

# Software Requirement Specification

Plan and Go:

Visual Public Transportation Analysis Tool

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# Software Requirement Specification

The purpose of our system is to assist city planners in organizing the public transport system in Västra Götalands region.

City planners will use our system via a web application where they can view and compare live user requests. After some analysis, this system will allow them to make decisions to help allocate resources to demand.

# Software Requirements Document

Date created: <b>16/12/2019</b>	Created By: <b>Group 8</b>	Created for: <b>Plan and Go</b>	Version: <b>1</b>
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## Functional Requirements

<b>FR 1</b>	The system shall allow the city planner to view traveler requests on a map.
<b>FR 2</b>	The system shall be used to visualize transport demands on Västra Götalands area.
<b>FR 3</b>	<p>During Interactive Mode, the system shall display a randomized user initial location and destination location on the map.</p> <p><b>FR 3.1.</b> The system shall allow the city planner to view the traveler request locations on a given day according to time.</p> <p><b>FR 3.2.</b> The system shall display all the requests generated on the map.</p> <p><b>FR 3.3.</b> The system shall allow the city planner to view requests of a particular purpose.</p>
<b>FR 4</b>	<p>During Data Driven Mode, the system shall allow the user to view all requests at the same time.</p> <p><b>FR 4.1.</b> The system shall update the visualiser based on new requests being generated.</p> <p><b>FR 4.2.</b> The system shall cluster requests on a map based on the region.</p>
<b>FR 5</b>	The system shall allow the city planner to switch the display between Data Driven mode and Interactive mode.
<b>FR 6</b>	The system shall only visualize requests where both the origin and destination is on land.

## Non Functional Requirements

<b>NFR 1</b>	The system shall display real-time user valid requests within 10 seconds of being filtered.
<b>NFR 2</b>	The system should not break when a sub-system does not respond as expected.
<b>NFR 3</b>	The system shall not crash when wrongly formatted data inputs are made.

## Constraints

<b>C 1</b>	The system shall use middleware based on the MQTT protocol as the basis for distributed communication.
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