

# eToilet



**India's First Electronic Public Toilet**



*I give you the world*

# Company Profile

eToilet is developed by Eram Scientific Solutions, a Group Company of Eram & ITL Group Companies.

Eram Group operates in 17 countries, more than 12000 team members in 44 Companies.

Operating in sectors of environment and clean technology, eToilets in urban locations, schools, sewage treatment plants, solid waste treatment systems, rain water harvesting structures, water purification technologies and other technologies.





# VISION

“Our vision is to be a pioneer in developing pro-earth solutions in multiple domains and technologies to ensure a better, safer and natural world around us.”



# MISSION

- ★ **Constantly innovating and applying Science and Technology to develop solutions against the pressing needs of the society.**
- ★ **Applying unconventional methodologies and ‘Out of the Box Thinking’ and practices.**
- ★ **Focus on developing solutions in alternate energy, clean technologies, and pro nature applications.**
- ★ **Ensure the democratization of wealth and knowledge.**
- ★ **Evolve itself as an abode of multi-disciplinary development enthusiasts.**





# Why eToilets?

Problems compounded by inadequate existing public toilet infrastructure

- **Lack of Toilets**

Density of public toilets in most cities far less than that required to meet national standards of 35 people per toilet seat.

- **Location**

Shortage in areas of greatest need such as slums, market areas, bus stops, areas with heavy pedestrian traffic, informal workplaces etc.

- **Underutilization**

Existing toilets underutilized as basic infrastructure like water, electricity and sewerage missing from most of these toilets.





## ● **Poor Maintenance**

Dilapidated state and poor maintenance of public toilets makes them unhygienic and unusable.

## ● **Lack of an Integrated City-wide Approach**

Investments currently planned in a piece-meal manner without focus on the full cycle of safe confinement, treatment and disposal.

## ● **Improper Planning and Monitoring**

Inaccessibility and poor condition of public toilets leading to continued open defecation.

Lack of available data suggests a poor knowledge base for adequate planning and monitoring of toilets





# Our Solution: eToilet

A multi-faceted public amenity infrastructure in urban, v, upcoming cities to keep in pace with the expansive growth of developed/developing nations in terms of population, and technology.



eToilet

 Eram Scientific





eToilet



# Technical Features

- ✦ Alerts to users- Display Boards in regional languages- Voice Alerts.
- ✦ Motion Sensor controlled Energy Management.
- ✦ Automatic Payment Collection.
- ✦ Automatic Washing Mechanism.
- ✦ Automatic Sliding door | Various Access Control Options.
- ✦ Remote Diagnosis | Remote Control | Remote Management  
Connect to Control room through GPRS.
- ✦ Reports to Client.
- ✦ Machines can be mapped.
- ✦ Waste processing through STP.
- ✦ Portable Design | Quick Installation | Rust Free Models.
- ✦ Installation in 5 to 10 hours time.



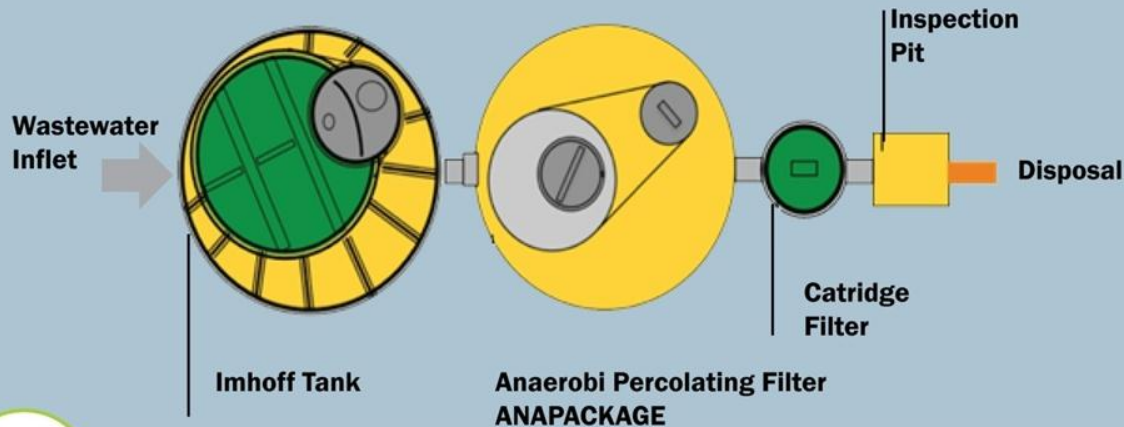


# Sewage Management

## Option 1: Connecting to DRDO Biodigester



## Option 2: Connecting to Anapackage





# Environmental Impacts

Efficient use of resources contributes to high environmental impact


















	<b>Water Efficiency</b>	<b>Electricity Efficiency</b>	<b>Cleaner Sewage Treatment</b>
Conventional Options	15-20 litres for flushing and floor washing per use	Use conventional power sources	Normal concrete pits constantly suffer from waste clogging and overflowing
eToilet & Anapackage	CPU controlled valve flushes 2-4 litres depending on usage time	Sensor-controlled electric systems like fan, light, audio	Anapackage utilizes anaerobic bacterial decomposition for sludge treatment in separate Compartments
Sewage Treatment Plant	5 litres for floor washing after every 5 uses	Mechanism to connect to solar panels	Sewage Treatment Plant does not require electricity





