Waste Management in IoT- Facilitated Smart Cities- A Survey

Abstract

The new period of Web and Internet of Things (IoT) paradigm is being enabled by the proliferation of various devices like RFIDs, sensors, and actuators. Smart devices (devices having significant computational abilities, converting them to ‘smart things’) are embedded in the environment to monitor and collect ambient information. In a city, this leads to Smart City backgrounds. Intelligent services could be offered on top of such information related to any aspect of humans’ activities. A typical example of services offered in the framework of Smart Cities is IoT-enabled waste management. Waste management involves not only the collection of the waste in the field but also the transport and disposal to the appropriate locations. In this paper, we present a broad and thorough survey of ICT-enabled waste management models. Specifically, we focus on the implementation of smart devices as a key enabling technology in existing waste management. We report on the strengths and weaknesses of various models to reveal their characteristics. This review sets up the basis for delivering new models in the domain as it reveals the needs for defining novel outline for waste management.
References


15. V. Catania, and D. Ventura, “An approach for monitoring and smart planning of urban


Index Terms

Computer Science                    Information Systems

Keywords

Radio Frequency Identification (RFID), Waste Identity, Weight, and Stolen Bins Identification System (WIWSBIS), Ubiquitous Sensor Network (USN), Gray Level Aura Matrix (GLAM), Receiver Operating Characteristic (ROC).