

# **POWER ENJOY**

**RASD: REQUIREMENTS ANALYSIS AND SPECIFICATION DOCUMENT**

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# GOALS and SUBGOALS

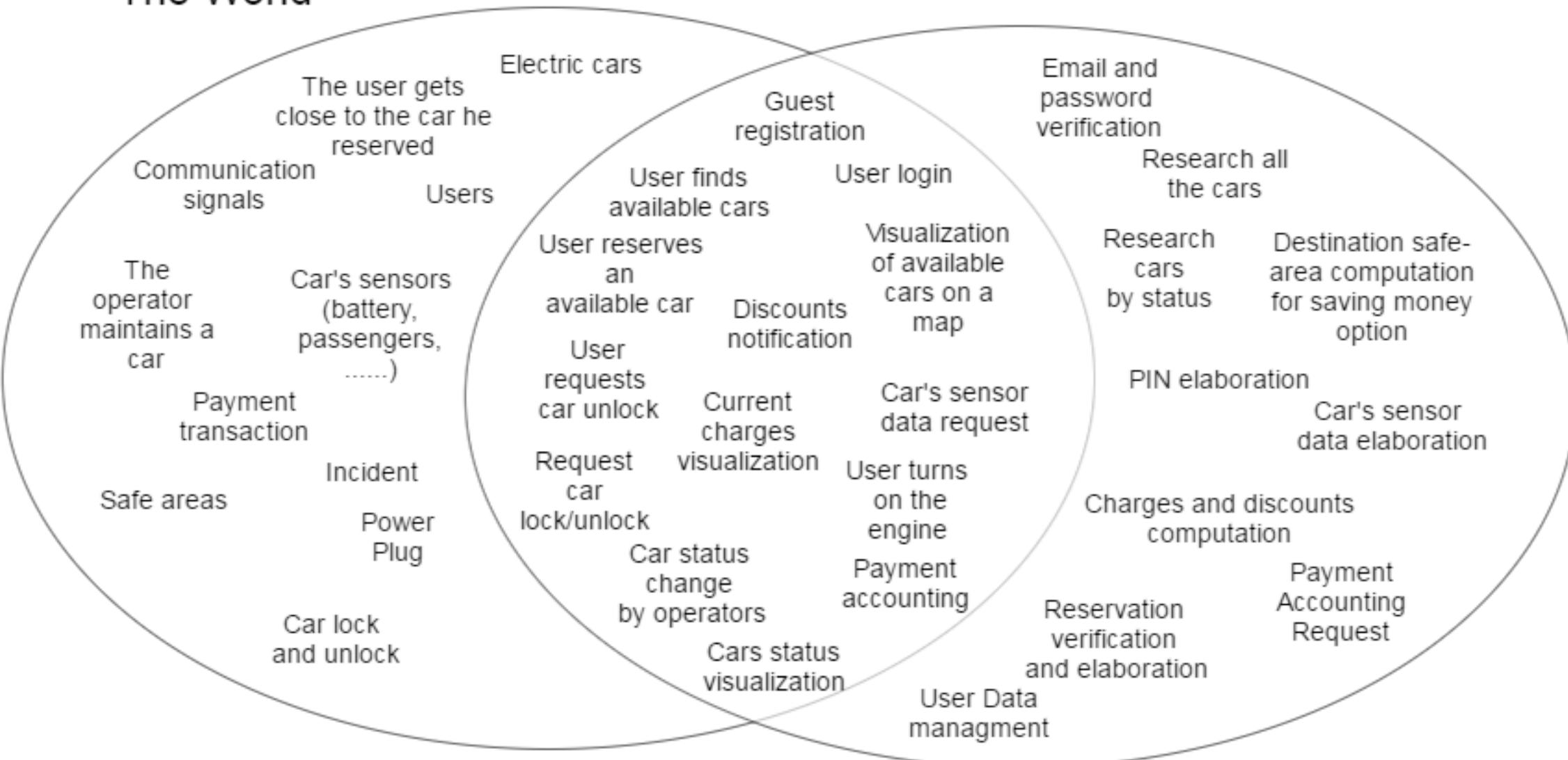
- ▶ [G1] Allow users to find available cars and reserve them
  - ▶ [G1.1] Allow users to access the system
  - ▶ [G1.2] Allow users to find available cars
  - ▶ [G1.3] Allow users to reserve available cars
- ▶ [G2] Allow users to use the reserved cars in the city area
  - ▶ [G2.1] Manage the user reservation
  - ▶ [G2.2] Handle unexpected car situations and user behavior
- ▶ [G3] Guarantee a uniform distribution of the cars in the city area
- ▶ [G4] Incentivize users to use properly the reserved cars
  - ▶ [G4.1] Reward the users that ease the experience of other users
  - ▶ [G4.2] Penalize the users that ruin the experience of other users

