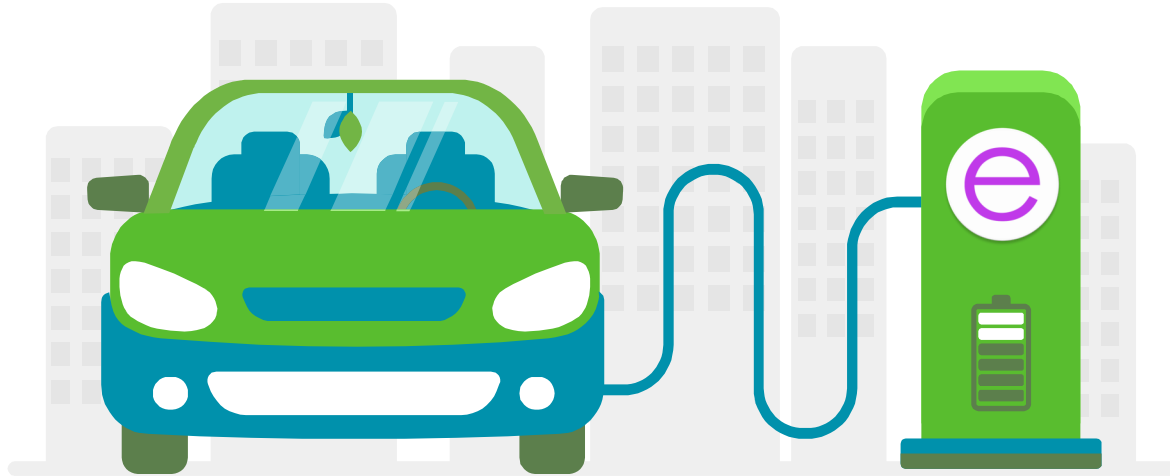


IMPLEMENTATION, INTEGRATION AND TESTING



eMall – e-Mobility For All

I&T



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FRAMEWORKS & LANGUAGES

27% + 3%

NODEJS and MOCHA

30%

REACTJS

30%

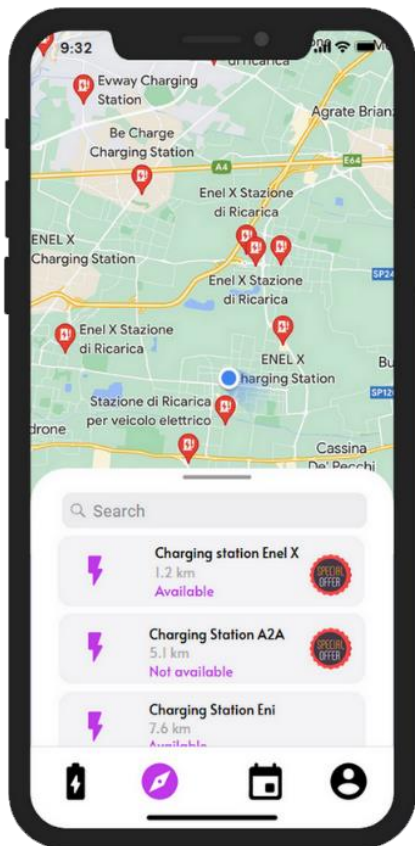
FLUTTER

10%

**JAVA FOR
ANDROID**



NEARBY CHARGING STATIONS



1

Current user latitude and longitude

2

Conversion charging station address to latitude and longitude

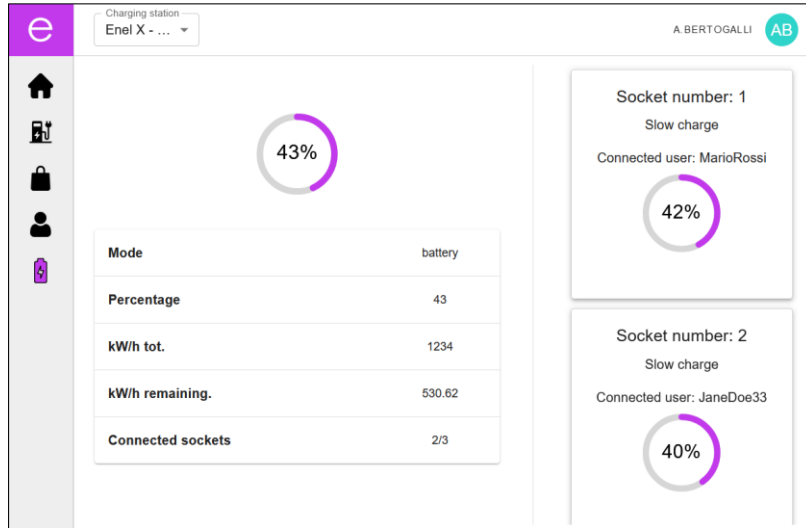
3

Nearby charging station selection according to user location

4

Return the nearest charging stations

REAL-TIME CHARGE



1

Involves both eMSP and CPMS

2

Real-time synchronization over WebSocket protocol

