



# GARBAGE REWARDING SYSTEM

(AN INNOVATION OF TRADITIONAL GARBAGE SYSTEM)

TEAM NAME: Dynamax

TEAM MEMBERS:

- R.J.Prahadeesh
- Arunachalam
- Penyamine
- James
- Jerniya
- Shalini

## EVENT DESCRIPTION:

ORGANIZATION NAME:

AICTE, MIC-STUDENT INNOVATION

PS CODE:

1474

PROBLEM STATEMENT TITLE:

STUDENT INNOVATION

CATEGORY:

HARDWARE

DOMAIN BUCKET:

CLEAN & GREEN TECHNOLOGY

PROJECT TITLE:

GARBAGE REWARDING SYSTEM USING IOT

# QUICK GLANCE OF PROBLEM:

01

## Landfills Waste:

High population density in cities results in increased waste generation.



02

## Environmental Pressure:

air/water pollution, habitat disruption, resource depletion.



03

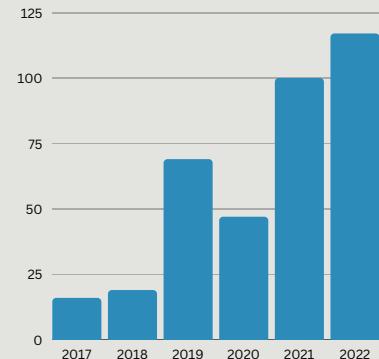
## Drainage Block:

Including clogs and debris buildup, impede water flow in drainage systems.



## NEEDS OF THIS INNOVATION

- Survey Findings: 347 Sanitation Worker Deaths in **5 Years**.
- **Double** the Deaths Compared to the Last Decade.
- **Unintentional** Harm: Workers **Killed** due to Unsafe Waste Disposal.
- Septic Tank Blockages from **Careless** Waste Handling.
- Annual Expenditure: Rs **7,366 Crores** on Solid Waste Cleanup.
- Financial Strain on Government Resources.



# PAINS TO BE RELIEVED

**Express** Expressoul

ECOLOGIC

## Managing Waste Disposal is a Challenge

Waste management has various stages – creation, storage, transportation, segregation and disposal. A city's municipality is usually responsible for collection, transportation and disposal. But the public must also ensure that all steps are carefully executed



SUNDAY | 4  
9-6-2006



## How the campaign unfolded

**BANISH THE BAGS**  
**DAY ONE:** and a High St giant responds to our campaign by showing what CAN be done...  
**M&C DANIELS**

February 27, 2008: The Daily Mail launches its Banish the Bags campaign to encourage the public to stop using plastic bags. The campaign urges the Government, supermarkets and the general public to cut back on the use of throwaway plastic bags.

## E-waste chokes AP beaches



8 NEWS

### A water pollution time bomb

Alarmed specialists say Durban's water security is not so much threatened by scarcity as by upstream pollution – much of emanating from Petermaritzburg's Umzimkulu River. Fred Kocott and Siboniso Mngadi report



## Dying in agony, birds poisoned by plastic pellets

Toxic waste killing island's puffins



## CITY HEAVES UNDER PLASTIC BURDEN

**ENFORCEMENT**  
₹25,000 fine for mass burning of plastic in open areas  
₹5,000 fine for minor plastic fires

**MEASURES TO GO GREEN**  
► Poster campaign at meat shops to carry boxes and not depend on plastic bags  
► Manufacturer of refuse-derived fuel (RDF) by local bodies

**WHAT'S WRONG** In spite of a ban being in force, manufacturers and end-users continue to deal in 'illegal' plastic on a large scale



CHOKING LAKE: The Hussainpur has become a local dumpard for many residents

**GOVT GOES GREEN**

Since coming to power the govt has taken up various other programmes to save the environment. These include:

**HARITHA HARAM** Haritha Haram is one of the largest green cover projects in the world. It aims at achieving at least 33% coverage of the non-recyclable plastic film for mailing magazines and promotional materials. In