# S2B BOUNDARIES

The World

Shared  
Phenomena

The Machine



-Name: VehicleInterface

-Mnemonic: Car

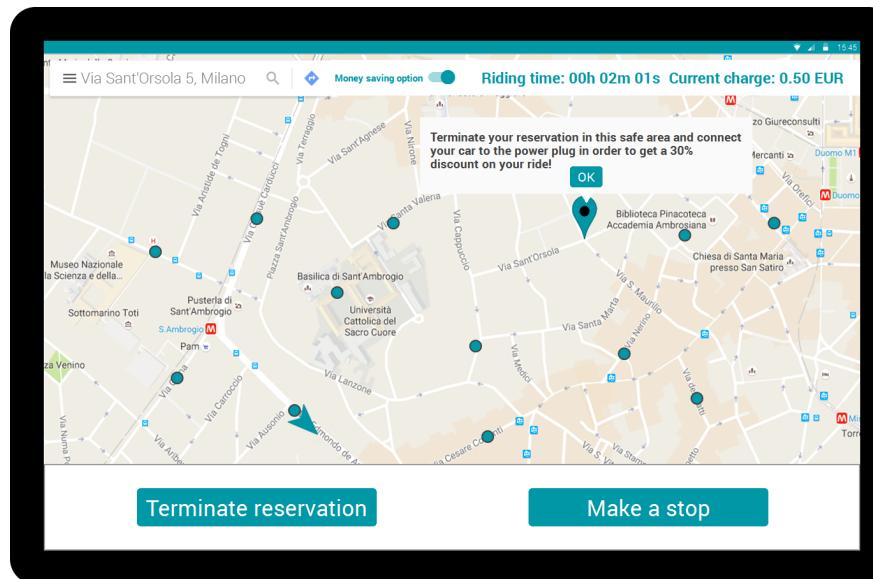
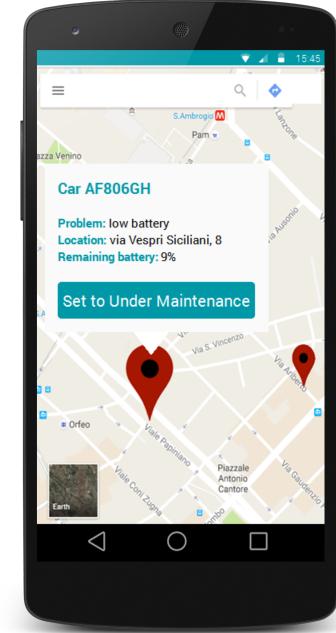
