Parking Analytics Project

Data Design Solutions©

Team
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Yasiru Kodikara (s3659489)
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PP1-MON1630-TEAM02

Supervisor
Vindaya Senadheera

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RMIT
UNIVERSITY

Melbourne Parking Analysis PROJECT CHARTER

Data Design Solutions

Version: V1.0
Date: 12/03/2021
Sponsor: Anton Wong
Number: 1
Author: Alana Tobgui

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V 1.0	12/03/2021	Alana Tobgui	Scrum Master

Amendment History

Section	Page	Version	Comment
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Add a row for each section update or consolidate if changes are minimal. NOTE: Changes should be tracked within the document if the document is to be re-distributed, so that the audience can quickly see the changes.

Staff or Entities Consulted

Name	Position / Organization
Alana Tobgui	Scrum Master, DDS
Yasiru Kodikara	Development Team Member, DDS
Klarke Douvin Higuit Rueda	Development Team Member, DDS
Anton Wong	Product Owner, DDS

Add rows as needed. If not relevant, enter N/A.

Related Documents

Name	Author	Description
Gantt Chart	Alana Tobgui	Estimated Timeline for Deliverables

Add rows as needed. If not relevant enter N/A.

Preface

The purpose of this document is to outline the Charter for Melbourne Parking Analysis. It serves as an agreement between the project team, the sponsor and the supervisor. It outlines the project's purpose and how the project will be approached, resourced, managed and delivered. Any amendments after this document has been signed off will be via addenda.

Table of Contents

1   Project Summary

The project agreed upon by VicRoads and Data Design Solutions involves data analysis on a metropolitan Melbourne car park dataset. The team at DDS aims to bring into the scope an advisory and technical solution to the issue of carpark funding allocation by VicRoads. DDS aims to analyse the dataset in order to advise it's Project Sponsor, Anton Wong, on the highest priority carpark spaces around Melbourne, while also widening the project scope to include a publicly available web application to inform the public on the official response of VicRoads as a result of the advisory deliverables.

2   Project Sponsor

The project sponsor is Anton Wong of VicRoads. He is the Senior Accountant/Lead of their finance team and requires consultation about opportunities to funnel funding into new carpark spaces in and around the city of Melbourne.

3   Stakeholders and End Users

The key VicRoads stakeholders are Anton Wong and Robyn Seymour. Robyn Seymour aims to improve public image of VicRoads by increasing the accessibility of parking spaces around metropolitan Melbourne, which will positively impact his reputation as CEO of VicRoads. This will also set a new defining theme in their annual report, as they conclude the major East Road Development venture. Furthermore, Anton Wong aims to improve the allocation of company funding so that adequate funds are funnelled into the most needed areas of development and business. This will, in turn, prevent unnecessary expenses being used or allocated in areas that are not currently of high priority.

Other Stakeholders include the implementation team of Data Design Solutions© (DDS). For this project, the team includes Scrum Leader, Alana Tobgui, and the Implementation Team, Yasiru Kodikara and Klarke Douvin HIguit Rueda. They aim to provide an agile solution to VicRoads, and present high-quality deliverables in a timely manner. This will open up new avenues for DDS in the infrastructure and city-planning sector, allowing them to diversify their company portfolio.

The internal End User is Anton Wong, who will use the results of the analysis to make an informed decision on carpark funding allocation. Other end users include the general driving public, who are the target demographic of the web interface to be implemented by the development team at DDS. This will inform the general public of changes in their parking options around Metropolitan Melbourne in a simple, easy to read format.

4   Appointment of Project Leader

The project leader is Alana Tobgui. The project leader was appointed as she has had experience in leading other teams in Software Design, and in international NASA funded competitions (such as the International Space Settlement Design Competition). She also has had minor experience as an advisory analyst on cybersecurity compliance in Superannuation.

5   Project Team Members

The project team members and their respective roles are:

Scrum Master: Alana Tobgui
Product Owner: Anton Wong
Development Team: Klarke Douvin HIguit Rueda, Yasiru Kodikara

6   Project Methodology and Approach

The team location is based at RMIT University, with most collaborative phases being online through Microsoft teams, and file sharing through applications such as Github and Google Drive.

