Integrating Smart Transportation System for a Proposed Smart City- A Context in Sri Lanka

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Smart transportation play a vital role as an important building block in smart city, providing solutions to many issues that relate to traffic on the road. It influences safety and Quality of Living (QoL), which are the main goals of smart city development. Sri Lankans spend a lot of time on roads for travelling. Daily over 500,000 vehicles enter the city causing air pollution, traffic congestion, resulting in the loss of much needed man hours. Some government statistics show that the total vehicle population has increased from 3.39 million in 2008 to 6.33 million in 2015 in Sri Lanka and they also state that 65% of road space is used by only 38% of passengers. Thus, utilization is highly needed. The way to reduce the number of vehicles on the road is to improve public transportation where it can facilitate more passengers. The ultimate goal of this study is to understand and find out the key challenges faced by passengers and to propose an Internet of Things (IoT) based Smart Transportation System to overcome the issues. Finally the aim is to find challenges that can emerge when implementing the system and usability and acceptability of the system in Sri Lankan Society. This study presents a literature review on existing researches on smart transportation in smart city to identify the area as well as the future research needs and gaps to be fulfilled. It summarizes different study perspectives on smart city and smart transportation, types of researches performed, problems addressed in studies, purposes of deploying smart transportation, and benefits, problems and technologies which are compatible in this study area.

Keywords: Internet of Things, Mapping Study, Smart City, Smart Transportation