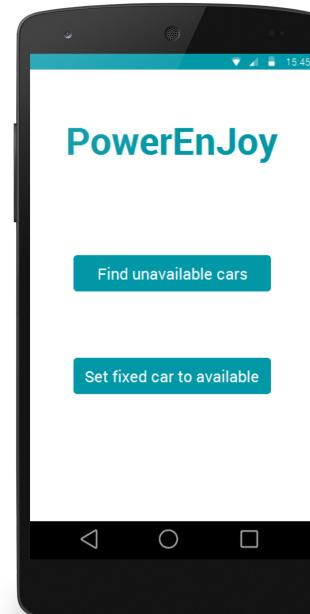
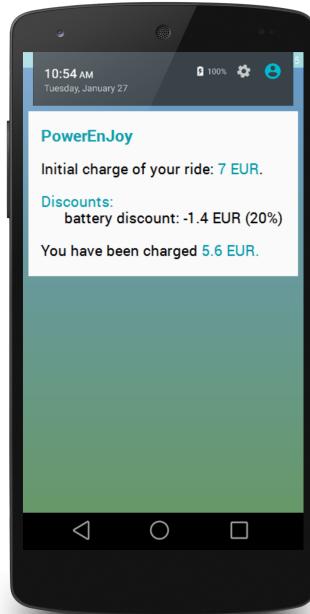
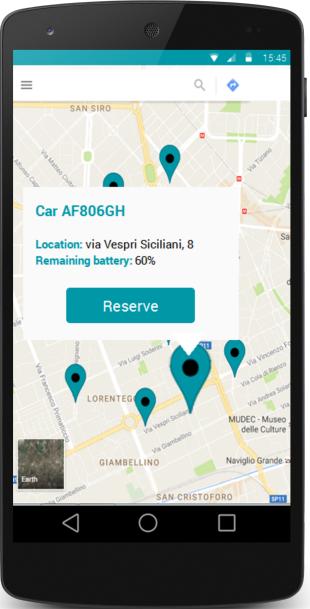
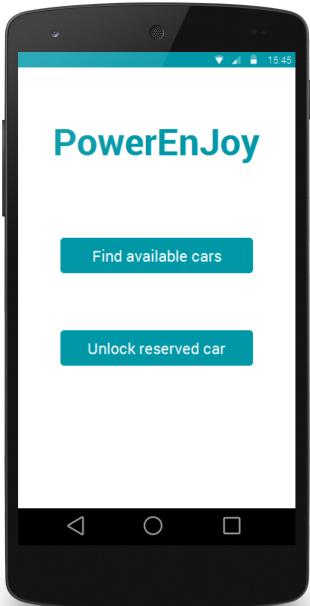
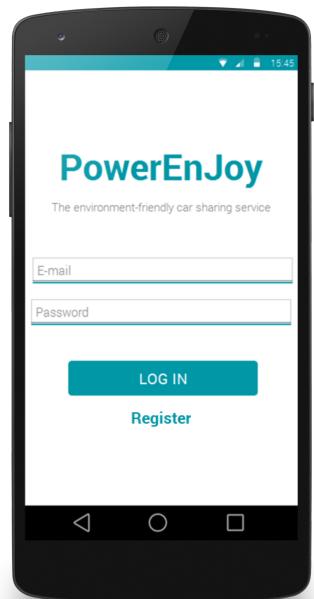
-Name : Google Maps