The process being followed is the Agile Software Development Model. This approach is chosen as to first allow the iterative production of analysis and implementation. This mode is best used for a web application, since the basic frame can be implemented during the earlier sprints, alongside the earlier steps of data analytics (such as cleaning, transforming, exploration). During the later sprints, analysis and advisory documentation can then be developed, and the response of the Project Sponsor will fuel the final sprint of filling in the relevant information on the publicly accessible website.

7   Project Governance

The Governance model is as follows:

For internal project management, the team will follow a strict, scrum-based model. There will be daily standups, where users will report what they have achieved in the past day, any relevant issues they faced, and their plan for the current day performance. Each sprint will also undergo a planning and review stage so that.

Decisions will be made via the daily standups, and further enquiries outside of these meeting times will be discussed in the group discussion channel in Microsoft Teams. The Product Owner is also consulted in this chat log and will attend the daily standups also.

Issues and risks preventing the progression of the deliverables will be discussed within these same settings. If a team member cannot resolve a certain issue, other members will participate to resolve it in a timely manner. For issues surrounding 'Scope Creep', these will be discussed with the product owner, to determine the priority of the task and the specific functional requirements of the task. This will subsequently determine whether the task can be implemented during the current sprint or will be implemented during a later sprint.

While all team members are expected to be able to work independently on their tasks, escalations of any nature will reach the Scrum Master, who will make an executive decision on the matter. This will ensure that the project is able to move along relatively smoothly and also give direction to all other team members.

The hierarchy of the Data Design Solutions© team, and its relationship to the product owner is shown below in figure 1.

Figure 1
Project Hierarchy
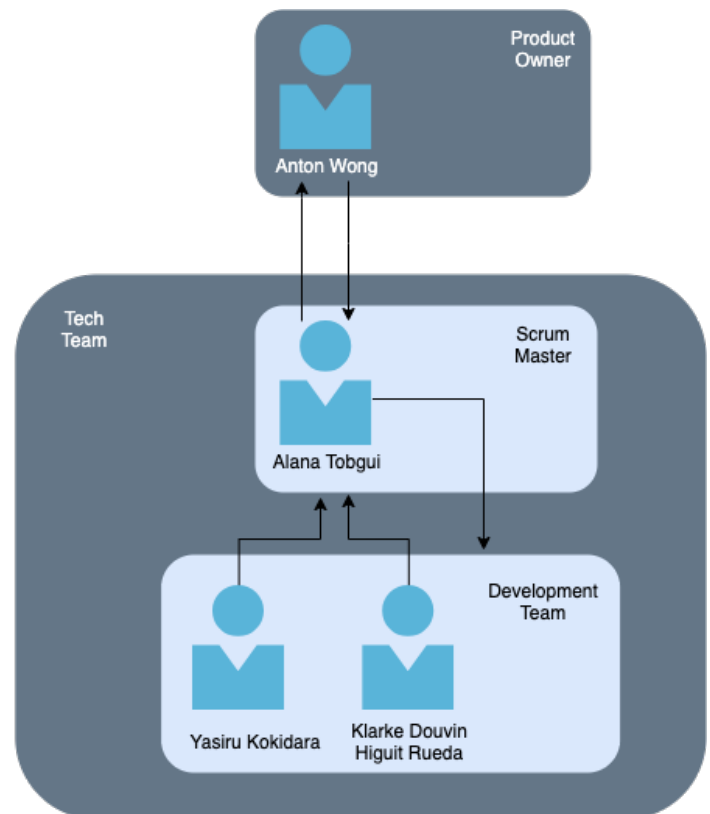
8   Project Scope & Deliverables

The team at DDS© and VicRoads have agreed on a project with both Technical and Advisory Deliverables. The Development team will first clean, transform and analyse the parking data that has been collected in order to advise VicRoads on areas of parking around Melbourne that require the most attention by their services. This will ensure that they can consider the best possible outcomes for their allocation of funding towards roadworks for the upcoming financial year. This advisory deliverable will be in the form of a Data Analysis Report, which will be divided into two sections: the first being a technical explanation of how the conclusion was reached, and the second will be an advisory section, written in layman terms to state the findings and conclusions to VicRoads.

