

Market Segments in India for the Multi-Unit Reinvented Toilet

Background

Multi-unit reinvented toilets (MURTs) are transformative sanitation solutions that treat human waste from multiple toilet units on-site. MURTs eliminate bacteria and viruses and recycle water. By 2030, the annual revenue opportunity for sale of MURTs in India could exceed \$500 million, with additional opportunity in after-sales service.

\$500M+
Annual revenue opportunity projected for MURTs in India¹

Market Segments for MURTs		Examples
Residential Building	Projected to be the largest market segment. Starting to adopt on-site treatment systems.	<ul style="list-style-type: none"> • Apartment buildings
Commercial Building	Values long-term financial value propositions.	<ul style="list-style-type: none"> • Offices • Factories • Hospitals
Public Building	Highly visible and cost-driven. Benefits from government and nonprofit financial support.	<ul style="list-style-type: none"> • Public and community toilets • Schools • Religious and tourist sites

Residential Building Segment

This segment is the largest market opportunity. Apartment buildings usually have a single septage management system, creating an opportunity for MURTs. Concrete septic tanks are the most common, but some larger buildings are adopting on-site treatment systems like sequencing batch reactors (SBRs) and moving bed biofilm reactors (MBBRs).

Understanding the **new apartment subsegment**

- New buildings are required to include sanitation solutions, and builders lead procurement decisions.
- In luxury and mid-segment apartments, builders are reputation conscious. This drives a focus on safety, reliability, and extra value-added features (especially visible ones).
- In low-income apartments, builders are more cost-conscious, selecting systems based primarily on regulatory compliance. Builders are less motivated by lifecycle costs because operating expense savings accrue to the homeowners' association (HOA).

Understanding the **existing apartment subsegment**

- HOAs assume maintenance responsibilities and lead procurement decisions 1 to 2 years after construction.
- HOAs typically only retrofit infrastructural amenities in response to dysfunction or failure of existing solutions.
- When selecting systems, HOAs value reducing operating expenses (such as electricity costs) and increasing reliability.
- In low-income apartments, HOAs also value simplicity in system maintenance, as the systems may be repaired and maintained by residents or on-site staff.

Learn more: [An Assessment of Small-Scale STP Technologies: India](#), [Market Insights for the Reinvented Toilet, India](#)

¹ This number is an updated 2030 projection based on analysis by STeP and Boston Consulting Group. The upside revenue potential of more than \$500M is highlighted here. For further context, see the original 2017 report [Transforming Sanitation: Commercializing Partnership Opportunities](#)

Commercial Building Segment

This segment may be motivated by water scarcity, which is starting to disrupt normal business operations in India. More than 21 major cities may run out of groundwater by 2020 and companies across the country are motivated to act. Like the residential building segment, on-site treatment technologies such as SBRs and MBBRs have been adopted at some sites. During procurement, buyers will value increased water savings and a long-term financial value proposition.

Understanding the **factory subsegment**

- On-site treatment systems for managing human waste are required in most industrial areas. They are considered a critical part of factory infrastructure.
- Decision-makers may be willing to spend more upfront to reduce the total cost of ownership.
- To avoid shortages, water reuse is a crucial need for factories. Most current technologies produce nonpotable water for reuse on-site.
- Regulation enforcement is more rigorous than in some other segments, so performance is key.

Understanding the **hospital subsegment**

- Procurement in public hospitals is done by municipal governments, which can influence decision-making.
- About three quarters of India's nearly 15,000 hospitals are rural, and hospital beds are increasingly private.
- Rural hospitals are more likely to lack sewer connections while also facing water scarcity. The urban supply chain may be easier to set up and execute.
- Low-maintenance technologies are valued in an environment with high visitor counts and strained resources.

Learn more: [Shared Toilet Facility Use Cases](#), [An Assessment of Small-Scale STP Technologies: India](#), [Reinvented Toilet: Early Adopter Compendium](#)

Public Building Segment

This segment can be leveraged to show the MURT value proposition. It is characterized by highly visible subsegments – such as religious sites and schools – where successful MURT product launches could demonstrate the value propositions to the broader market. A marketable product launch – and the opportunity for financial support through government, Corporate Social Responsibility (CSR) programs, and NGO initiatives – makes this segment an attractive early adopter for MURT technology.

Understanding the **public toilet subsegment**

- Private companies construct, operate, and maintain toilets on land leased from the municipal government and often transfer the site back to the government after 5 to 7 years.
- Challenges include financial sustainability, providing long-term service, and accountability between users and service providers.
- On-site treatment is uncommon, but new technology, such as self-cleaning toilets and remote monitoring, is being adopted to reduce operating and maintenance expenses.
- Traditional sources of revenue include fee-for-use and service/maintenance contracts. Expanded revenue streams are being incorporated, including sale of other services, consumer goods, microfinancing, and advertising.

Understanding the **religious and tourist sites subsegments**

- Procuring sanitation systems is led by religious trusts or the government and is cost-driven.
- Water concerns and high visitor counts drive unsustainable water demands. Shortages could negatively impact visitor counts.
- Interest in recycling water, but at religious sites cultural barriers may limit utility and value of recycled water.
- Spatial constraints drive sanitation improvements. Decision-makers may prioritize the number of stalls over treatment capacity.
- Existing maintenance activities focus on appearance and cleanliness. Maintenance teams will need training to service the MURT processing components.

Learn more: [Reinvented Toilet: Early Adopter Compendium](#), [Shared Toilet Facility Use Cases](#), [Operation & Maintenance of Community and Public Toilets in India](#), [Business Model Insights for Community and Public Toilets in India](#)

Learn more about this opportunity

Visit STeP's online [Resource Center](#), a living library of Reinvented Toilet market resources, to access over 50 market intelligence reports focused on on-site sanitation around the world. Not sure where to start? We can provide advice and research tailored to your needs.

Contact us: info@stepsforsanitation.org Visit us: www.stepsforsanitation.org

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