VEHICLE MANAGEMENT SYSTEM FOR THE DEPARTMENT OF SOCIAL WELFARE AND DEVELOPMENT FO1

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INTRODUCTION

Project Context

In today's world, cars prove to be the most effective medium of transportation. We have evolved so much from their discovery and now in the contemporary times, it is the best machine created by mankind. Cars are important because they provide a common means of transportation, whether it is a longer commute to work or a shorter trip to run errands around town. In addition, those who do not have convenient access to public transportation, such as trains or buses, which is especially true in the suburbs, can use cars for personal transportation.

Fleet management is the term used for the management of a company's transportation fleet. (Fleet_management,2014) Fleet management includes commercial motor vehicles such as cars, aircraft (planes, helicopters etc.), ships, vans and trucks, as well as rail cars. Fleet (vehicle) management can include a range of functions, such as vehicle financing, vehicle maintenance, vehicle telemetric (tracking and diagnostics), driver management, speed management, fuel management and health and safety management. Fleet Management is a function which allows companies rely on transportation in business to remove or

minimize the risks associated with vehicle investment, improving efficiency, productivity and reducing their overall transportation and staff costs, providing 100% compliance with government legislation (duty of care) and many more. These functions can be dealt with by either an in-house fleet-management department or an outsourced fleet-management provider. According to market research from the independent analyst firm Berg Insight,(http://www.berginsight.com/) the number of fleet management units deployed in commercial fleets in Europe will grow from 1.5 million units in 2009 to 4 million in 2014. Even though the overall penetration level is just a few percent, some segments such as road transport will attain adoption rates above 31 percent. Some fleet management systems provide historical information about vehicle routes. Such historical information can include start and stop information, vehicle locations at given times, and speed information, or the like. A fleet management system typically outputs this historical information in the form of a list. For example, a fleet management system might provide a map display that includes symbols representing vehicles in a vehicle fleet, and user selection of a vehicle symbol can cause a popup window to display a vehicle history list.

A vehicle tracking system combines the use of automatic vehicle location in individual vehicles with software that collects these fleet data

for a comprehensive picture of vehicle locations. Modern vehicle tracking systems commonly use GPS or GLONASS technology for locating the vehicle, but other types of automatic vehicle location technology can also be used. Vehicle information can be viewed on electronic maps via the Internet or specialized software. Urban public transit authorities are an increasingly common user of vehicle tracking systems, particularly in large cities. (Vehicle tracking system, 2014)

Purpose and Description

This study aimed to create a Vehicle Management System for the Department of Social Welfare and Development Field Office I. Advance technology has a great contribution for making Vehicle Management System. Thus, this study is important to all employees of DSWD FO1 for easier processing of request letter for the use of vehicle. The result of this study will give benefits to the following:

Employee. To lessen the time in waiting for the release of paper upon the approval of the request letter for vehicle and vehicle trip ticket.

Students. This will serve as future reference of students conducting related study.

Researchers. The outcomes of this study could lead future researchers

on a wider range of understanding and develop a more productive and more functional system. The system provides the students more knowledge to improve or enhance their skills in information technology.

OBJECTIVES

General Objectives:

To design and develop Vehicle Manangement System for DSWD FO1.

Specific Objectives:

1. To determine the current process of making of schedules and request to use vehicles at DSWD FO1.
2. To design and develop a vehicle management system for DSWD FO1
3. To test the usability of the developed system along:
    - Efficiency
    - Attractability
    - Helpfulness
    - Control
    - Learnability

Scope and Limitations

This study aimed to create a Vehicle Management System for the Department of Social Welfare and Development Field Office I. The study focused on the design and development of a system that can be use in GASSD. Print Vehicle Trip Tickets, request letters for vehicle reservation and re-scheduling a Trip.

Limitation

The system is not capable of tracking the vehicles, this system is exclusive for DSWD FO1 only.

Chapter II

REVIEW OF LITERATURE

According to Port of Felixtowe, the vehicle booking record or VBS is a real-time appointment system used by haulers wishing to deliver or collect containers at The Port of Felixtowe. (vbs.portoffelixstowe.co.uk/,2014) The simple-to-use web-based system allows haulers to select a time for their visit, enabling the Port to proactively manage customer demand, providing a faster turnaround. In addition, each time the hauler creates a new booking, VBS checks and confirms that the costumer's details are correct, thereby greatly reducing wasted journeys and expense caused by incorrect information. Registering for VBS is a simple process. Once registered, hauler will be given their own unique account, where they can create and manage their hauler arrivals at the Port of Felixtowe on-line. (Port of Felixtowe/Vehicle Booking Record, 2014)

The Vehicle Management System (VMS) is an application for the automotive industry. It supports, in the area of Sales & Services, the business processes that you require as vehicle importer when dealing with your original equipment manufacturers (OEMs) and your dealers in new and used vehicle sales. VMS offers you complete integration of all the relevant processes such as procurement, sales, rework, returns processing, trade-in and service processing. It also supports the

archiving of vehicle data. In other words, it allows you to react flexibly to customers' requirements in the area of production (using the "pull strategy") and fast delivery times with reduced warehouse stock and sales/distribution costs. For the vehicle importer, VMS serves as a central tool for managing, procuring, sales/ distribution and tracking of vehicles. Your driver uses it as a workplace for configuration, searching, purchasing and tracking of vehicles for your employee.