# Comparison with Other Toilets

Strong value proposition compared to competing solutions

Key Parameters	E - Toilet	Brick and Mortar Toilet Complexes	Portable Toilets
Structural Integrity			
Hygiene of usage			
Maintenance Efficiency			
Land Usage Intensity			
Water & Electricity Infrastructure			
Sewage Treatment			

Scores higher than other public toilet models on almost all parameters





# Achievements

- ★ Reinvent the Toilet Challenge Round 2 Grantee, Bill & Melinda Gates Foundation.
- ★ TiE50 2012 Top Start Ups, Life Sciences Category.
- ★ Sankalp-Artha Grand Prize Winner for the most promising enterprise of the Year 2012.
- ★ Sankalp Awards 2012, Water and Sanitation Sector.
- ★ Finalist, Samsung Innovation Quotient Season 2, 2012.
- ★ ET Now's Pick of Sankalp, The Best among 4 enterprises.
- ★ Innovative Enterprise, Manufacturing Leadership 100 Awards 2012.
- ★ Winner, Technology Review Grand Challenges 2011 Program.
- ★ Product Manufacturing, Computer Society of India (CSI) Excellence in IT Awards 2011.
- ★ Finalist-Special Jury Reference Award, Manthan 2011.
- ★ Innovative Technology in Public Convenience, Washroom & Beyond Honors 2011.
- ★ Most Innovative Initiative in Public Healthcare - eWorld Public Choice Awards 2011.
- ★ Best CSR Project 2011, PMI Award.
- ★ Top 10 innovations by Ministry of Commerce, Govt of India.



# Network of Connected eToilet Infrastructure (CeTI)

**Think of a network of connected eToilets whose locations can be traced with an SMS, remote controlled, remote managed, self operating and sustainable.**

**Mapping and connecting all the eToilet units via web and mobile, thereby making travel smoother and easier for the Public and tourists alike.**

**The travelers can identify and select the eToilet units according to their journey route.**





# On the GO

**All eToilets connected to a Map enabling Toilet Search.**

**Online integration will provide details on the coins collected and the water & power usage.**

**The agency in-charge of the eToilet unit will receive alerts in case of any theft/vandalism attempts.**

**The agency will also be able to remote control the unit and clean the toilet.**



# New Development Sector Initiative



## eToilet + eShops

**employment - sustainability - development**







# eShops

## A Smart Shop

- Access control- Smart card regulated entry.
- Internal security camera to ensure safety.
- UPS backup power supply for emergency.
- Time-out alarm for time based/ regulated vending.
- Intrusion alert via Multiple sensors.
- Online tracking of shops through web interface.
- eShop will sell only Healthy-Ethnic-Indigenous-Organic Items.
- Promotion of Handmade/Homemade products of SHGs.

# Delight Junction

Shop to have space for Fridge, Mixer, Tea Vending Machines

Steel Structure

Toilet in Concrete or in Fibre



E Shop PLug & Play

Concrete...Space for Massage  
One Side for Book Shelf

Floor in Concrete/ One  
Benchin Concrete & Stell  
Combination - Health Kiosk







# Sources of Revenue

- \* Sales from Vending
- \* Coin collection from eToilet
- \* Lease of Advertisement space on eToilet/ vending shop
- \* Returns from Other accessories- coffee vending machine, bookstall, massage parlours etc (Depending on location, tourism factor etc.)



# Tie Ups

**Connected 28 Universities worldwide  
through Gates Foundation.**

**London School of Economics.**

**Indian Institute of Science.**

**National Institute of Design.**

**University of Notre Dame.**







indian express

# E-toilets to be set up in tourist destinations

Sreedevi Chitharanjan I ENS  
Kozhikode, February 8

UNHYGIENIC conditions in public comfort stations will soon become a thing of the past with the Department of Tourism planning to install

(MoU) with the Dea Celera to provide dep...  
vertisements of the toilet tr...  
income to r...  
but only if t...  
get other ad...  
He belie...

inside the toilet. Each will have in-built water and bio-septic tank co...  
bacteria that are c...  
ing gen...

Thane Corporation planning to set up 5000 toilets

# Kerala Promises Hygienic Stay for Foreign Tourists

## State to add 300 new e-toilets

nanthapuram-based Eram Scientific Solutions, has features like automated door opening, power flushing, automatic washing and

Kerala CM declares setting up PPP company for setting up eToilets Legislative Assembly

# TOILETS ON THE PATH TO AUTOMATION



QUEUE TO PEE: There's first electronic automatic public toilet (e-toilet), which opens after insertion of a



**THANK  
YOU**

