आवासन और शहरी कार्य मंत्रालय
भारत सरकार
MINISTRY OF HOUSING AND URBAN AFFAIRS
GOVERNMENT OF INDIA

स्वच्छ भारत
एक कदम स्वच्छता की ओर

· accessible · convenient · sustainable · robust ·
· hygienic · inclusive · private · ventilated ·
· comfortable · odourless · beautiful ·
· welcoming · aesthetic · gender sensitive ·

PUBLIC TOILETS

Global Insights on Planning and Best Practices



Central Public Health & Environmental Engineering Organization (CPHEEO)
MINISTRY OF HOUSING AND URBAN AFFAIRS (MoHUA)
2025

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PUBLIC TOILETS

Global Insights on Planning and Best Practices

July **2025**


BABY CHANGE FACILITIES
GENTLEMEN
City of Westminster
MON – SUN, 7.30am – 12.30am
City of Westminster

Introduction

You can tell a lot about a place from its toilets. Not just the quality of the toilet or how well it is maintained, but how they are conceptualized and designed, where they are positioned, and the way they are attended to and decorated, all give insight into the mindset of people. Toilets sometimes become a creative architectural and art project, or make a statement about the values and priorities of the venues, locations and communities they serve.

As India urbanizes and continues to clean and develop its cities, public toilets remain a challenge. Accessibility, maintenance, hygiene, odours, safety, and environmental pollution are all generally in the undesirable range, though good examples are emerging with some "aspirational toilets" coming online, and some public-private projects like inter-city expressways developing good rest stops with toilets. But there is a long way to go.

Good public toilets require multiple things to be put in place–not just the construction of toilets which itself is a challenge due to lack of space in dense cities, but long-term financing for good operations and maintenance, the right policy framework, trained workers, design and environmental sustainability, all have to be addressed simultaneously.

Many other countries have struggled with these issues in the past. And while these countries or cities may be very different from India in terms of governance systems, urban planning methods, institutional capabilities, budgeting and financing resources, and planning of roads and water / sewerage systems, there is still much that Indian cities can learn and adapt from these examples.

This report studied countries across the world that had found successful solutions to their public toilet problems, along five dimensions:

1. **Access** to toilets, ensuring city-wide, universal, convenient and safe access for everyone including those with physical difficulties
2. Good **Operations and Maintenance** to deliver a consistently good good user experience
3. **Technology** enabled Toilets that reduce operational costs, extend lifespan and ensure a good user experience
4. **"People's Toilets"** that and evoke civic pride, leading to a deeper sense of ownership
5. **Partnerships** where municipalities, local businesses, social organizations and Foundations come together to solve the problem

Further, this report studies toilets that meet one or more of the above criteria, as well as the policy, regulatory and institutional frameworks in multiple cities and countries that deliver the promise of good quality, inclusive, and sustainable public toilets.

We hope this study will help Indian Municipalities, social organizations and businesses to create new models to improve access to public toilets for every Indian.

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Case Studies | Innovative Public Toilets Across the World



01 Paris, France: **The Sanisette**

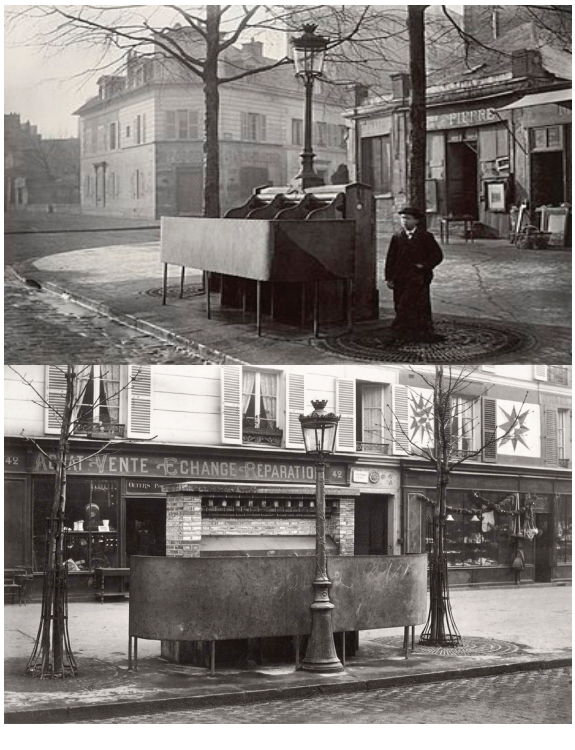


The Problem

In the 1980s, pissoirs (urinals) and public toilets were available in Paris, but were limited. Pissors were cylindrical urinals made of lightweight material and without any screen (or partial screen), while fee-based public toilets were usually found only at popular areas. Many parts of the city were unserved, and women in particular found it difficult to find toilets.

In the 1980s, decent public toilets in Paris were few, and inconvenient due to pricing, accessibility, and quality / cleanliness. This led to growing advocacy for more modern and hygienic public toilets, culminating in the introduction of sanisettes-self-cleaning toilets designed to improve accessibility and hygiene across Paris.

Due to growing population and tourists, demand for new public toilets remains strong in Paris. Accordingly, sanisettes have evolved to address the growing needs since the initial version from Beaubourg in 1982.



Historic Trivia:

The Pissoirs were introduced to solve public urination as early as the 1830s, and the urine collected from them was sold to tanneries. Later models were built of bricks and cast iron, and allowed posters and ads to be placed on them. These became popular across European cities and by 1930, Paris had over 1,200 of them. By the 1960s, their numbers had reduced and they were largely discontinued by the 1980s. Today, one remains as a in-use historic monument at Boulevard Arago. They can still be an option for cities in developing countries that struggle with men urinating on walls and sidewalks.

