INNOVATION CHALLENGE -PROJECT SUMMARY

THEME : "SUSTAINING OUR FRAGILE ENVIRONMENT THROUGH THE APPLICATION OF ENGINEERING AND TECHNOLOGY".

FOCUSED AREA : SUSTAINING OUR FRAGILE ENVIRONMENT THROUGH THE APPLICATION OF ENGINEERING AND TECHNOLOGY

PROJECT DEFINITION:

Bio degradable waste is one of the important factors which have no impact for the environment. It acts as manure in domestic and rural areas. Cleaning of Bio-degradable waste is extremely costly, where several primitive methods are used to take Bio-degradable waste .The methods here are to collect and recycle Bio-degradable waste.

IDEA:

Our main idea is to develop a more efficient system to collect and recycle the Bio-degradable waste material. We focus on the large-scale cleaning of Bio-degradable waste especially in cities.

CONCEPT:

This Project presents a framework of IoT innovation for waste management system. The solution is to enrich the efficiency of waste bin collection activities and cost reduction. The proposed system on top of this framework can be further improved to perform real-time, reliable and efficient waste management system. Customer complaints module will be added and integrates with the message notification system to perform fast response. The map showing the waste bin actual coordinates stored in the database can be further leverage by integration with GPS technology to give the current waste bin location. Alert message can be produce if the waste bin has been reposition to other place or fall down. This monitors the waste collection status in real-time and based on the recorded information they able to measure their operational performance, predict future operation requirements and plan for better service to deliver.

SOLUTION:

This project as three major advantages that are useful for the society in the ways such as

1) The effective collection of wastes and detecting the toxic waste

2) To check the level of waste in the bin that is being filled

3) The bio-degradable wastes is separated and given to the fertilizer industry in which the share is given equally to the one who send the wastes and also to the industry.

PROJECT:

Cleaning of Bio- degradable waste is extremely costly, where several primitive methods are used to take Bio-degradable waste

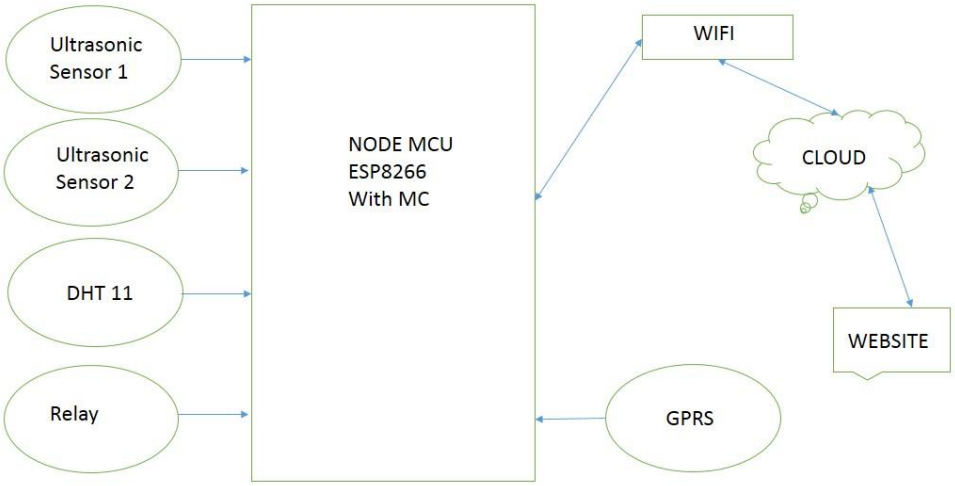
PROTOTYPE:

1. To analysis the previous techniques used in cleaning of waste.
2. To develop re-usable material.
3. To develop an economical model to clean the waste in large scale.

PROJECTS BENEFITS:

By grinding food items in your disposal, you will incur less garbage in your home, which results in fewer garbage bags and fewer trips to your garbage can. There is also less chance of decomposing food attracting pests, animals and insects. In addition, considering the amount of solid waste and scraps of food sent to landfills, lowering the amount of that waste would also save energy costs for cities and countries, because there would be fewer refuse vehicles needed.Thus lowering overall energy consumption and emissions from unburned fossil fuels. Using this project, reduction of routine human work of checking the dustbins will be reduced and by using RIFD, the bin can easily be tracked.The profits of converting waste into amount is increased by converting bio-degradable waste into manure.

BLOCK DIAGRAM:



KEY DIFFERENTIATION OF IDEA:

We have different ideas but we are focusing in large scale cleaning of waste, we are also having several plans to increase our markets.

1. To develop a composite material (nano composite material) for large scale application.
2. To develop aerosol material (nano aerosol material) for small scale application such as cleaning of in industry.
3. To develop foam material, liquid chemicals etc. for domestic cleaning purpose.