

## WASTE MANAGEMENT USING RFID TAG

Dr. Niket Shukla, Dept. of Management

Dr. C.V. Raman University, Bilaspur

### Abstract

In the paper, we suggest an intelligent bin implementation based on data contained in tags connected with each waste product. Smart bins monitor the waste using an RFID-based system without needing external information system assistance.

**Key words:** RFID tag, waste.

### Introduction

Waste management[1] in many nations is a significant necessity for sustainable ecological growth[2]. In today's society, efficient waste sorting is a significant problem. The main motive is to:

- Recycle and reuse the products that are disposed;
- Reducing the production of waste; and
- Making sure that that the waste is properly disposed of.

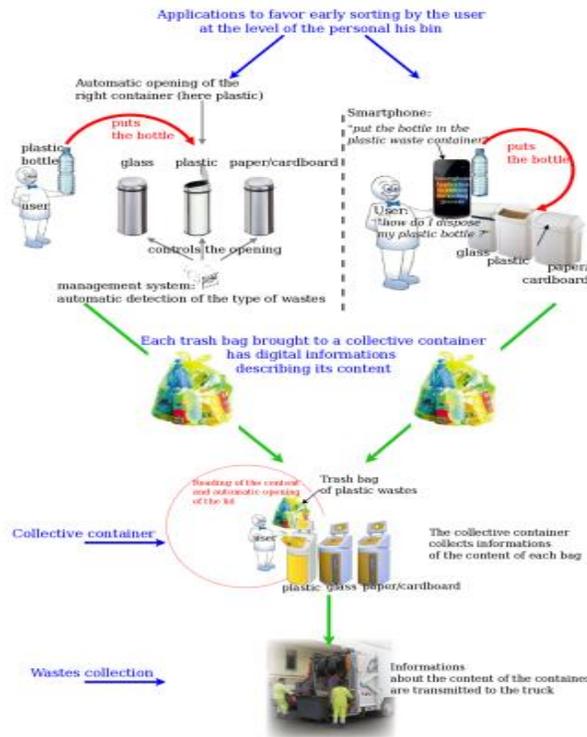


FIG.1 Architecture of waste flow system

**Methodology**

The approach to intelligent waste consists of combining a physical waste with digital data. In our strategy, waste-related data[3], [4] can be stored in a QR code or in memory of an RFID tag. QR code, however, needs the object to be in sight line. During the reading operation, RFID tags can be read without requiring a precise position relative to the reader. The tagged waste concept uses tag memory from the data banks to store information about each tag waste. Only an RFID reader is needed to read the intelligent waste data.

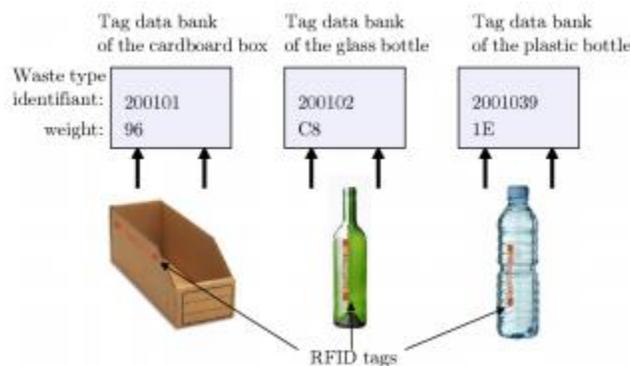


Fig. 2 Information represented in Tag memory

## Conclusion

In the paper, using RFID technology, we suggest a fresh alternative to improve the effectiveness of waste collection. Fully relying on digital data connected to waste products, this strategy requires no sensor, nor help from external information system, allowing for high scalability and accessibility. It provided a system that will help the user to properly sort and dispose waste.

## References

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