

## **Challenges and Opportunities of Waste Management in IoT-enabled Smart Cities: A Survey**

### **ABSTRACT**

The new era 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 capabilities, transforming them to 'smart things') are embedded in the environment to monitor and collect ambient information. In a city, this leads to Smart City frameworks. 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 comprehensive and thorough survey of ICT-enabled waste management models. Specifically, we focus on the adoption of smart devices as a key enabling technology in contemporary waste management. We report on the strengths and weaknesses of various models to reveal their characteristics. This survey sets up the basis for delivering new models in the domain as it reveals the needs for defining novel frameworks for waste management.

### **EXISTING SYSTEM**

Generally the population in the urban areas is increasing day by day. These leads to the more needs of the citizen in the urban area. As the population is increasing the amount of the waste produced is also high. The surroundings get dirty casually. This leads to severe attack on environment if it is not reused and there by effects citizen's health.

### **DRAWBACKS**

- The amount of waste produced is not determined and hence one cannot control waste.
- Serious effect on environment.
- Health issues may arise.

## PROPOSED SYSTEM

This survey's focus is on more energy-efficient IoT as an enabler of various applications including waste management. Specifically, it aims to present a large set of models dealing with the efficient waste management. Special attention is paid on the waste collection. It present efforts for the intelligent transportation within the context of IoT and Smart Cities for waste collection. They propose an inductive taxonomy to perform comparative assessment of the surveyed models. It focus only on efforts that incorporate ICT models for waste collection They report on the strengths and weaknesses of various models to reveal their characteristics. This survey sets up the basis for delivering new models in the domain as it reveals the needs for defining novel frame works for waste management.

## ADVANTAGES.

- Waste is collected and we can reuse the waste.
- It is environment friendly.

## SYSTEM EQUIREMENTS

### H/W System Configuration:-

- Processor - Pentium –IV
- RAM - 4 GB (min)
- Hard Disk - 20 GB
- Key Board - Standard Windows Keyboard
- Mouse - Two or Three Button Mouse
- Monitor - SVGA

### S/W System Configuration:-

- Operating System : Windows 7 or 8 32 bit
- Application Server : Tomcat5.0/6.X
- Programming Language : Java
- Java Version : JDK 1.6 and above

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