LoJack Fleet Management powered by Tom Tom is a comprehensive GPS- based advanced telematics system designed for tracking and managing fleets ranging from 5 to 5,000 vehicles. It can be customized to fit the business needs of a wide range of companies in diverse industries: corporate executive fleets, nationwide commercial fleets, such as: telecom services, food and beverage companies, pharmaceutical companies, oil companies – to name just a few; plus, road haulage fleets, suppliers, courier companies, express services, utility companies, as well as smaller, localized service providers, such as: construction firms, municipal public works fleets, ambulance fleets, limos, HVAC, florists, electricians, plumbers, and more. LoJack Fleet Management can provide business intelligence that helps fleet managers achieve a wide range of operational efficiencies – maximizing fuel economy, minimizing driver/labor costs, extending fleet vehicle life cycle, optimizing customer service, and ultimately, boosting your business'

productivity and profitability. Locate your vehicles and dispatch the closest driver to a jobsite. You'll save money on fuel, be able to respond to customers more quickly and as a result, may even be able to add more jobs! Reduce Fuel Costs Dispatch drivers based on proximity to a job site and use Tom Tom's leading navigation system to optimize routes, reduce drive time and lower fuel costs. All of this can add up to reduce fuel costs. Improve Driver Safety While Controlling Vehicle Maintenance Costs Use Active Driver Feedback to prompt your drivers to stay safe and fuel efficient behind the wheel. Better driving could save you money with fewer service appointments. Those are powerful tools to help improve driver safety. Generate Better Customer Service Dispatch the closest vehicle to a job and provide customers with accurate ETAs to keep them informed of arrival times. Gain a competitive advantage by offering your customers smaller service windows. This system has the capabilities to help you provide better customer service. Helps Improve Your Security Controls Get warned of unauthorized use and respond to a theft immediately upon receiving an alert if your vehicle leaves a pre-set area. (Lo Jack Corp. 2014).

According to WEBCAST TECHNOLOGIES, INC the TrackMe Vehicle Tracking and Fleet Management Systems utilize advanced Global Positioning System (GPS) and Global System for Mobile Communications

(GSM) technologies to provide you with real-time vehicle monitoring capability. With Track Me, you can view necessary information of your vehicle through a SECURED WEBSITE from any computer with internet access, allowing you to increase the operational efficiency of your fleet as well as to ensure the security of your assets. (www.webcast-inc.com.ph/products/trackme/, 2014)

The Diamond Fleet Management System (DFMS) is the most comprehensive fleet management solutions available in today's market. DFMS is a consolidation of the services of Pronto! Auto Services and Buenaflor Insurance Agency, with support from the leading Car and Truck Rental company in the Philippines whose ownership is under the Diamond IGB Inc. Corporation. All combined to give you one-stop shop fleet management solutions. Diamond Rent a Car Philippines, one of the pioneers in the industry existing for more than 30 years, is one of the largest car rental companies in the Philippines, Diamond's role in DFMS is for the supply of vehicles for the DFMS clients be it sedans, SUVs, AUVs, or even commercial trucks. Diamond assures renters of best quality as our cars have a relatively short turnover of 3 years* making sure that our cars are always the latest model and are in perfect running condition. *Service and Safety* is Diamond's priority so that you don't have to worry about anything about the cars you or your employees' drive. GetSmart Rent a Car is Diamond's no-frills low cost car rental

company. Although we're running older cars here you can be assured that these cars will get you to where you're going and in style and fun. Our bright red cars have been repainted and detailed to showroom finish and Pronto Auto Services assures you that the cars are as reliable as they were when they first rolled out of their respective showrooms. What you get are a fun car that is smile on your face motoring at a fraction of the cost of the other car rental companies out there. Get Smart adheres to Diamond's mission which is to be the leader in safety and service and that's what you get. Pronto! Auto Services acts as the fleet maintenance provider for all the vehicles under the DFMS. Pronto! Auto Services is a 3,000sqm warehoused facility with world-class equipment and services catered to handle all the maintenance requirements. Buenaflor Insurance is one of the largest non-life insurance agencies in the Philippines. Through our scale we are able to offer you the best rates and the most cost-effective solutions for your insurance requirements. (diamondfleetmanagement.com/web/about/, 2014)

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