PERFORMANCE MEASUREMENT FOR THE DEVELOPMENT OF EMERGING SMART CITIES: THE CASE OF SRI LANKA

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DECLARATION

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DEDICATION

To my parents and Gayan

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ABSTRACT

Performance of a Smart City can be measured in terms of the smartness which in turn is defined by means of smart characteristics. Suitable smart characteristics for a particular context can be identified by means of performance measures and the Performance Measurement System prepared as such, can provide means for the emerge of Smart Cities in that context. Thus, this research aims at enhancing the emerging city development projects in Sri Lanka through an appropriate and holistic Smart City Performance Measurement Systems. The objectives of this study were accomplished with a mixed method approach and data were collected through preliminary interviews, case study interviews and questionnaire surveys. Findings were analysed with content analysis using cognitive maps and with statistical analysis using Battelle scoring approach.

As the major findings of this study, a list of Performance Measures for Smart Cities from literature, the appropriate list of Performance Measures for the proposed Smart City project in Colombo Port City and a scoring system as part of the Performance Measurement System for a Sri Lankan Smart City context are produced. The Performance Measurement System includes the themes Smart Mobility, Smart People, Smart Environment, Smart Living, Smart Economy and Smart Governance, embedded in critical success factors in a Smart City project and shows interrelationships between themes. Findings revealed that availability of ICT infrastructure as the most significant Performance Measure while the Smart Mobility was the most significant theme in the scoring system. The researchers in designing the Performance Measurement System have given an equal importance to Smart People theme as well. Additionally, the reasons to proceed with emerging Smart City development projects, barriers to proceed with the developed Performance Measurement System to Smart Cities in Sri Lanka and the recommended solutions to overcome the barriers are discussed.

Key words: *Performance Measurement System, Performance Measures, Scoring System, Smart Cities, Sri Lanka*

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ABBREVIATIONS

API	Application Programming Interface
CPC	Colombo Port City
EMC	Estate Management Company
ICT	Information and Communication Technology
SMCPC	Smart City Project in Colombo Port City
	Application Programming Interface