-Mnemonic: MapService

-Name : Virtual POS

-Mnemonic: BillingService

# MOCKUPS

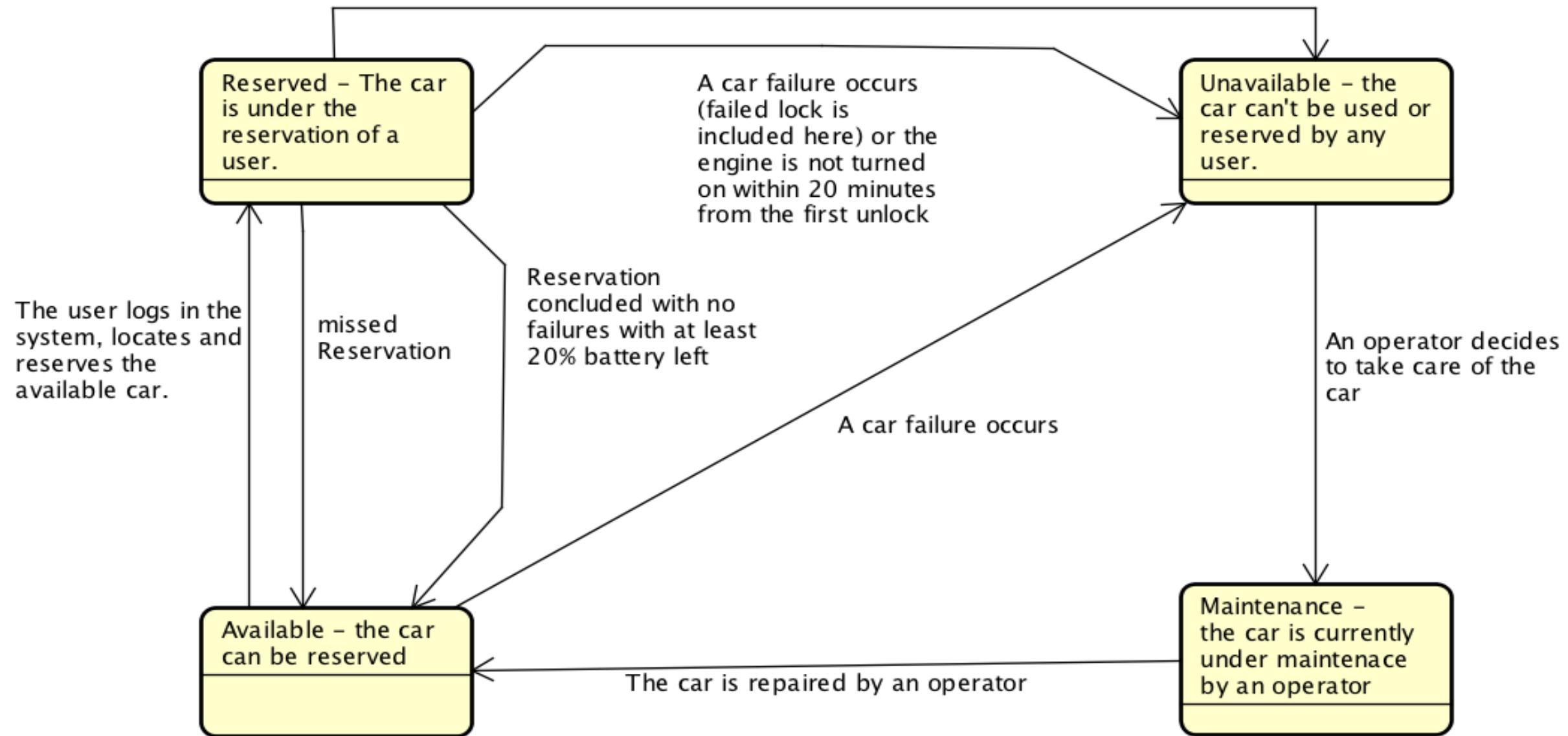


# SOME ASSUMPTIONS...

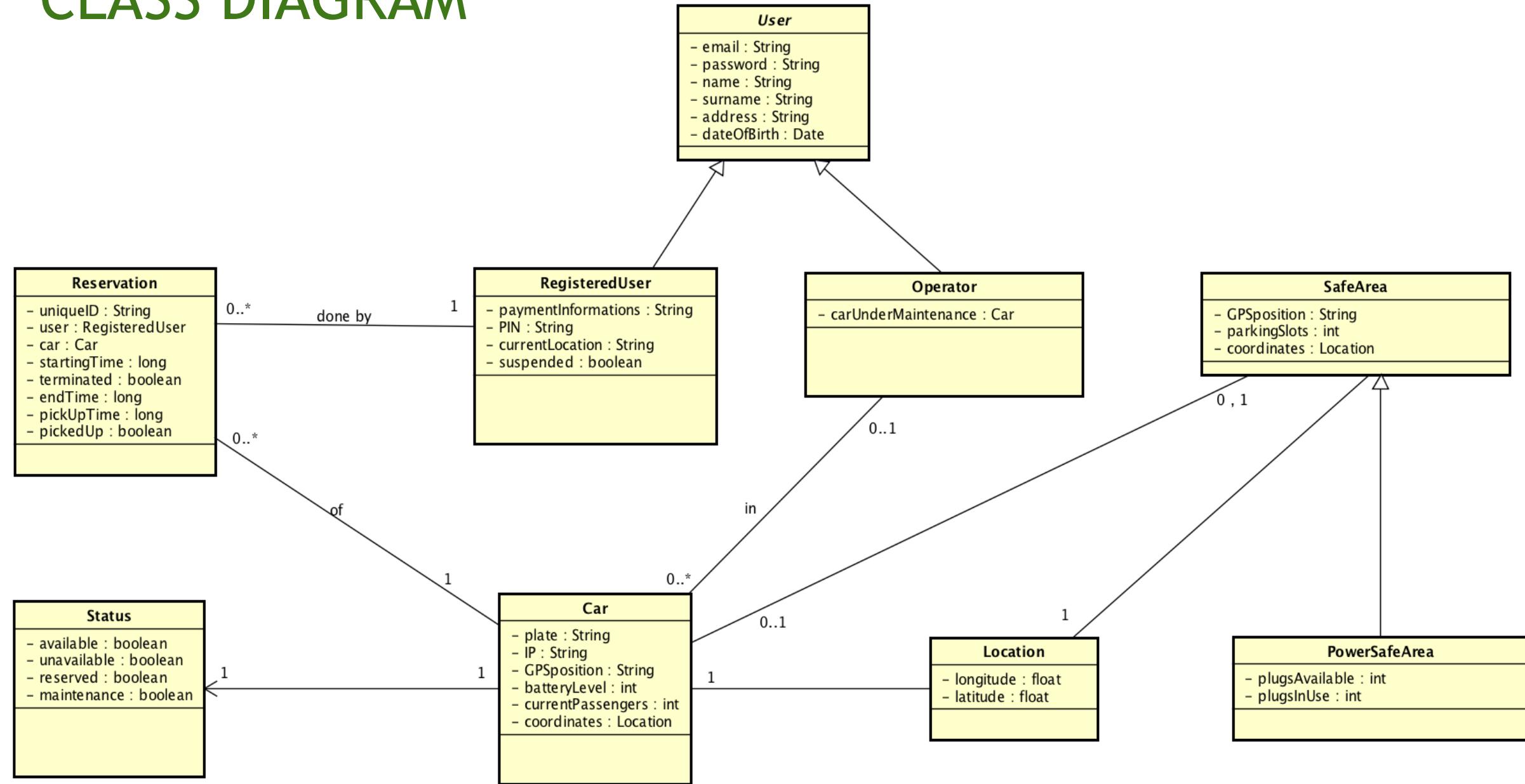
- ▶ [D1] Every car has a GPS module that is always on.
- ▶ [D2] Every car has a 3G module that is always on.
- ▶ [D3] The S2B on board of a car is always on even when the screen on board of that car is turned off to save service battery energy.
- ▶ [D4] Inside every car there is a low-level hardware board which is connected to the CAN-bus of the car. This board provides a software interface that can be used by our S2B to get informations from that car and to control the actuators of that car.
- ▶ [D8] A car occurring in a car failure will always be able to communicate to the system.
- ▶ .....
- ▶ [D15] When a car is plugged to a power plug inside a power safe area, the battery array recharges and the service battery recharges as well.

 Users are unpredictable!!!