The technical deliverable is a simple, static website that will advertise the basic findings of the analysis, and the approach that VicRoads will take in response to the report findings. This will be delivered to VicRoads as a basic build file, so that they may host the website, and that DDS may be the primary source of contact for modifications and upkeep of the product. This website will be incorporated into VicRoads public relations campaign for the coming financial year.

All deliverables will be signed off by the sponsor/stakeholder (as decided and detailed above, in Project Governance).

The current trajectory of the project can be seen below in figure 2. This form gives leeway for the addition of minor tasks or functionalities requested during the scope of the next 6 weeks.

Figure 2
Gantt Chart
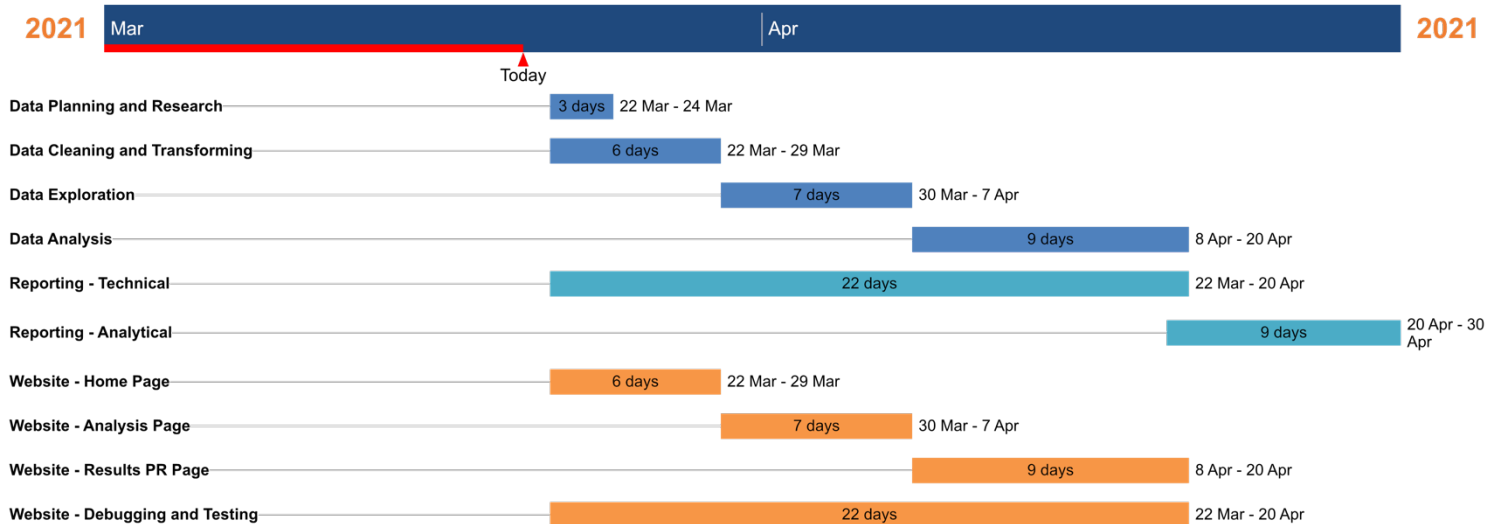
Milestone One
Sprint 0
Programming Project

Meeting Agenda
Alana Tobgui (s3760538)
Yasiru Kodikara (s3659489)
Klarke Douvin Higuit Rueda (s3646771)
Andong Wang (s3665452)

Team: PP1-MON1630-TEAM02

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PROJECT 4

Daily Standup
Meeting No: 1

MEETING DETAILS

DATE:	13/03/2021
TIME:	9:00 pm
VENUE:	Microsoft Teams
ATTENDEES:	Alana Tobgui, Andong Wang , Klarke Rueda, Yasiru Kodikara
APOLOGIES:	N/A
COPY TO:	

