DD

Carlo Dell'Acqua, Adriana Ferrari, Angelica Sofia Valeriani

November 13, 2019

POLITECNICO
MILANO 1863

Contents

Chapter 1

Introduction

1.1 Purpose

1.1.1 Purpose of the Platform

SafeStreets is a service that aims to improve the safety of the general traffic. This is achieved by creating a community of users who are able to report any violation they see while the system manages all the aspects of data validation and statistical analysis. Different services contribute to this purpose:

- The first service offered by the front end application is the report service. Any registered user can submit violation reports and SafeStreets will validate them as described in the following sections with the help of the community.
- The second service offered by the front end application is the the Unsafe Areas Map. SafeStreets will provide statistics about areas that have a higher risk of violations based on the reports it receives and the danger of the infractions. Data can also be collected from public services if available to increase accuracy.
- The third service is the ticket generation. Traffic policemen will have access to a dedicated section of the application where SafeStreets will collect validated reports. This will enable any registered policeman to take actions against those violations.

1.1.2 Purpose of this document

In this document a more detailed approach with respect to the RASD will be provided to explain how we intend to build the platform. The following paragraphs will describe the architecture of the physical system and its abstract software components, how they interact with each other and how they create the services we described in the RASD.

1.2 Scope

1.3 Definitions, acronyms and abbreviations

1.3.1 Definitions

- **Safe (or Unsafe) Area**: A geographical region, usually a set of streets, where less (or more) accidents occur than the average based on neighboring regions
- **Report**: A set of data containing all the information about a traffic violation
- **System/Platform**: The SafeStreets platform
- **Web Application**: A Rich Internet Application that enables users to access the functionalities of the system through a modern web browser without having to manually install any other software

1.3.2 Acronyms

- **DD**: Design Document
- **API**: Application Programming Interface
- **GPS**: Global Positioning System

1.3.3 Abbreviations

- **Web App**: Web Application

1.4 Revision History

Version	Major changes
1.0.0	First release

1.5 Reference documents

- **Assignment:** SafeStreets Mandatory Project Assignment
- **Previous project example:**
  - **Assignment:** Mandatory Project Assignment AY 2018-2019
  - **Example document:** DD to be analysed AY 2019 2020

1.6 Document Structure

1. **Introduction**: The first section is a general description of the system's scope and purpose. It also includes references of the document and definitions, abbreviations and acronyms used along the paper

2. **Architectural Design**: The second section describe the architecture of the platform from different views.

3. **User Interface Design**: The third section includes an overall description of the user interface, explaining how the user will interact with the system and how the user interface will help them through the different interaction scenarios

4. **Requirements Traceability**: The fourth section provides a traceability matrix that allow keeping track of the requirements

5. **Implementation, Integration and Testing**: The fifth section describes how the system will be implemented, how the integration with existing system will be made and how the test will ensure the stability of

6. **Effort Spent**: The sixth section includes the detailed information about the time spent for each part of the document and how the work has been divided between group members

Chapter 2

Architectural design

Chapter 3

User interface design

Chapter 4

Requirements traceability

Chapter 5

Implementation, integration and test plan

Chapter 6

Effort spent

References