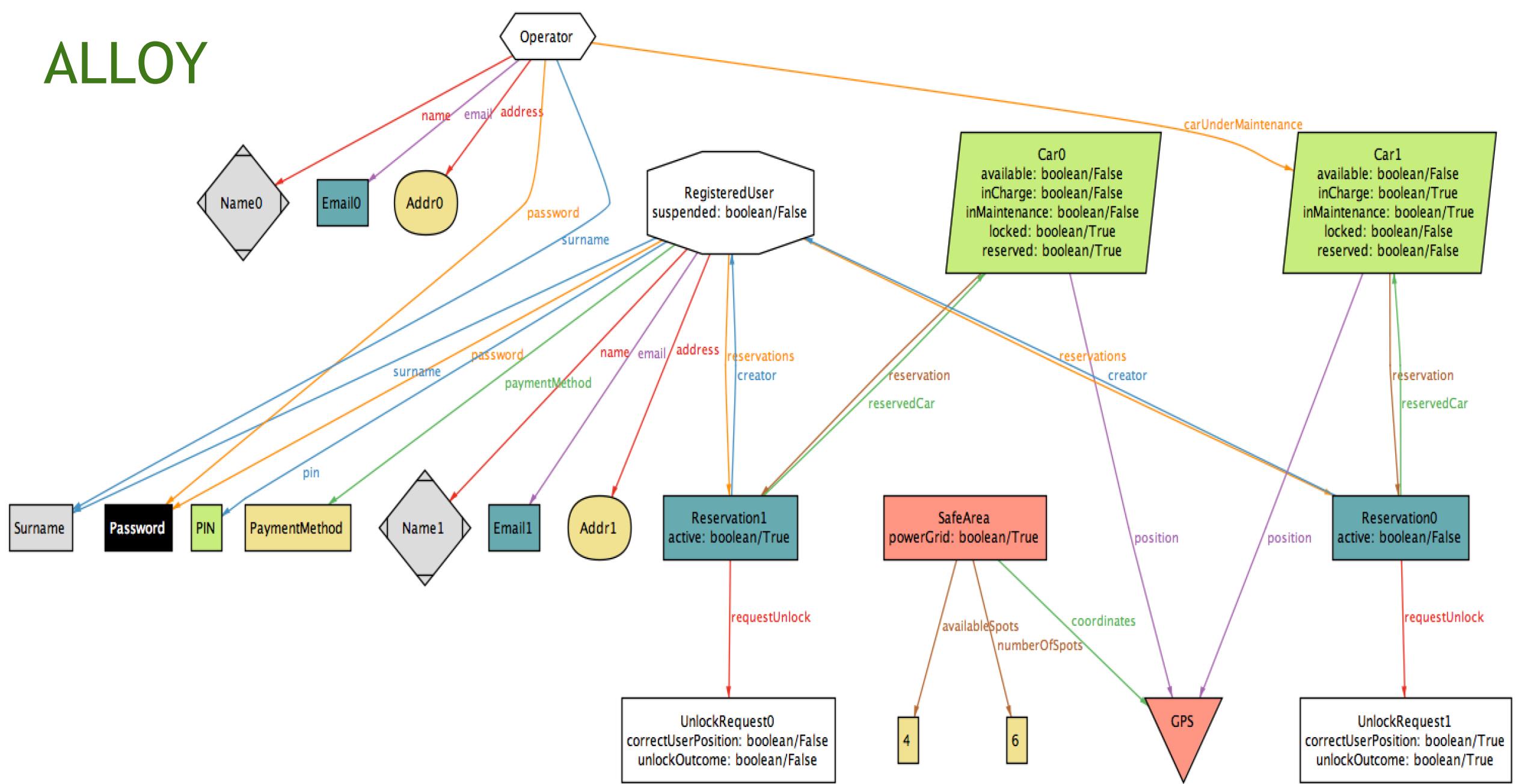
# CAR STATUS: REQUIREMENTS CORE



# CLASS DIAGRAM



# ALLOY



# QUESTIONS?