BSc in Information Systems with Business Management

Final Year Project

2017

"BunchBus"

A Participatory Approach in Reducing Bus Bunching and its consequences in

Private Bus Industry

Sri Lanka

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This report is submitted in partial fulfilment of the requirements for the

BSc (Hons) Information Systems with Business Management degree

at the University of Westminster

Abstract

Numerous measures have been adopted by different nations to solve diverse loopholes in the industry. The developed nations tend to invest more on the capital infrastructure while developing and transitional nations are reluctant to follow the same approach due lack of resources and government spending. However a growing trend is been there where Information Technology has been frequently tested in the industry to reduce the identified inefficiencies.

In Sri Lanka, there are several inefficiencies existing in the Private Bus Industry such as communication gap between the stakeholders, lack of data to analyse the current position and productivity of the industry, hassle in complaint process and many more which will have a direct impact on the continuous decrease of passenger demand for private buses. The main root cause has been identified as the "Bus Bunching Phenomenon".

Thus project aims to identify the factors influencing the bus bunching in relation to public transport in Colombo district, in order to design, develop and evaluate an information system solution which will assist in reducing bus bunching as well as other inefficiencies faced by the connected beneficiaries of Public transport around Colombo. The project is mainly focused on meeting the requirements of the National Transport Commission, Private Bus Owners, Private Bus Drivers and Passengers. In the process of creating an effective conceptual framework and IT solution, the factors affecting bus bunching have been researched and analysed using the existing literature. These key factors then were validated through interviews with the key stakeholders and distribution of questionnaire amongst the public. The framework incorporates a mobile solution for bus owners, drivers and passengers which is named as "BunchBus" and the National Transport Commission receives an internal website to monitor and analyse the data received from the mobile application. Both the IT solution and conceptual model were evaluated and were rated highly in terms of smoothening the inefficiencies prevail in the private bus industry and reduce the dissatisfaction amongst commuters who rely on the bus transport.

Keywords: Bus bunching, Public Transport, Bus service, Private Bus Industry