Project Plan

Data Visualisation of Crash Statistics Victoria

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# Introduction

## Background

The Victoria State Accident DataSet 2015-2020 (VSADS) project aims to modernize and enhance the existing accident data collection system operated by the VicRoads. This project seeks to extend the system's capabilities to provide a user-friendly interface with advanced analytical tools to gain valuable insights from the accident data.

The VSADS project holds paramount importance for the health and safety of the Victorian population, as it provides substantial benefits not only to VicRoads but also to the broader community. By improving the quality and accessibility of accident and crash statistical data, the project will enable more informed decision-making, better resource allocation, and enhanced public safety measures.

Building on the dataset collected by VicRoads in the years 2015-2020, the VSADS project aims to construct, test, and implement an initial release of an analysis tool with the following functionality:

* For a user-selected period, display the information of all accidents that happened in the period.
* For a user-selected period, produce a chart to show the number of accidents in each hour of the day (on average).
* For a user-selected period, retrieve all accidents caused by an accident type that contains a keyword (user entered), e.g. collision, pedestrian.
* Allow the user to analyze the impact of alcohol in accidents – ie: trends over time, accident types involving alcohol, etc.
* **WE NEED TO DESIGN ONE MORE TOOL HERE>>>>>> HOT SPOT MAP with long lat data from .csv file**

With these features implemented the VSADS 2015-2020 project seeks to revamp the existing accident data collection system and provide an advanced, user-friendly platform with analytical tools for gaining valuable insights from the accident data. With the aims to ensure the successful implementation of this analysis tool, we hope that it makes a positive impact on public health and safety across the state.

## Scope

The emphasis of this document is to provide information on documentation (artefacts) that would normally be utilised in the delivery of a COTS system implementation. The document does not specify the ‘Process’ that accompanies such a methodology and as such is, in the strictest sense, not providing a complete methodology.

The artefacts can be adapted and with approval from the PMO changed to meet the requirements of the engagement.

PLEASE NOTE: The artefacts may be superseded or altered by documentation held or produced by the PMO. Please liaise with the PMO accordingly.

The emphasis of this document is to provide documentation to be utilised with the VSADS to ensure the timely delivery and implementation.

## Document contents

The purpose of this document is to develop

The scope of this assignment is to

The document will contain a work breakdown structure

*Include some background information about the problem, the scope and what this document will contain.*

# Work Breakdown Structure

This topic contains a copy of the Work Breakdown Structure chart. For details refer to the Work Breakdown Structure (M036S) deliverable.



*This section should include the work breakdown structure for the whole project. The elements from the WBS should be used to generate your activity definition and those activities should then be scheduled in the Gantt Chart. Remember to consider ALL project activities – anything you do or will need to do should be included in the WBS*

*WBS’s are usually presented as some kind of hierarchical diagram/chart etc. The details what is involved each work unit should be provided in section 3:* ***Activity Definition***

*You do NOT need to do a WBS Dictionary for this project – the activity definition (whilst slightly different) will suffice. The WBS is focussed on SCOPE. The Activity definition is focussed on TIME.*

# Activity Definition & Estimation

* 1. **Initialising**
     1. The initialising phase focuses on developing a team, assigning roles, understanding and analysing problem requirements, defining the project scope and project milestones and deliverables, and allocating resources. Under task 1.1, the project begins with the "Establishment of the Project Group and Communication Model." This task is set to take a day as it will take no less than one meeting to establish a group, each roles the members will take and what means of communication is needed. Following this, task 1.2 involves the Business Analyst and the Project Manager who will spend two days to "Analyze Problem Requirements." Then, task 1.3 encompasses a two-day duration allocated for "Defining the Project Scope". Task 1.4 sees the Project Manager and Team Members collaborating over a day to "Define Project Milestones and Deliverables." Wrapping up this phase, task 1.5 focuses on "Resource Allocation" over a day.
  2. **Planning**
     1. The planning phase focuses on creating a project plan, risk management, deciding the development language, system architecture foundation, defining data sources and outlining software design. Task 2.1 starts with creating a "Project Plan". The project plan is an elaborate blueprint comprising of tasks, dependencies, and timelines. It is estimated to take about five days to complete. Task 2.2 focuses on "Risk Management" over two days, and task 2.3 looks at deciding the "Development Language/Libraries and Environment" in a similar timeframe. Task 2.4 addresses the system's architectural foundation over three days. Task 2.5 involves the Data Specialist and Technical Lead working over a day to "Define Data Source and Integration." Finally, task 2.6 allots two days for the outline of software design and components.
  3. **Execution**
     1. The execution phase focuses on frontend and backend tasks. The frontend tasks under 3.1 begin with 3.1.1, installing web application components. It is estimated to take one day to complete. Then, task 3.1.2 allows the System Administrator and DevOps to set up the web application environment the next day. Task 3.1.3 provides three days for designers to create the main UI components. On the backend, task 3.2.1 initiates with a day for database cleaning and optimization. Task 3.2.2 will take an estimated two days to complete table structure and importation of data. Task 3.2.3 will take one day to establishing a link between the database and middleware. Data integration, under task 3.3, spans over six days, focusing on SQL connectors, ETL processes, and object lists. Task 3.4 dedicates two days for CI/CD practices, and 3.5 allocates four days for documentation.
  4. **Controlling**
     1. The controlling phase focuses on implementing control practices, tracking project progression, reviewing the project plan and function testing and reporting. Task 4.1 starts with implementing and enforcing version control practices over a day. Task 4.2 is designated for tracking project progression the subsequent day. Task 4.3 is two days of conducting a thorough review of the project plan and software design documentation. Lastly, task 4.4 reserves a five-day span for concurrent unit and function testing.
  5. **Closing**
     1. The closing phase focuses on user documentation, crafting control logs and the close-out documentation. Task 5.1 dedicates three days to producing user documentation. Task 5.2, crafting version control logs, takes up a day. The project's conclusion is marked by task 5.3, which focuses on the production of close-out documentation over the final three days.

*From your WBS, define the activities required for your project. You will revise this document and add more detail for part B as you discover more about the project.*

*Each activity should be clearly identified by a number and should match up to your Gantt chart. You should provide some estimations for the time you think each activity will take. This should make it easy to prepare your Gantt chart.*

# Gantt Chart

*This section should contain your Gantt chart. The items in the Gantt chart should match the activity definition from section 3. You should also submit your Gantt chart file separately.*