SMART DELHI IDEATHON 2025

Theme: Crafting Sustainable Solutions for Cleaner Air in Delhi

The Challenge

- **Public problem:**
    - Delhi faces alarming levels of air pollution, primarily from vehicular emissions, industrial activities, and deforestation.
    - Poor air quality adversely affects public health, causing respiratory and cardiovascular diseases.
- **Impact on the public:**
    - Vulnerable groups like children, elderly, and those with pre-existing conditions are at higher risk.
    - Reduced quality of life, increased healthcare costs, and lowered productivity.
- **Data & evidence:**
    - PM2.5 levels in Delhi often exceed the WHO safe limits by 10x during peak seasons.
    - Studies link prolonged exposure to air pollution with a 20% increase in mortality rates.

Our Vision

- **Desired future state for the public:**
    - Citizens actively monitor air quality data and take preventive actions.
    - Increased adoption of sustainable practices like planting trees and using public transport (e.g., Delhi Metro).
    - Reduced air pollution levels leading to a healthier environment and community.

The Innovation

Solution Name: *Ecogrow*

Brief Introduction:

- Ecogrow is an IoT-based AQI (Air Quality Index) monitoring system designed to empower individuals and communities to tackle air pollution effectively.

Key Features & Technologies:

- **IoT AQI Monitoring System:**
    - Monitors live air quality data (PM2.5, SO2, NO2, etc.).
    - Displays weekly data trends and insights through a user-friendly website.
- **Eco-Rewards System:**
    - Collaborates with third-party air purifier companies to offer eco points and discounts.
    - Rewards users with eco points for planting trees through government nurseries at subsidized rates.

    - Eco points redeemable for Delhi Metro travel, encouraging public transport use.

- **Tree Planting QR System:**
    - QR codes attached to planted trees.
    - Scanning the QR code reveals data about the user who planted the tree, inspiring community participation.

Implementation Plan

- **Key Partnerships**:
    - Delhi Metro Rail Corporation (DMRC).
    - Government nurseries for tree plantation.
    - Third-party air purifier and eco-product companies**.**
- **Resource Requirements**:
    - IoT devices and data infrastructure.
    - Website development and maintenance.
    - Funding for marketing and incentives.

Impact & Evaluation

- **Measurable Outcomes:**
    - Reduction in AQI levels by 10% in targeted areas within 2 years.
    - Increased tree plantation rate by 30% within 18 months.
    - 25% rise in public transport usage in Delhi Metro.
- **Evaluation Methods:**
    - Continuous AQI monitoring and trend analysis.
    - Surveys to measure public participation and awareness.

Call to Action

- **Collaboration & Support:**
    - Government, private sector, and citizen collaboration is essential for success.
    - NGOs and environmental organizations can amplify outreach efforts.

Next Steps

- Finalize prototype development and testing.
- Secure partnerships and funding.
- Launch pilot program in select areas of Delhi.
- Scale based on pilot feedback and success metrics.