



POLITECNICO MILANO 1863

SafeStreets Software Engineering 2 Project

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1 Introduction

The following RASD aims at providing an overview of the project *SafeStreets*.

1.1 Purpose

From this brief description of the functionalities we may extract the following goals for *SafeStreets*:

- [G1]
- [G2]
- [G3]
- [G4]

With regards to *Advanced Function 1*, we may identify one goal:

- [G6]

With regards to *Advanced Function 2*, we extract the following goals:

- [G7]

1.2 Scope

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1.2.1 World Phenomena

We identify the following world phenomena:

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1.2.2 Shared Phenomena

1.2.3 Machine Phenomena

1.3 Definitions, Acronyms, Abbreviations

1.3.1 Definitions

- **Municipality:**
- **Violation:** the action of violating traffic laws
- **Ticket:** administrative sanction established by law for a violation

- **Plate recognition Algorithm:** algorithm that automatic recognize vehicles' plate by the images sent from users to report a violation or an accident
- **Notification Data:** information that is provided by the user when he reports a violation. This includes picture, license plate, date, time, position.
- **Ticket Data:** information that is provided by the municipality when it adds a new ticket in the system. This includes violation type, license plate, date, time, position.
- **Accident Data:** information that usually is provided by the municipality when it reports an accident. This can includes accident type, picture, multiple license plate, date, time, position.
- **Intervention:** action taken by the municipality to prevent further issues in the city traffic.
- **Notification:** message sent by the user to advise the system about a violation.

1.3.2 Acronyms

- **GPS:** Global Positioning System
- **API:** Application Programming Interface
- **ID:** Identifier
- **RASD:** Requirements Analysis and Specification Document
- **DBMS:** Database Management System
- **GDPR:** General Data Protection Regulation

1.3.3 Abbreviations

- **Gn:** n-th goal
- **Rn:** n-th functional requirement
- **Dn:** n-th domain assumption
- **AF1:** advanced function one
- **AF2:** advanced function two
- **SP1:** shared phenomena controlled by the World and observed by the Machine
- **SP2:** shared phenomena controlled by the Machine and observed by the World

- **WP:** World Phenomena
- **MP:** Machine Phenomena

1.4 Revision History

Version	Date	Changes
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Table 1: Revision History

1.5 Reference Documents

- Project Assignment

1.6 Document Structure

The rest of the document is organized as follows:

- **Overall Description** (Section 2)
- **Specific Requirements** (Section 3)
- **Formal Analysis** (Section 4)

2 Overall Description

2.1 Product perspective

2.1.1 Class Diagrams

2.2 Product functions

2.3 User characteristics

2.4 Assumptions, dependencies and constraints

2.4.1 Constraints

-

2.4.2 Dependencies

-

2.4.3 Domain Assumptions

- [D1]
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