

**Team Leader**

Recording the number of times the bins are emptied and how fast they fill up.

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Garbage Truck Weighing Mechanisms:

It is similar to the waste level sensor in the bin. A garbage truck weighing Mechanism is installed in garbage trucks to predict the fill levels and reduce collection trips

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## Reports

Recording the number of times the bins are emptied and how fast they fill up.

Garbage level of the bins can be monitored through a web App

. Alerts the authorized person to empty the bin whenever the bins are full.

Alerts and Notifications

To avoid all such Hazardous scenario and maintain public cleanliness and health this work is mounted on a smart garbage System.

Smart waste management is an idea where we can control many problems, which disturbs the society in pollution and Diseases.

Active industrial action over a period, on waste generation by identifying the fill pattern to make immediate garbage collection from those by alerting responsibilities.

Citizens behavior during specific festivals, events in specific areas are predicted for garbage bin overflowing and empting bins accordingly.

Analytics Dashboard- An user- friendly dashboard where users can monitor the bins capacity, track diversion rates and make strategic decisions.

Pneumatic waste collection, it uses vacuum suction to empty garbage bins through an underground network of pneumatic tubes.

Image-based trash can sensors:

Image-based trash can sensors are GPS-based and automatically monitor fullness and contents. It also determines which containers need service each day, then schedules routes and evenly distributes jobs to drivers.

Trashbots with large capacity, the spacious design can accommodate enough garbage from crowdes places like malls.

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Solar powered trash compactors, reducing collection frequency by up to 80%

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Usage of multiple

layers in bins to

segregate

degradable from

plastic and non

degradable wastes

instead of having

separate bins.

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## Future planning

Self-Driving Trucks

It’s still in the development phase, but autonomous waste pickup is close to being implemented. As known, Volvo has been working on this technology for many years with Uber for a self driving pickup truck. This system targets a truck maneuvering itself while the operator gets out to collect the garbage. Gear changing, steering, and speed are also optimized for low fuel consumption and emissions.

It helps to save petroleum

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| **PROBLEM** |
| **How might we Design a Smart Waste Management?** |

Motivation for financial management

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Automate transfer stations and separate disposal sites for daily garbage, mapping all collection points to create zones,wards,transfer station in city through geofencing

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# Importance

Robot Recyclers

Pneumatic waste collection, it uses vacuum suction to empty garbage bins through an underground network of pneumatic tubes.

If each of these tasks could get done without any difficulty or cost, which would have the most positive impact?

Mobility bins-embedded with swivel lock wheels, helping users move on any hard surface.

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## Automation

Robot Recyclers

We can view the location of every bin in the web application by sending GPS location from the device.

Quality Improvements

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Smart dustbin

# Feasibility

Regardless of their importance, which tasks are more feasible than others? (Cost, time, effort, complexity, etc.)

Prioritize

Brainstorm

Group Ideas