

Cyber Security Issues and Challenges for Smart Cities: A survey

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Abstract— The increasing need and implementation of Information Communication Technologies (ICT) in urban infrastructure have led to greater attention in smart cities. Smart cities make use of ICTs to enhance: the quality of life of citizens by paving the way to improve local economy, enhance transport system and transport management thereby providing conducive environment to build strong relationships together with public authorities. The assiduous goal of a smart cities is to improve the quality of life and services of citizens. Nevertheless, the instigation of ICTs has raised various issues pertaining to privacy and security issues concerned with smart cities and the inhabitants residing in them. The current research is an effort to present briefly the core concepts of security and privacy issues concerning to the smart cities and reveal cyber-attacks that were recent targeting smart cities based on current literature. Further, this research has elaborated and identified numerous security weaknesses and privacy challenges pertaining to various cyber security, the issues, challenges and recommendations in order to provide future directions.

Keywords— *Smart Cities, Cybersecurity, Cybersecurity Issues, Cybersecurity Challenges, Smart Cities Infrastructure, Smart Cities Cyber Attacks*

I. INTRODUCTION

Smart cities are those cities which incorporates the modern technologies for automatic and effective service that are provided to increase the lifestyle of citizens. The recent research studies reveal that the modern cities will be populated by 60 percent of the country's population by 2030. Which is a clear indication that lives in the cities will be a great challenge, and not easy to manage easily. The smart cities concept will only be able to accommodate this great number of population and manage their needs, since smart cities are equipped with the latest technologies including cloud computing, networks,

mobile devices, electronic equipment's, Internet of things, etc. [1].

During the latest era, the notion of Smart City is becoming the more prevalent and taking main share in literature as well as in policies. This is the time to realize the importance of urban areas, and to understand why people consider urban areas safer and faster for their future growth. Main cities in any country have significant role in their economy, environment. [2].

A smart city is a city equipped with state-of-the-art ICT facilities aimed at improving the quality of life by improving the efficiency of the citizens dwelling in it. [1].

A. Dimensions of smart cities

Normally, there are six regions where cities can have the ability to become smarter. These areas include: governance, people, economy, living, mobility, and environment as depicted in Figure1. Smart city does not only mean to organizing platforms that perform city-relevant features effectively, but it is a big idea that consists of numerous electronic and physical objects which intermingle and communicate.