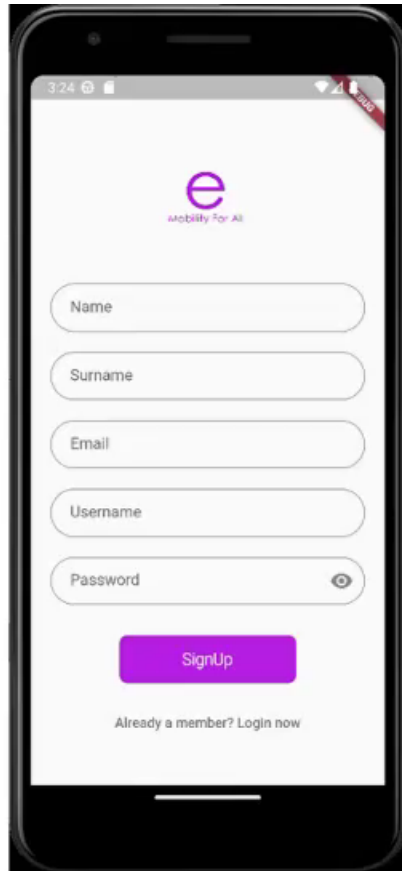
3

Full-duplex communication, no polling

4

Uses rooms for targeted communications, no broadcast

DEMO – EndUser App



A smartphone mockup displaying the login screen of the 'EndUser App'. The screen has a white background with a purple 'e' logo and the text 'mobility For All' at the top. Below the logo are five input fields: 'Name', 'Surname', 'Email', 'Username', and 'Password'. The 'Password' field has a toggle icon on the right. A purple 'SignUp' button is centered below the fields. At the bottom, there is a link that says 'Already a member? Login now'. The status bar at the top shows the time '3:24' and various icons. A red 'beta' badge is in the top right corner of the app screen.

