KALASALINGAM
ACADEMY OF RESEARCH AND EDUCATION
(DEEMED TO BE UNIVERSITY)
Under sec. 3 of UGC Act 1956. Accredited by NAAC with "A++" Grade
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AUTOMATIC DRAINAGE CLEANER

1. PI & CO PI

NAME: Dr. B. Perumal,

DESIGNATION: Associate Professor

2. SDG INVOLVED

Our project is directly connected to **SDG 6: Clean Water and Sanitation**, which focuses on ensuring access to safe water and sanitation for everyone.

1. **REDUCING POLLUTION**: Our Automatic Drainage Cleaning System (ADCS) helps prevent sewage blockages caused by waste like plastics. By keeping drains clear, we reduce the risk of untreated sewage overflowing into water bodies, which helps in minimizing pollution.
2. **PROTECTING HEALTH**: The ADCS reduces the need for manual drain cleaning, which is often dangerous and exposes workers to harmful chemicals and infections. By automating this process, we are protecting the health and safety of sanitation workers, making it safer and more ethical.
3. **EFFICIENT WASTE MANAGEMENT**: Our system ensures that waste is regularly filtered and disposed of properly, preventing blockages and maintaining a smooth sewage flow. This efficiency contributes to better waste management and helps keep the environment cleaner.

4. **Innovative Sanitation Solution**: By introducing automation into the drainage cleaning process, our project aligns with the goal of improving sanitation infrastructure. It's an innovative approach that not only keeps drains clean but also ensures a safer and more sustainable environment.

3. Aim of the project

The aim of the project is to design and develop an **Automatic Drainage Cleaning System (ADCS)** that efficiently cleans and maintains drainage systems, reducing blockages caused by waste materials like plastics, ensuring continuous sewage flow, minimizing environmental pollution, and eliminating the health risks associated with manual drain cleaning. This system seeks to enhance public health and safety, promote sustainable sanitation practices, and contribute to cleaner water management. Proposed design aims to maintain the cleanliness of the drainage system and promote its effective operation.

4. Objectives of the project and its direct relation to a particular SDG goal

1. **Automate Drain Cleaning**: Create a system that automatically clears out waste from drainage systems to prevent blockages and ensure the sewage flows smoothly.
2. **Connection to SDG 6**: By automating this process, we help reduce pollution and improve the management of wastewater, which is crucial for maintaining clean water and sanitation.
3. **Protect Worker Health**: Replace the need for manual drain cleaning with a mechanical system to safeguard workers from dangerous conditions and reduce the risk of infections.
4. **Connection to SDG 6**: This objective aligns with SDG 6 by ensuring safer and more ethical sanitation practices, which are vital for public health.
5. **Efficient Waste Handling**: Set up a filtration system that consistently removes and properly disposes of waste, like plastics, to prevent environmental damage.
6. **Connection to SDG 6**: Proper waste management supports the goal of reducing hazardous materials in water, contributing directly to cleaner water and sanitation.
7. **Reduce Environmental Harm**: Ensure that the system treats and monitors waste and gases to minimize any negative impact on the environment.
8. **Connection to SDG 6**: By controlling the release of untreated wastewater and harmful gases, this project helps protect water-related ecosystems, which is an important aspect of SDG 6.
9. **Encourage Sustainable Sanitation**: Develop a sustainable drainage maintenance system that can be widely used and adapted to different environments.

10. **CONNECTION TO SDG 6**: This goal aligns with SDG 6 by fostering innovative solutions that enhance sanitation infrastructure and promote long-term sustainability in water and sanitation management.

5. PROJECT SITES

Kalasalingam Technology Business Incubator - PMD Systems

6. PROJECT - UG STUDENTS

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