AGENDA

1. **FIRST AGENDA :**
   - INTRODUCTIONS
   - DISCUSSION ABOUT GROUP MEMBER SKILLS AND ROLES
   - HIGHLIGHTING SOME WEEK 3 SUBMISSION SPECIFICATIONS

2. **SECOND AGENDA:**
   - PLANNING DAILY STANDUPS
   - DISCUSSING SUPERVISOR MEETING TIMES
   - CONFIRMING THE MEETING TIME FOR THE NEXT GROUP STANDUP

PROJECT 4

Daily Standup
Meeting No: 2

DATE:	14/03/2021
TIME:	7:30 pm
VENUE:	Microsoft Teams
ATTENDEES:	Alana Tobgui, Andong Wang , Klarke Rueda, Yasiru Kodikara
APOLOGIES:	N/A
COPY TO:	

AGENDA

FIRST AGENDA :
- DISCUSSION ABOUT PROJECT 4
- SETTING UP TRELLO BOARD

SECOND AGENDA:
- ASSIGNING TASKS-TO-DO BETWEEN GROUP MEMBERS
  YASIRU KODIKARA - PLAN SPRINT 0, FINALISE MEETING MINUTES FOR TODAY
  KLARKE RUEDA - WORK ON USER STORIES AND ACCEPTANCE CRITERIA
  ANDONG WANG - RESEARCH ABOUT DATABASE, CREATE GITHUB REPO
  ALANA TOBGUI- PLANING FRONT END , PLANNING FUTURE TASKS, PREPARING
  QUESTIONS TO ASK SUPERVISOR FOR TOMORROW

- STARTING A NEW DOCUMENT TO BRAINSTORM IDEAS FOR DATABASE QUESTIONS
- AT WHICH HOUR OF THE DAY DID THE HIGHEST NUMBER OF PARKING EVENTS HAPPEN?
- ON WHICH STREET DID THE HIGHEST PERCENTAGE OF PARKING EVENTS RESULT IN AN INFRINGEMENT?
- IN WHICH AREA DID THE HIGHEST NUMBER OF INFRINGEMENTS OCCUR?
- WHAT IS THE MEAN/MEDIAN VALUE OF THE DURATION OF PARKING EVENTS?
- IN WHICH AREA DID PEOPLE PARK FOR THE LONGEST/SHORTEST DURATION ON AVERAGE?
- AT WHICH HOUR DID THE HIGHEST PERCENTAGE OF PARKING EVENTS RESULT IN AN INFRINGEMENT?
- WHICH AREA HOLDS THE SHORTEST DURATION OF PARKING?
- WHICH AREAS HOLD THE LONGEST DURATION OF PARKING
- DO THE NUMBER OF INFRINGEMENTS INCREASE WITH SHORT DURATION PARKING OR LONG DURATION PARKING?

PROJECT 4

Daily Standup
Meeting No: 3

DATE:	15/03/21
TIME:	4:45 pm
VENUE:	Microsoft Teams
ATTENDEES:	Alana Tobgui, Andong Wang , Klarke Rueda, Yasiru Kodikara, Vindaya Senadheera
APOLOGIES:	N/A
COPY TO:	

AGENDA

FIRST AGENDA :
- FIRST MEETING WITH SUPERVISOR
- DISCUSSION ABOUT PROJECT 4 DATA ANALYTICS
- TALKING ABOUT PROJECT CHARTER AND BUSINESS DELIVERABLES
- DISCUSSION ABOUT USER STORIES AND ACCEPTANCE CRITERIA

SECOND AGENDA:
- DISCUSSION ABOUT QUESTIONS WE NEED TO ANSWER AND ANALYSE FOR THE BUSINESS REPORT

  BRAINSTORMING DATABASE QUESTIONS AND BUSINESS DELIVERABLES

  COUNCIL: INVESTIGATE IN AREAS WHERE A LARGE NUMBER OF INFRINGEMENTS OCCUR, TO DETERMINE WHETHER THERE NEEDS TO BE MORE PARKING IN THE AREAS, OR THE PARKING TIME OF EXISTING SPACES NEED TO BE INCREASED.