Drowning in a sea of non-recyclable plastic film

Dear Readers,

While the past decade has seen the tide turn against plastic shopping bags – with an array of alternatives and highly successful programmes such as the one run by the Commonwealth Bank throughout Australia (St. Kilda, Tasmania, NT and Qld), as well as a myriad of state and local governments – I am afraid that the tide has come to reverse again. Turn around to see the amount of non-recyclable plastic film that has

arrived in 'Eco-Friendly' plastic bags through the medium of the Internet and via delivery services (including delivery services for any other convenient method). I have also included this wrapping in the count. After all, it is not just plastic bags that are the problem.

Admittedly, it is clearly a fairly basic and unscientific investigation, as we the consumers did not keep a record of the items purchased over the past few years, the results were extremely alarming to say the least – and I was expecting the tally to be low. In fact, over a four week period I recorded no less than 42 separate items of trash wrapped in plastic film. Granted, this is 10 items less than the 52 items I recorded in the first week, but it is still extremely high – especially given the overall reduction in traditional mail that has

plastic film that cannot independently contribute environmental costs to the planet. This is not to mention the sheer volume of trash that is generated.

As in the case with plastic bags, I am sure that the Management of your local high street supermarket will be extremely pleased to hear that we have been able to reduce the amount of plastic film used in their stores over the last twenty years that the plastic

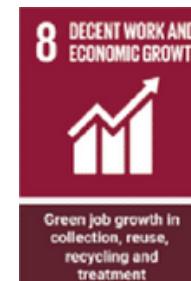
pla-

## PROPOSED SOLUTION:

- Addressing the Challenge: Rising Waste and Environmental Concerns
- Innovation for Sustainable Waste Management
- Collaboration with Local Government and Businesses
- Transparent System for Collecting and Validating Data
- Rewards and Incentives: Points, Discounts, Vouchers, or Civic Honors