3:24

e
mobility For All

Name

Surname

Email

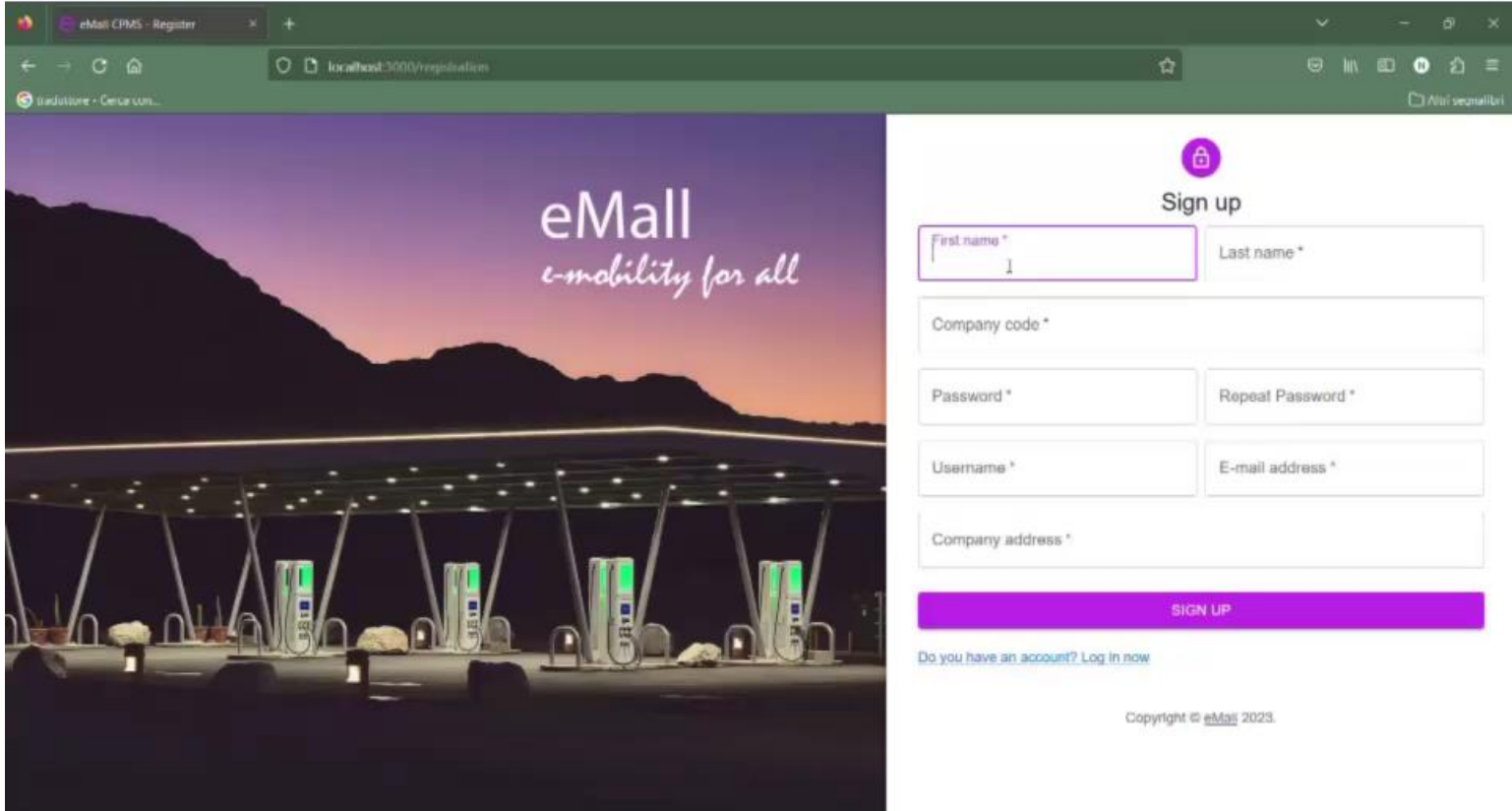
Username

Password

SignUp

Already a member? Login now

DEMO – CPO App



eMail CPO App - Register

localhost:3000/registration

bidstone - Cera.com...

Also available

Sign up

First name *

Last name *

Company code *

Password *

Repeat Password *

Username *

E-mail address *

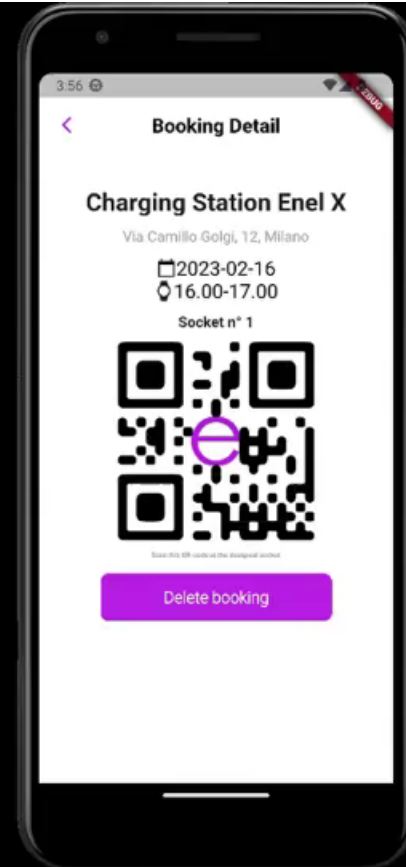
Company address *

SIGN UP

[Do you have an account? Log in now](#)

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DEMO – Charge Process





THANKS FOR YOUR ATTENTION.

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