# Change Log

# Preface

# Table of Contents

# List of Tables

# List of Illustrations

# Introduction

## Purpose

## Scope

MyTaxiService is a Milano’s government proposal for optimizing its taxi service, by simplifying the access of the passengers to the services and guaranteeing a fair management of taxi queues.

The passengers will be able to make requests for taxi services either through the MyTaxiServices’s web site or its mobile app, sending the request for service information. The systems then replies to the passenger with the accepted request information, and he is successfully served. The passengers can also reserve taxi services in advance and share the taxi with other passengers.

The taxi drivers will be able to receive requests for taxi services in the mobile application, when they have informed the system about their availability. When they receive the request they are given the incoming request information. When the request is accepted, the passenger is informed.

When the trip is over the passenger is asked to evaluate the driver’s service. This information will be used by the Milano’s government to improve the services.

The requests are managed and assigned to available taxis, according to the position provided by the taxi’s GPS. The city is divided in zones, and each one of these has an associated queue of available taxis. The request is assigned to the first driver in the corresponding queue.

## Definitions, acronyms, and abbreviations

Accepted request information: when a request has been accepted, the passenger receives the following information: taxi’s code, estimated arrival time, fee to be paid to the taxi driver, and possibly how many people the car will be shared with.

Incoming request information: when the taxi driver receives a request for a service, he is given the origin, destination, the eventually payed fee for the trip, and possibly the amount of passengers.

Request for service information: when the passenger makes a request for a service, he specifies the origin and destination of the trip, and states whether he wants to share or not the taxi.

## References

## Overview

# Overall description

## Product perspective

## Product functions – Goals

In this section we expose the product functions by listing the desired goals:

* G1: Passenger can request a taxi either through a web application or a mobile app.
* G2: Passenger receives the confirmation after his/her request has been sent and accepted by some taxi driver.
* G3: Passenger is notified when the taxi arrives at his/her location.
* G4: Taxi driver informs the system about his/her availability.
* G5: Taxi driver receives requests for services.
* G6: Taxi driver may confirm that he/she is taking care of a certain received request.
* G7: Taxi driver receives the passenger’s information when he/she accepts the request.
* G8: Requests for taxi services are fairly managed.
* G9: Passengers can enable a taxi sharing option.

## Stakeholders, users and actors

### Stakeholders

### Users

### Actors

* Passenger: person who makes use of the MyTaxiService to make a request for a taxi service. He does not have to perform a log-in into the system to make requests. He can send requests either through the web site or the mobile application.
* Taxi driver: person who makes use of the MyTaxiService to attend requests for taxi services. He must have an account to log-in into the system, which includes a taxi code. He receives the requests in the mobile application.

## Scenarios

## Use Cases

## Constraints

## Class model

## Assumptions and dependencies

# Specific requirements

## Functional requirements

## Non-functional requirements

# Alloy Modeling

## Entities

## Facts

## Predicates

## Functions

## Asserts

## Generated world

# Appendix

## Used software

## Worked hours

## Revisions