# Design Document

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# Introduction

While the RASD presented a general view of the SafeStreets appliction and its features, this document aims to further analyze the system's design and architecture, by describing for each of its components their runtime behaviour, integration, interfaces, implementation and testing plans. This document is mainly intended to be used by the test and development teams as a guidance in the development process, but also to prevent structural degradation during maintainance and extension phases. Nonetheless, the document is also addressed to all the stakeholders who are interested in supervising the development process.

## 1.1 Purpose

"I always thought something was fundamentally wrong with the universe"

## 1.2 Scope

# Architectural Design

## 2.1 Overview

In this chapter we are going to discuss the architectural structure of the System. In Figure 1 is represented an high-level view of the components and their interactions. The details are explained in the next sections.
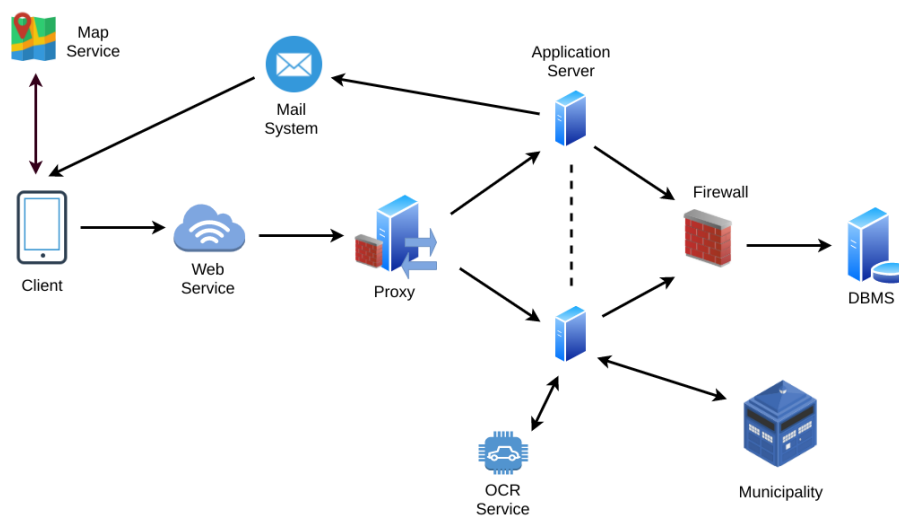


Figure 2.1: Overview of the System.

## 2.2   Component view

## 2.3   Deployment view

## 2.4   Runtime view

## 2.5   Component interfaces

## 2.6   Selected architectural styles and patterns

The following architecture are used for the structure of the System.

### 2.6.1   Client-Server Architecture

In this structure there are two main role with different duties, the client uses data and services offered by the server. The server stores all data in order to provide them to the client.
**Motivations:** this pattern dues to several advantages. Server can be replicated to have more scalability. Accessibility: users can use the services without the need for a specialized device or client. The security is granted because the server allows only registered user to consult data. Furthermore, it is easy to update, replace, repair, move a server without affecting clients.
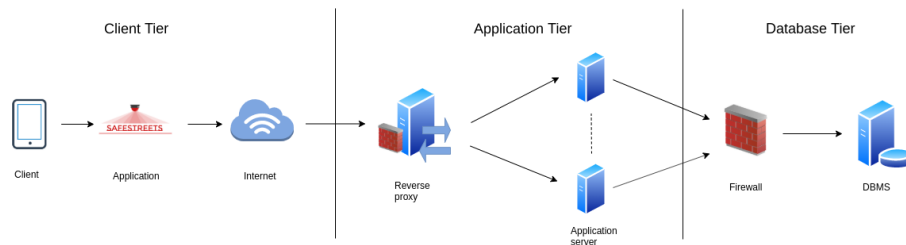
Figure 2.2: Overview of the System.