Deliverable 01-Planning

Loza Tadesse, Amir Kemal, Nahome Hailemichael, Yanet Woldemichael

Contents

[Introduction 2](#_Toc82617800)

[Systems Analyst 3](#_Toc82617801)

[Methodology 5](#_Toc82617802)

[System Request Form 7](#_Toc82617803)

[Financial Feasibility Spreadsheet 8](#_Toc82617804)

[Work Breakdown Structure 9](#_Toc82617805)

# 

# Introduction

For our project, we will be building a minibus transportation management system for DSU student, faculty and residents of Madison. The transportation needs of small towns vary considerably depending on their context.  A small town could be home to a college campus, could be located within a larger metropolitan area. A small town with a college campus could likely support a small bikeshare system or other forms of shared mobility, whereas a small town within a rural setting may require more creative strategies given the lower population density. For this system we will have the context to be in Madison SD. This system will combat the transportation issues for the town, provide adequate access of mobility, affordable transportation options and create an income for the university. There is a higher demand of international students as most of them don’t have cars and face challenge to move around. The other issues we can combat is to save money spend on parking issues and fuel expense. The other big thing we work on is to minimize the emission of air pollutants to the environments as we expect to reduce the usage of personal vehicles. For the long run we believe that the system will attract more students who would think the lack of transportation is an issue.

# 

# Systems Analyst

A System Analyst is responsible for analyzing the needs, value, and costs of potential systems, hardware, and software for a given client or business. They design and list the requirements for a given system and figure out the value a business is getting from their design. The responsibilities of the given analyst include Analyzing current system, creating algorithm to create the shortest and most efficient routes, creating schedules for trips that are convenient for the users, make payments for service and deposit money for service on the account, display the travel schedule and notify user the current locations of the shuttles, display the stops on map and direct to users to the nearest bus depot. System Analysts are also responsible to get feedback where it is necessary and reroute the flow of shuttle to the most crowed routes. The members of the Project include: The Project Sponsor, the Project Manager and the Project Members. The Sponsor is tasked with looking over the project, providing the necessary requirements and funding for the project. The Project Manager makes sure people are working on their given tasks and is responsible for meeting the deadlines of a project, keeping the team organized, and keeping track of when other members of the project are meeting their deadlines. The other members of the team are the ones accepting different roles and tasks within the project, sometimes being split up into two groups. The two groups of members are those who work full time on the project while there are others who work part-time. In our project, Andrew Behrens is our project sponsor Andrew Behrens is our project sponsor. Andrew Behrens will be taking the role of project manager, while Loza, Amir, Yanet and Nahome make up the Core team members. Amir will be the business analyst since he, minors in business administration Then Yanet will be the system analyst because of her strong background in computer information system and finally Loza and Nahome will work together as the infrastructure analyst and change management system analyst. In summary, a systems analyst holds the responsibility of laying out the plans for a new system and lists the overall pricing, requirements, needs, and values of a given system. Their plan is a deciding factor in the decision of if a project is chosen and if the project will succeed. The system analyst is an essential role for any given system and should be managed and thought about carefully when building a system

# Methodology

For this project our group has decided that the waterfall methodology would the best fit. The waterfall methodology is a linear project management approach, where stakeholder and customer requirements are gathered at the beginning of the project, and then a sequential project plan is created to accommodate those requirements. Some of the advantages that made the waterfall suitable of the project are it uses clear structures with defined set steps requirement gathering and documentation, System design, Implementation, Testing, Delivery/deployment and Maintenance. For this class the deliverables we will be submitting have a structured system methodology directly shaping our project to a more structured approach. On the project the vehicles will be visible on the application meaning customers can track the shuttles that are active and working so that they can know when to board and their route of the buses will be visible for customers so that they can know on which direction the shuttle is going. After locating the shuttle that matches the need of the consumers, they will be directed to the nearest bus stop so that they can board on. Another feature is that customers all could see all the stop so that they can get off the shuttle ones they have reached their desired destination. Therefore, the ability to develop system that are complex will be a perfect fit for the project to help us execute all the complex tasked in an efficient way. For the management system we are building reliability is one of the biggest things that are required because our consumers must get the shuttles accurate to the location of the application and the time it takes for arrival, the exact location of the bus stops, and the precise route of the buses take must be accurate to the information on the application

Also, for the management system we are building most of the demography we are working on are people who have a good understanding of technology so the lack of the ability to develop system with unfamiliar technology won’t be a factor to the decision making of the methodology we use.

System Request FormGraphical user interface, text, application, email

Description automatically generated

# Financial Feasibility Spreadsheet

Graphical user interface, application, table, Excel

Description automatically generated

Our minibus transportation management system is going to be implemented by DSU. This system has two ways to acquire tangible benefit, the primarily by attracting Students, Faculty’s, and others to join DSU. The second way is through direct payment. So, our System is going to charge 85$ per month for unlimited use for subscription or 1$ per mile. Students who are subscribed will use their student Id and students who can use their trojan silver. Our system will not be running during summer since no one will be on campus resulting in less demand. The system’s one time cost includes software costs and development cost. This system will need a verification card scanner to validate or charge the student ID and a GPS location tracker to provide the actual location of the van.  The system does not have the cost of buying vans since DSU have sufficient vans and buses. The operational costs include the salaries of the drivers, software, and hardware managers. The employees of this jobs will be on campus students thus providing more job opportunities.

# Work Breakdown Structure

Chart

Description automatically generated