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# PowerEnJoy

## Requirements Analysis and Specifications Document

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# 1 Introduction

## 1.1 Purpose

This document is called *Requirements Analysis and Specification Document* also known as the acronym RASD. Its purpose is to communicate to customers what is understood about functional and not-functional requirements based, the limitations and obstacles for implementing this system, the constraints founded and for modeling the customer's need. This document is also addressed to developers and programmers who have to implement all the requirements then it must be more complete and correct than possible. It is a contract with customers therefore it must show use cases to allow everyone to understand what the system will do and in what domain it can be used. Project manager can use this document to make an evaluation of costs and size of the project.

## 1.2 Scope

The aim of the project called PowerEnJoy is to provide a car-sharing service that involves only electric cars. All people who want to share a car must be able to register at the system using credentials such as name, surname, e-mail, nickname and giving a valid information payment (number of credit card) that is needed to pay for the service. When the user receives the password to log in, he can find available cars in a specific location and, if he wants, he can reserve it. The system unlocks the car as soon as the user is nearby and keeps informed of the amount of the service with a screen on the car; when the car is in one of the safe areas, indicated in a list that can be consulted on-line, the system locks it after the person exits from it. The project has also the purpose to encourage people to leave at home their pollutant cars and take with other people the electric car: in fact if there are at least two passengers with the driver he has a 10 per cent discount on the ride. If the user leaves the car in the safe area with more than half of the battery he has a 20 per cent discount on the ride and if he recharged the car he will have 30 per cent discount. But if the user leaves the car far away from a safe area or with more than 80 per cent of empty battery, the system charges 30 per cent more on the ride.

## 1.3 Definitions, acronyms, abbreviations

Here there is the acronyms list:

**RASD** Requirements Analysis and Specifications Document

## 1.4 Overview

## **2 Overall Description**

### **2.1 Product perspective**

### **2.2 Product functions**

### **2.3 User characteristics**

### **2.4 Constraints**

### **2.5 Assumptions and Dependencies**

## 3 Specific Requirements

### 3.1 External Interface Requirements

#### 3.1.1 User Interface

#### 3.1.2 Hardware Interfaces

#### 3.1.3 Software Interfaces

#### 3.1.4 Communication Interfaces

### 3.2 Functional Requirements

### 3.3 Performance Requirements

### 3.4 Design Constraints

#### 3.4.1 Standards compliance

#### 3.4.2 Hardware limitations

#### 3.4.3 etc...

### 3.5 Software System Attributes

#### 3.5.1 Reliability

#### 3.5.2 Availability

#### 3.5.3 Security

#### 3.5.4 Maintainability

#### 3.5.5 Portability

### 3.6 Other Requirements

## 4 Appendix