## ULTIMATE GOALS:



# TECHNICAL OVERVIEW

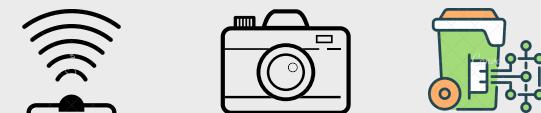
## System interface



## Smart garbage

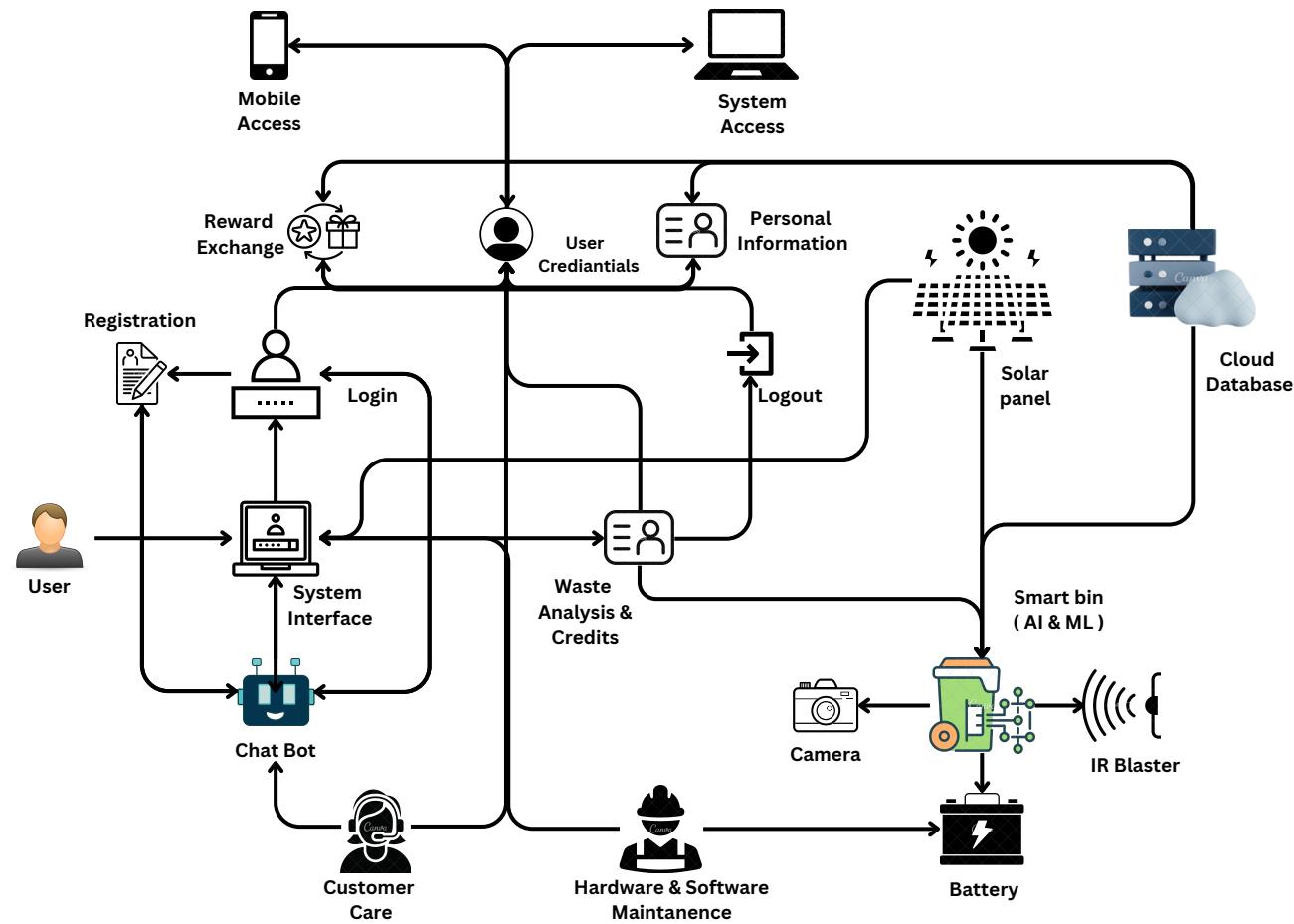


AURDINO



## Software and Hardware Requirements

# ARCHITECTURAL OVERVIEW



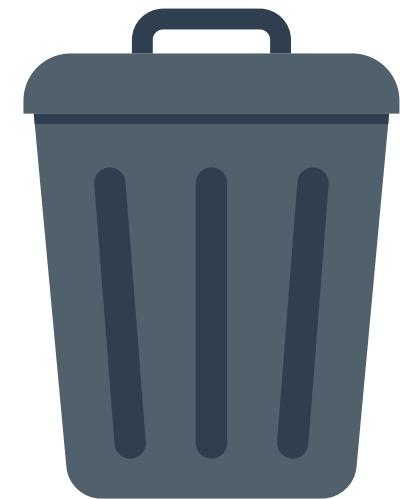
## BENEFITS :

- Restricts Pollution and Strain on Landfills.
- Reduction in Littering and Illegal Dumping.
- Reduced Government Expenditure on Cleanup.
- Encouraging Responsible Waste Disposal Habits.
- Less Risk of Disease Spread from Uncollected Waste.
- Boosting Local Economies through Rewards and Incentives.



## CONCLUSION:

- **Incentivizing Participation:** Rewards encourage people to actively engage in waste management and recycling.
- **Environmental Benefits:** It leads to cleaner surroundings, reduced littering, and increased recycling, benefiting the environment.
- **Requires Support:** Success relies on support from local authorities, businesses, and continuous public awareness efforts.
- **Fostering Responsibility:** This system helps instill a sense of environmental responsibility and promotes sustainable practices.



# Thank you