



Problem Statement

Smart waste management system in metropolitan cities

Waste management suffers from a pervasive under-pricing which means that the costs of waste management are not fully appreciated by consumers and industry and waste disposal is preferred over other options. Few waste treatment options are available than landfill costs.

Goal:

The transformation of an urban habitation into a smart zone consists of multiple parameters for optimal implementation, where primary parameters include technology, data, and people. The genesis of smart cities has evolved from the need of sustainable development and a better future for humankind. The efficacy of the smart city paradigm in the remediation of environmental issues, specifically waste management, has emerged as a potential topic of research. The shortcomings and issues associated with the current urban waste management practices can be suitably dealt through the integration of tools such as the 'internet of things' (IoT), transportation systems' with the existing waste management system and infrastructure for waste collection, segregation, transportation, treatment, and final disposal. The application of automation through cyber-physical systems can effectively turn waste management practices smart in the smart city paradigm. In this context, the chapter provides insights into the current trends of the applicability of IoT techniques, including radio-frequency identification (RFID) techniques, sensors and actuators, embedded systems, and wireless mobile communication technologies for effective waste segregation, real-time collection, optimal transportation, and future perspectives considering product lifecycle for the reduction in waste generation and increasing waste recycling for achieving circular economy in the smart cities.



Brainstorm & idea prioritization

Use this template or your own brainstorming sessions as your team can capture their imagination and start shaping, categorizing and if you're not sitting in the same room.

- 1. 10 minutes to prepare
- 2. 10 minutes to brainstorm
- 3. 10 minutes to categorize

Brainstorming template

1. Before you brainstorm

A brainstorming session is only as good as the session itself. Here's what you need to do to get going.

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LITERATURE SURVEY

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