  PROPOSAL:
  WE WORK AT THE COUNCIL

- ASSIGNING ROLES AND TASKS :
- ALANA TOBGUI - SCRUM MASTER/ PROJECT CHARTER
- ANDONG WANG - PRODUCT SPONSOR/ USER STORIES
- YASIRU KODIKARA - DOCUMENTATION/ SPRINT AND PRODUCT BACKLOG
- KLARKE RUEDA - DOCUMENTATION/ USER STORIES

PROJECT 4

**Daily Standup
Meeting No: 4**

MEETING DETAILS

DATE:	16/03/21
TIME:	7:30 pm
VENUE:	Microsoft Teams
ATTENDEES:	Alana Tobgui, Klarke Rueda, Yasiru Kodikara
APOLOGIES:	Andong Wang
COPY TO:	

AGENDA

FIRST AGENDA :
- DISCUSSION ABOUT FRONT END WEBSITE , REPORT STRUCTURE , PROJECT CHARTER
- DISCUSSING WHAT EVERYONES DONE SO FAR
  ALANA TOBGUI - WORKING ON FRONT END DEVELOPMENT ON WEBSITE AND PREPARING PROJECT CHARTER DRAFT FOR SUPERVISOR, TROUBLESHOOTING ISSUES WITH JUPYTER DATABASE

  YASIRU KODIKARA- WORKING ON THE SPRINT 0 BACKLOG, PRODUCT BACKLOG , SPRINT PLANNING

  KLARKE RUEDA - WORKING ON USER STORIES

- DISCUSSION ABOUT MILESTONE 1 REQUIREMENTS
- UPDATING TRELLO BOARD WITH NEW TASKS

PROJECT 4

Daily Standup
Meeting No: 5

MEETING DETAILS

DATE:	18/03/21
TIME:	4:30 pm
VENUE:	Microsoft Teams
ATTENDEES:	Alana Tobgui, Andong Wang , Klarke Rueda, Yasiru Kodikara
APOLOGIES:	n/a
COPY TO:	

AGENDA

FIRST AGENDA :

- DISCUSSION ABOUT PRODUCT BACKLOG
  SUGGESTION: UPDATE DEFINITION OF DONE WITH MORE DETAILED STEPS LIKE DATA CLEANING AND OTHER STEPS
  SUGGESTION: PLANS TO IMPROVE PARKING AROUND METROPOLITAN MELBOURNE USER STORY
  SUGGESTION: MAKE THE FORMAT LOOK MORE PROFESSIONAL

- REVIEWING USER STORIES AND ACCEPTANCE CRITERIA

SECOND AGENDA :

- TALKING ABOUT WHAT EVERYONE HAS DONE SO FAR

  ALANA TOBGUI - SENT PROJECT CHARTER DRAFT AND AWAITING RESPONSE FROM TUTOR, WORKING ON FRONT END AND DATABASE, MANAGING GITHUB

  YASIRU KODIKARA - STARTED PRODUCT BACKLOG, REVIEW USER STORIES, REFINING SPRINT BACKLOG

  ANDONG WANG- WORKING ON PYTHON SCRIPT FOR DATABASE, ADDING MORE USER STORIES

  KLARKE RUEDA - FINISHED ADDING USER STORIES, WORKED ON ACCEPTANCE CRITERIA

- UPDATING TRELLO BOARD WITH NEW TASKS

Daily Standup
Meeting No: 6

DATE:	19/03/21
TIME:	7:30 pm
VENUE:	Microsoft Teams
ATTENDEES:	Alana Tobgui, Andong Wang , Klarke Rueda, Yasiru Kodikara
APOLOGIES:	n/a
COPY TO:	

AGENDA

FIRST AGENDA :
- REVIEW OF WHAT EVERYONE HAS DONE SO FAR
- AWAITING TUTOR'S RESPONSE FOR THE PROJECT CHARTER DRAFT
- DISCUSSION ABOUT USER STORIES AND PRODUCT BACKLOG
- DISCUSSION ABOUT MILESTONE 1 SUBMISSION

