IMAGINE IOT
PROTOTYPE CHALLENGE

ELECTRIC CAR VALET SOLUTION FOR AIRPORT CUSTOMERS
E-VALET
Summary

The manager of an airport parking service has only a few charging stations for electric cars available. These charging stations are often being blocked for longer time and some customers cannot rely on them, as they might not be available.

Storyline

Some electric car drivers live within a full battery charge distance from the airport, but he/she would need a new charge in order to return home. To fully recharge it the drivers have basically two options: either leave the car charging until they return from a trip or wait for a few hours until the car has been charged. The facility manager of the parking garage sees both options as not suitable and needs a solution which brings smart usage of the charging station with no extra waiting time for customers. If the airport could offer an e-valet solution which would charge electric cars while drivers were away, they would surely consider taking the electric car to commute to/from the airport.
**Persona**

**Maria**  
**Facility Manager**

“I feel responsible for our customers and need to adapt our services to their needs, simplifying their lives.”

**About**
- 35 years old, married, 3 years of management experience
- Puts customer needs at first place
- Always searching for ways to improve customer experience
- Owner of an electric car herself, she knows the importance of having a charging station available when needed

**Responsibilities**
- Responsible for hiring and defining roles of employees
- Has to assure customers are able to enter and leave the parking garage without delays
- Searches for innovative ways to attract more customers
- Observes the flow in the parking house by analyzing videos made by strategic cameras

**Main Goals**
- Need to assure customers are satisfied with services provided in the parking garage
- Electric car customers must have the guarantee their car is going to be charged when returning from a trip

**Needs**
- Make sure the charging stations are not overused by fully charged electric cars
- Assure there is enough personal to provide e-valet service for customers
- The use of cameras and sensors are essential for identifying overused stations

**Pain Points**
- I can’t offer more than a handful charging stations in the garage
- The charging time is quite long
- I can’t afford blocking a station after an electric car is fully charged
- Customers can’t afford driving to the airport and not being able to recharge theirs cars
Point of View

As a facility manager of an airport parking garage

I need a way to make sure electric car users can trust our facility and e-valet services

so that they have a fully charged battery when picking up the car after a trip.
<table>
<thead>
<tr>
<th>ACTIONS</th>
<th>MINDSET</th>
<th>FEELING</th>
<th>TOUCH POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Sees a new electric car arriving at the parking garage</td>
<td>“Oh, nice. One more customer”</td>
<td>😊</td>
<td>Video camera.</td>
</tr>
<tr>
<td>- Offers e-valet service which includes recharging the battery.</td>
<td>“Nothing like making life easier for them.”</td>
<td>😊</td>
<td>Customer.</td>
</tr>
<tr>
<td>- Writes down customer information including pick up details.</td>
<td>“I need to make sure this electric car is charged before the driver returns”</td>
<td>😊</td>
<td>Customer; Application; Car keys.</td>
</tr>
<tr>
<td>- Parks the car in a parking spot where it will stay until it’s time to charge.</td>
<td>“As soon as a charging station is free I can bring this car for a charge”</td>
<td>😊</td>
<td>Parking spot; Car.</td>
</tr>
<tr>
<td>- Gets informed via sensors that a charging station is now available.</td>
<td>“Great! I can finally park the charged car in a parking spot and bring this new car to the charging station”.</td>
<td>😊</td>
<td>Application.</td>
</tr>
<tr>
<td>- Switches the cars and starts charging the newly arrived electric car.</td>
<td>“Now I just need to wait for it to be charged. Customer will receive the car recharged and on time”.</td>
<td>😊</td>
<td>Parking spot; Cars; Application; Charging station.</td>
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