IC Hack 2.0

🌧️ **Climate Change** 🌿

Waste Management in Climate Change

Improved Smart Waste Management for Smart City

Exploring the Unconventional 🌐🌿

- **What if we could turn waste into a solution for climate change?**
- **Can our trash become the treasure that saves our planet?**
- **We face a crisis like no other in human history.**
- **The clock is ticking, and the need for action has never been more pressing.**
- **To combat climate change, we must rethink waste management from the ground up.**
- **We need groundbreaking strategies to tackle the intertwined issues of climate change and waste**

Impact on Climate
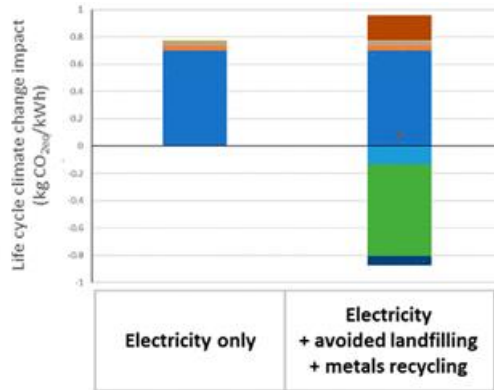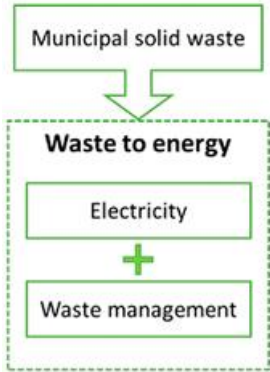
- **Climate change has far-reaching and profound impacts on our environment.**
- **It affects ecosystems, weather patterns, and natural resources.**
- **Increasing frequency and intensity of extreme weather events (e.g., hurricanes, wildfires).**
- **Rising sea levels, leading to coastal flooding and erosion.**
- **A steady global temperature increase, disrupting ecosystems and weather stability.**
- **The case study shown in the figure shows the Climate change impact at waste-energy facility.**

Tech Driven Management 🖳
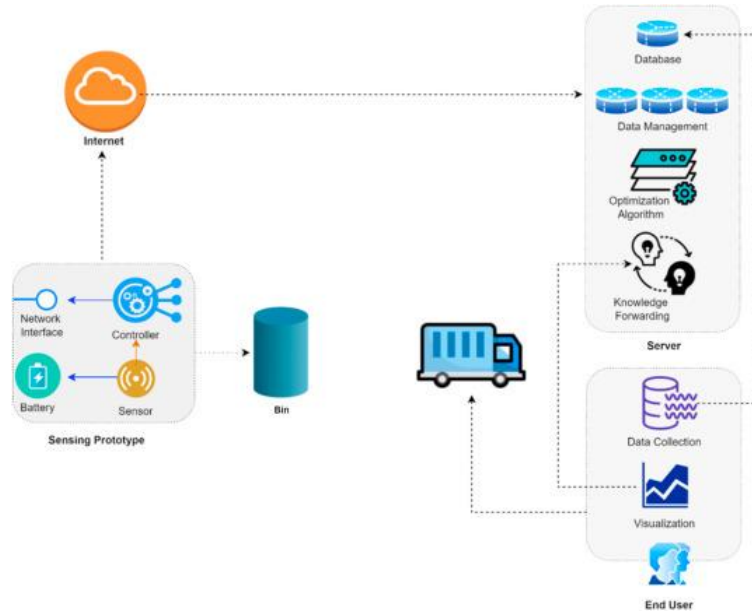
- **Tech Stacks are technology solutions that work together to optimize waste management processes, reduce environmental impact.**
- **Use of IOT sensors to monitor the levels of waste in real time.**
- **Use of Arduino Ultrasonic and micro sensors.**
- **Auto transmit signals to the authorities when the bins are nearly full.**
- **Minimize environmental harm, by preventing pickups.**
- **Prevent the False Triggering of the sensors using advance sensor quality, dual sensor redundancy and consider weather conditions impact.**
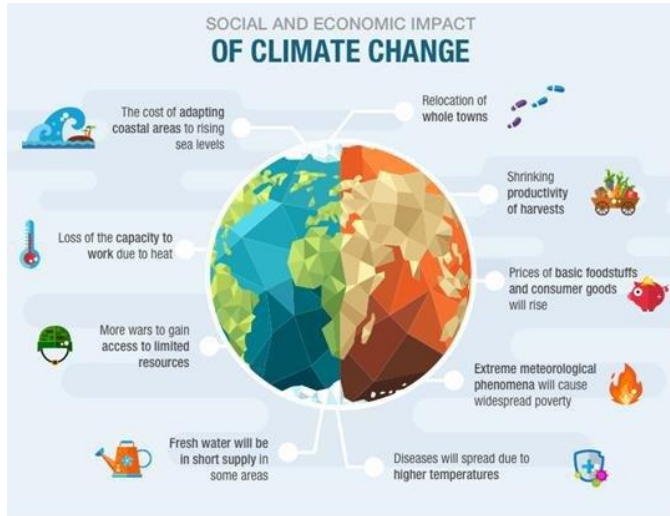- **Reliable internet connectivity for real time signal transfer.**

