

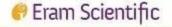
Technology for Sanitation An Indian Experience





Dr. Siddeek Ahmed
Chairman & Managing Director
Eram Group

eŤoileŧ



This is not an ADB material. The views expressed in this document are the views of the author/s and/or their organizations and do not necessarily reflect the views or policies of the Asian Development Bank, or its Board of Governors, or the governments they represent. ADB does not guarantee the accuracy and/or completeness of the material's contents, and accepts no responsibility for any direct or indirect consequence of their use or reliance, whether wholly or partially. Please feel free to contact the authors directly should you have queries.

eŤoileť

- eToilet is a modular, pre-fabricated public toilet made of steel and is integrated with user-friendly electronic interfaces, to ensure cleanliness and hygiene to every user.
- Unmanned and automated, eToilets have remote monitoring capabilities via GPRS to track its health status.
- Takes care of entry to sewage treatment thereby addressing the sanitation lifecycle comprehensively
- 500+ eToilet installations across 10 states in India





Comparison with Other Toilets

Strong value proposition compared to competing solutions

Brick and Mortar Key Parameters E - Toilet **Portable Toilets** Toilet Complexes 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 Based on Study done by Intellecap

eToilet

@ Eram Scientific

eToilet - A Quick Look

- Easy to install
- Consumes less water
- Power efficient
- Enhanced cleanliness through auto flushes & floor washing
- Unmanned operations
- Coin operated entry/ free access
- Onsite waste treatment using anaerobic biodegradation
- No regular manual cleaning/ maintenance required
- Outdoor advertising space on eToilet panels
- Preventive Maintenance
- Dedicated Service team





eToilet Variants



Public Model in Stainless Steel

Public Model in Mild Steel





School/Civic Model



Product Functionalities

- Pre flush, Auto flush, Platform cleaning
- Stainless Steel platform with SS closet
- Stainless Steel /Mild Steel Assembly structure
- Sensors for Water / Electricity Conservation
- In-built water tank on top
- Web reports on health status
- Power Backup

Optional

- Napkin Vending Machines & Incinerators for women toilets
- Sewage treatment systems: Anapackage & DRDO Bio digester technology









Network of Connected e Toilet Infrastructure (CeTI)

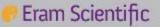
Think of a network of connected eToilets whose locations can be traced with an SMS, remote controlled, remote managed, self operating and sustainable.

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.







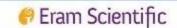
Social Entrepreneurship Model for Sanitation Sustainability



eToilet + eShops

employment - sustainability - development





Research & Development Areas





Moving Forward

- Self sustained eToilet which use its on waste to generate energy and water under the grantee ship of Bill& Melinda Gates Foundation.
- Collaborations with Caltech, Duke University and University of South Florida for developing next generation eToilets
- Cost effective eToilets for selected communities and slums.
- A massive campaign to provide child friendly eToilets coupled with sanitation awareness programmes for schools across India.



Be the change you want to be... Mahatma Gandhi





Dr. Siddeek Ahmed
Chairman & Managing Director
Eram & ITL Group of Companies
cmd@eramgroup-sa.com

