Project Indication Document

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1 User Stories

1.1 Actors

- **Government**: Use given information to set up invoices.
- **User**: Use the internet to keep track of their invoices.
- **Police**: Can trace stolen car's location.
- **Developer**: Test the system without touching real data

1.2 Epics

- Create a simulation for developers to virtually test the system in a safe environment.
- Store, retrieve, monitor and filter the movements of vehicles across the country.

1.3 Stories

1.3.1 First Epic

1. As a developer I want to generate uniquely identifiable vehicles for multi-vehicle testing.

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2 Exploration

A key insight of architecting systems is that you should always be looking at the bigger picture. In order to properly use the technologies for the proftaak someone should look ahead in order to anticipate upcoming subjects.

In this semester multiple courses will be given to look at the possibilities. These are Java Enterprise Applications, Design Patterns for Integration and Software Ontwikkelprocess. In the following sub-chapters we will shed a light on the roadmap for these.

2.1 DPI

Design patterns for integration is focused on making large and distributed applications work together to achieve higher scalability. The course itself looks at the specific implementation on how this is achieved, with the emphasis being on distributed messaging systems.

In these systems big applications are broken into smaller parts which can be handled by a singular tiny application. A long operation like creating an invoice will be broken up into a large amount of smaller tasks, which are distributed through a central messaging system. These tasks will enqueue themselves and will be executed at some point in the future.

The course itself focuses on the specific implementation patterns for distributing, consuming, aggregating, routing, transforming and monitoring.

2.2 SOP

Software Ontwikkel Process is a course aimed at the operations side of an application. It teaches the importance of build processes, continuous integration and delivery and the integration of several code metrics. The aim is to teach pupils how to set up an automated pipeline that handles all these details and gives an overview of code quality and deployability.

2.3 JEA

The biggest course of the semester concerns the usage of the glassfish server to it's maximum capability. The roadmap shows that the following subjects will be under discussion;

- Enterprise beans and dependency injection
- Persistence
- Events and interceptors
- Batch processing
- Security and authentication
- Integration testing
- Token based authentication
- Websockets
- Restful services

These subjects all seem very useful and will be required in time. Due to the scheduling of the proftaak these items will be discussed at the same time they will be implemented, leading to the proftaak and JEA working in tandem.