User Friendly AI

- To analyze large datasets quickly and accurately, identifying patterns in waste generation and collection.
- User-friendly AI apps offer waste collection schedules, recycling guidelines, and reporting tools.
- Residents can access essential waste management information, making it easier to participate in recycling and waste reduction efforts.
- By making waste management user-friendly, AI encourages community involvement in sustainability initiatives.

Transforming Communities

SOCIAL AND ECONOMIC IMPACT
OF CLIMATE CHANGE

The cost of adapting coastal areas to rising sea levels

Relocation of whole towns

Loss of the capacity to work due to heat

Shrinking productivity of harvests

More wars to gain access to limited resources

Prices of basic foodstuffs and consumer goods will rise

Fresh water will be in short supply in some areas

Extreme meteorological phenomena will cause widespread poverty

Diseases will spread due to higher temperatures

- **Sustainable waste management reduces pollution, which in turn leads to cleaner air, water, and soil in communities.**
- **Effective waste management ensures clean streets, parks, and public spaces, improving the overall aesthetics of communities.**
- **Sustainable waste management practices maintain hygiene and sanitation in communities, minimizing the risk of waterborne diseases.**
- **Vulnerable populations, such as children and the elderly, benefit from reduced exposure to disease and environmental toxins.**
- **Health risks linked to improper waste disposal, sustainable waste management contributes to improved public health outcomes in communities.**

Scaling Sustainable Solutions 💡
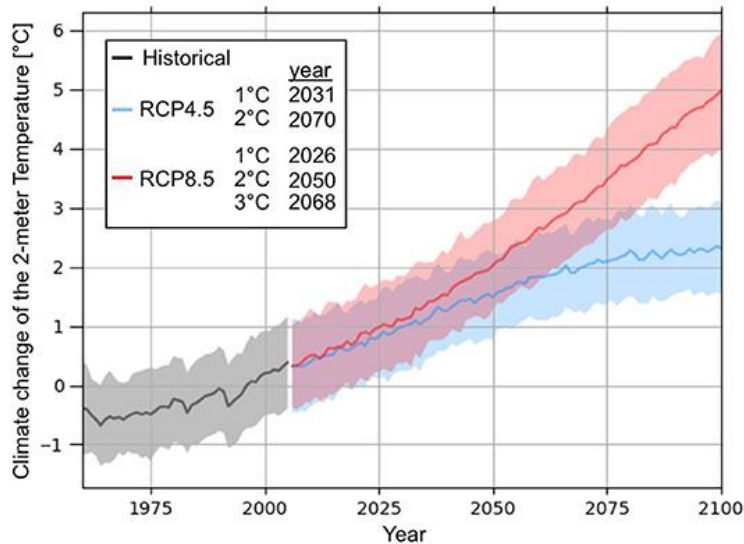
- **Scalability is essential in waste management solutions for their effectiveness.**
- **Expand recycling initiatives city-wide for broader reach.**
- **Large composting facilities offer substantial agricultural benefits.**
- **Use growth charts and visuals to depict scalability's potential.**
- **Scalable projects often demonstrate economic viability and create jobs.**
- **Scalability helps reduce greenhouse gas emissions and conserves resources.**
- **Scalable solutions can be adapted worldwide to address waste challenges.**