

SMART PUBLIC RESTROOM:

PROBLEM STATEMENT:

1.Sensor Malfunctions:

ISSUE: Sensors may not detect usage or trigger cleaning properly

SOLUTION: Regularly inspect and maintain sensors. Clean them to remove dirt or debris that may interfere with their operation. Consider upgrading sensors if they are outdated or malfunctioning frequently.

2.Supply Restocking Issues:

ISSUE: Sensors may not accurately detect low supplies, leading to shortages of toilet paper, soap, or other essentials.

SOLUTION: Improve supply monitoring algorithms and sensors. Conduct routine checks to manually restock supplies when necessary.

DESIGN THINKING:

Understand the needs and pain points of users (e.g., cleanliness, hygiene, accessibility).Conduct surveys, interviews, and observations at public restrooms.Gather insights on current maintenance challenges.Clearly define the problem: "How might we create a public toilet that is consistently clean and well-maintained?"Develop user personas and create a user journey map.Brainstorm ideas for automated cleaning and maintenance systems.Encourage creativity and innovation in addressing the problem.Consider technologies like sensors, robotics, and AI for efficiency.Incorporate automated monitoring systems to track usage and cleanliness.Set up regular maintenance schedules for the automated components.

PROJECT IDEA:

Automated Cleaning and Maintenance:

- Install sensors to detect usage and trigger automated cleaning after each use.
- Implement self-cleaning surfaces and UV disinfection to maintain cleanliness.