

STRATHMORE UNIVERSITY

FACULTY OF INFORMATION TECHNOLOGY

PROJECT PROPOSAL

**FLEET MANAGEMENT SYSTEM**

PRESENTED BY:

TIKANI RUTH ITA

051298

# ABSTRACT

This project proposal is the first step of developing my Fourth year project containing a brief summary and a foresight on what my project will do and achieve. The project I am undertaking is to develop a fleet management system for buses to manage records better improve on accountability and save on costs.

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# INTRODUCTION

## Background Statement

Over the years we have seen an increase of bus companies in Kenya; this can be attributed to the increase in demand of bus services as a major channel of public transportation. This transportation can be within the city with examples like the *Citi Hoppa* and *Double Ms* that operate within Nairobi town or between cities and countries transportations offered by *Horizon* or *Akamba* buses.

While there has been a great level of improvement in the Information Technology front, Kenyan bus companies have delayed in embracing the advantages that IT tools can bring with Fleet management systems and software.

Developments and successful accounts of fleet management in other fields such as truck companies enable us to anticipate success in creating a fleet management system for bus companies in Kenya.

## Problem Statement

The dominant setback noted is not only a lack of a fleet management system in the Kenyan Bus companies but also the use of manual approach of managing buses in terms of acquisition, bus maintenance, servicing, license and financing.

The manual approach is inefficient and costly in the long run and record keeping of information is not reliable and chronological hence accountability is almost never achieved.

## Proposed Solution

The proposed system seeks to automate the manual approach of managing buses used by many Bus companies and creating a Fleet management system making management of buses more reliable, fast and efficient.

This will greatly improve accountability, security of assets (buses), save on costs and enhance the overall operations of these bus companies.

## System Objectives

The main objectives this system wants to achieve is

* Automate the current fleet (bus) management approach
* Record and manage information concerning the bus fleet
* Create service scheduler with reminders
* Generate reports to help in management and decision making.

## Project Objectives

What I hope to achieve in undertaking this project is:

* To create fleet management system for the bus companies for better organization and management operations concerning the fleet of buses.
* Automate record keeping in an orderly and chronological order.
* To ensure and promote accountability of company assets.
* To improve my proficiency in management systems, web based and tools and database management.

## Deliverables

The deliverables of the fleet management can be grouped into two requirements; Functional requirements and Non-functional requirements.

The Functional requirements are mandatory for the system to perform. These requirements would be:

* The login module for the Fleet manager is necessary to ensure accountability.
* The Database as it holds all records and where all reports will originate from.

The Non-Functional requirements are those that if it was excluded the system would still function well. These requirements would be

* The Parts Reports, which would be generated from the database.

## System Environment

Several platforms and tools will be needed to make this system a success;

* Development tools – php on Adobe Dreamweaver CS3
* Database tools- Xampp Server
* Documentation and Design- Ms Office Word 2010, Ms Office Powerpoint 2010, WorkBench and Ms Visio for design

# LITERATURE REVIEW

## The Manual problem

As I described above, technological advancements have not yet been full embraced in all areas and fields that exist. There is still a strong dependency on *paper* and a lack of trust for the computer systems in all industries from the Banking sector to the Health sector.

This trust issue doesn’t exclude the Transportation sector, whether it is public or private. The Manual approach of managing fleet seemed to be costly in the long run because, monitoring, managing and regulating resources and assets were not well done and accountability was poor. This resulted to the Fleet management system, where the automation of management of Fleet began through the development of systems and software.

## Fleet Management

Most work that has been done in the fleet management system (especially in Kenya) is with regards to companies that handle and own trucks and big Lorries that cover long distances .e.g. Distances form the Mombasa port to the interior parts of Kenya which transport large or a big quantity of goods.

Most companies that take up the challenge to develop fleet management systems originally offered vehicle tracking services then ventured out to creating software and systems that offer fleet management. Examples of companies that have developed fleet management system in the country are *MTrack, AutoTrack, AFMS ltd* and recently the *G4S Group* unveiled their fleet management system.

However, very few systems have been created to manage fleet of buses for bus companies in Kenya. There is a great opportunity for developers, principally because the public transportation is growing with the arrival of a good number of bus companies into the market. This will promote accountability and better management of the buses in use

## Solution

The solution to identified opportunity and problem is to create a management system for buses that will incorporate a record of all the buses the company has, service requirements for the buses with a scheduler and reminders of services, licensing and insurance due, suppliers the company interacts with regards to the buses and the parts they supply and the depreciation factor to determine when buses should be sold. The scope could increase with time to cover all areas of managing bus fleets.

# METHODOLOGY

Methodology in software development is a form of outline that is used to structure, plan an control the process of developing a system. The fleet management system will be developed using the Waterfall Model software development approach which is a chronological approach in which development is seen as flowing steadily downwards orderly from the requirement analysis stage to documentation.

Requirements Analysis

Documentation.

Validation

Coding

Design

# Project Schedule

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| --- | --- |
| **ACTIVITY** | **DURATION** |
| Problem Analysis | 2weeks |
| Requirements Analysis | 2weeks |
| Design | 1weeks |
| Coding | 5weeks |
| Validation | 4weeks |
| Documentation | 2weeks |