SECOND AGENDA:
- REVIEWING TRELLO BOARD AND TASKS THAT NEED TO BE DONE
- ALLOCATION OF NEW TASKS ON TRELLO
- DECISION TO MOVE ALL USER STORIES FROM GOOGLE DRIVE TO TRELLO
- EVERY GROUP MEMBER REFINING THE SPRINT BACKLOG

Daily Standup
Meeting No: 7

DATE:	20/03/21
TIME:	9:00 pm
VENUE:	Microsoft Teams
ATTENDEES:	Alana Tobgui, Andong Wang , Klarke Rueda, Yasiru Kodikara
APOLOGIES:	n/a
COPY TO:	

AGENDA

FIRST AGENDA :

- REVIEW
  ALANA- WORKING ON PROJECT CHARTER
  ANDONG - ADDED MORE USER STORIES
  KLARKE- ADDED SOME USER STORIES TO TRELLO
  YASIRU - WORKED ON SPRINT BACKLOG

SECOND AGENDA :

PREPARING EVERYTHING FOR MILESTONE 1 SUBMISSION

YASIRU - BURNDOWN CHART, SPRINT RETRO

ANDONG - SPRINT REVIEW, REFINE USER STORIES

KLARKE- REFINE USER STORIES

ALANA- PROJECT CHARTER, UPLOAD EVERYTHING TO GITHUB, PREPARING MEETING

MINUTES FOR TUTOR MEETING, PREPARING PDF FILE AND ZIP FOLDER FOR

SUBMISSION

Daily Standup
Meeting No: 8

DATE:	21/03/21
TIME:	7:30 pm
VENUE:	Microsoft Teams
ATTENDEES:	Alana Tobgui, Andong Wang , Klarke Rueda, Yasiru Kodikara
APOLOGIES:	n/a
COPY TO:	

AGENDA

FIRST AGENDA :
- DISCUSSION ABOUT PROJECT CHARTER , SPRINT RETRO AND BURNDOWN CHART
- DISCUSSION ON ISSUES WITH TRELLO BURNDOWN CHART AND SOLVING THEM
- REFINING AND REVIEWING THE SPRINT REVIEW DOCUMENT AND SPRINT RETRO- FIXING A FEW GRAMMAR MISTAKES AND ADDING MORE DETAIL INTO THE DOCUMENT ALONG WITH A COMPLETE BURNDOWN CHART
- PRODUCT BACKLOG - UPDATED THE USER STORIES TO MAKE IT LOOK MORE PROFESSIONAL

SECOND AGENDA :
- SINCE THE MILESTONE 1 SUBMISSION IS TOMORROW , ALL OF THE GROUP MEMBERS USED THE MEETING TIME TO FINALISE AND PREPARE THE SPRINT DOCUMENTS AND LINKS
  ALANA - PREPARING PDF AND ZIP FILES FOR SUBMISSION, UPLOADING DOCUMENTS TO GITHUB, WORKING ON SPRINT BACKLOG
  YASIRU- ADDED MORE ACCEPTANCE CRITERIA FOR THE UPDATED USER STORIES 1-9, COMPLETED MEETING MINUTES
  KLARKE- UPDATE TRELLO BOARD WITH NEW USER STORIES
  ANDONG- ADDED MORE ACCEPTANCE CRITERIA FOR THE UPDATED USER STORIES 10-18
- SHARED GOOGLE DRIVE WITH THE TUTOR

Project Infrastructure Summary

Data Design Solutions©

Team
Alana Tobgui (s3760538)
Yasiru Kodikara (s3659489)
Klarke Douvin Higuit Rueda (s3646771)
Andong Wang (s3665452)
PP1-MON1630-TEAM02

Trello
https://trello.com/b/SnT8qz6X/sprint-0

Gitflow
https://github.com/s3665452/Analytics-of-Parking.git

Document Management Repository (GoogleDrive)
https://drive.google.com/drive/folders/17yKxcBNcRCwK1pQkWDqftdSmV6e6H1G_?usp=sharing

Cloud Deployment
Not included in this project since it's out of scope