

Sustainable Design

Project: Flush Pure

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WELCOME

The Flush Pure project addresses the critical issues of inadequate sanitation facilities and the increased risk of urinary tract infections (UTIs) for women. This initiative will design and deploy sustainable, trailer-based mobile toilets specifically tailored to women's needs. The project prioritizes eco-friendly design principles, including the use of sustainable materials, water conservation systems, and renewable energy sources. Key features will address female-centric hygiene requirements and promote UTI prevention through education. The Flush Pure project aims to empower women in underserved communities, schools, workplaces, and events by providing safe, hygienic, and accessible sanitation solutions.



Project Goals





Implement eco-friendly construction, water

sources.

UTI Prevention

Provide educational resources on UTI risks and promote frequent toilet access.

conservation systems,

and renewable energy

Women Centric Hygiene

Prioritize sanitary disposal, privacy, handwashing facilities, and personal care amenities.

Mobility

Utilize trailer-based design for easy transportation and deployment in various locations.



Problem

Public restrooms suffer from excessive water use, poor hygiene, and inadequate cleaning practices. This creates an unpleasant user experience and contributes to significant health risks, especially for women, as 50-60% will experience a UTI in their lifetime. Furthermore, a large percentage of people avoid using public restrooms altogether:

- 52.6% rarely use them
- 31.6% occasionally
- 10.2% frequently
- 5.2% very frequently.

Addressing Sustainable Sanitation Challenges

The availability of safe and hygienic toilets poses a significant challenge across India. This lack of proper sanitation facilities can increase the risk of infections and negatively impact overall public health.

Your Insights Matter

I'm researching solutions to improve sanitation conditions in India and would greatly appreciate your valuable input. Could you please spare 5 minutes to participate in a short survey? Your insights will help guide efforts to create better sanitation systems.





Solution

Flush Pure addresses the challenges of public restrooms with a revolutionary system.

- It replaces water-intensive flushing with a dry, sealed waste collection mechanism, drastically reducing water usage.
- A small, integrated water supply allows for handwashing, ensuring hygiene.
- Flush Pure also converts the collected waste into safe, nutrient-rich compost and features an automatic sanitation mechanism for superior cleanliness.

This innovative solution prioritizes resource conservation, enhanced hygiene, and a more pleasant user experience.

Design and Functionality



14 x 6 x 8 ft

Toilet Dimensions 6 x 6 ft

Trailer Dimensions

Design and Functionality



LAYER 2



LAYER 2

BAG RETRACTED AND DUMPED INTO THE LOMIOSTING BIT. NOLESS IS WATERLESS FLUSHING



The toilet functions with a dry flushing system using compostable bags and a spin mechanism. Waste drops into a composting chamber below the seat, and a new section of the compostable bag is automatically released. To ensure optimal sanitation, a sanitizer release mechanism is integrated; after each flush, the seat rotates to receive a thorough cleaning.



MATERIAL BOARD



Fiberglass-reinforced polymer for the trailer



Stainless Steel for sink





LED Lighting

MATERIAL BOARD



Low-VOC Paints



Vitreous China for toilet seat





Activated charcoal for smell

PAYMENT APP UI



FLWSH PURE

FLWSH PURE	
Hello Sakshi !	
Search Toilet	
Scan QR	
History	



Use current location

Enter location manually





FLWSH PURE



payment options



SUSTAINABLE DEVELOPMENT GOALS







SUSTAINABLE CITIES AND COMMUNITIES



12 RESPONSIBLE CONSUMPTION AND PRODUCTION









Future Aspect - Business plan

The current project deals with tier 1 cities and the future plan is to expand it to tier 2 and tier 3 cities with a correct cost evaluation for the demography and geography.