Objectives

1. **Accessibility and Hygiene:** Provide dignified, secure, affordable, accessible, and hygienic public toilets throughout Paris, especially in high-traffic areas to underserved sections such as women, but also in less busy areas across the city.
2. **Easy to Maintain:** Deploy self-cleaning technologies with minimal manual intervention to maintain high cleanliness standards while reducing costs.







The Solution

Over 420 self-cleaning sanisettes were installed across Paris, making public sanitation facilities widely available, free, and accessible to all, including those with disabilities.

The automated cleaning system sanitizes each unit after use and reduces costs of cleaning staff. These support environmental goals by conserving water and using rainwater, and some units are solar powered.



Budget & Charges

The City of Paris allocated €9 million (Rs 80 Cr) for the initial phase. Today, there are 420 sanisettes owned by JC Decaux, and the city pays €1,192 (Rs 1,10,000) per unit per month as rent,. In all, €6 million (Rs 55 Crores) is paid each year to offer free public toilets.

When they were first introduced in 1985, the fee was 1 Franc per use. In 2006, it was made free to use.





Key Features

- **Quantity / Location:**
  - 435 units covering all neighborhoods of the city
  - Strategically placed in high-footfall areas–but these are not enough and lines are often seen outside
  - Newer models have separate urinals to increase capacity
- **Design and Sustainability:**
  - Standard design and colour so it is easily recognizable
  - Automated cleaning and disinfection of the toilet, floor, and walls after each use–takes 30 seconds
  - Early models were too small so the size was increased
  - Rainwater harvesting systems reduces water use by 30%+
  - Water conserving devices–new models use 65% less water than older ones
  - Solar panels (in some locations)--new models use 33% less electricity than older ones
  - Drinking water fountain and handwash facility outside
- **Accessibility:**
  - Free to use
  - Open by the push of a button
  - Most are available from 6 am till 10 pm with some available 24/7
  - Wheelchair-accessible
  - Unisex
  - Braille signage for visually impaired
  - The toilet has a maximum 15 minute cycle so people don't stay in too long and for safety
  - Average use is 2.5 minutes
- **Operations:**
  - A service person visits three times a week to inspect and change soap, toilet paper, empty wastebin etc
  - Servicing is now done on electric bikes–entire system uses renewable energy
  - The outside is washed once a week
- **Used by 3 million people each year. Free of charge.**

Contract between City of Paris and JC Decaux

JCDecaux is responsible for the following activities:

- Installing Sanisettes across Paris in accessible and useful locations
- Regular maintenance, including cleaning, servicing, and repair–making sure all systems work
- Periodically upgrade the toilets to meet evolving standards for hygiene, environmental efficiency, and accessibility for all persons
- Sustainability: Eco-friendly materials must be used, and water and electricity use regularly reduced through new technologies and devices
- Advertising Rights: JCDecaux is given ad rights on other street furniture in Paris like bus shelters and billboards to offset the costs of running the Sanisettes, but not on the Sanisettes themselves
- Duration: The contract has a duration of 15 years, and was renewed and enhanced in 2022

User Experience

- **Feedback System:** Users can report issues through hotlines and websites
- **Finding Locations:** An online map and mobile apps managed by JCDecaux helps people find nearby Sanisettes
- Due to the automated cleaning, the experience is usually good and safe
- There are often waiting lines in busy areas as there are too few units relative to the need





02 Tokyo, Japan: **The Tokyo Toilet Project**

The Problem

Although Tokyo is known for its tremendous civic sense, high quality public infrastructure and cleanliness, residents said that many on-street public toilets are dirty, dark, smelly, un-inviting and even scary.

The city is very commercial and in most areas, people can find malls, shops, restaurants or metro stations where they can use the toilet–but these toilets may not be comfortable for everyone to use, and are not available at all times or the day and night, or on all days of the year. Therefore, the need for better public toilets was still a felt need.

Tokyo took the solution to an entirely different level!

Key Objectives

The Nippon Foundation said that the mission was to *"apply innovative design to make public bathrooms accessible for everyone regardless of gender, age or disability, with a goal that people will feel comfortable using these public toilets, and to foster a spirit of hospitality for the next person."*

The Solution

The aspirational Tokyo Toilet was conceived by an entrepreneur, Koji Yanai, founder of retailer Uniqlo, and funded by the Nippon Foundation, a philanthropic foundation.

Shibuya ward of Tokyo was selected as the site as it would be the most visible area for the project and challenging location to execute in. It is a major commercial and nightlife district with two of the busiest railway stations in the world, covering 15 sq. km. (BKC in Mumbai is 4 sq. fm.) and with very high population density. There are about 186 public toilets there, and while the majority of them are clean and hygienic, some have a bad perception amongst people.

Tokyo Toilet was part of a larger urban redevelopment effort across Tokyo to upgrade the city for the 2020 Olympics. It was launched in 2016 and completed in 2023 to change public perception of on-street public toilets.

Project Design

The Project built 17 toilets with the following goals:

1. To create high quality public toilets that are clean and safe
2. To promote the "Omotenashi culture," which is courteous hospitality
3. Creative design–the toilets should actually elevate the public spaces they serve
4. Use Innovative technology to solve practical issues
5. Toilets must be inclusive for everyone







Koji Yanai who conceptualized the project, actually directly reached out to designers across the world to invite them to design these 17 toilets. Each has a different design and different facilities, located in or near parks, train stations, and busy roads, but all had to:

1. Comply with laws and standards set by the government
2. Collaborate with Japan's luxurious washlet manufacturer TOTO, who provided the technical layout and toilet equipment
3. Include at least one universally accessible toilet stall.

Inclusive:

All are wheelchair accessible, have baby care facilities, and are ostomate-friendly (for those using pouches for urine or stool).

Sustainable:

Some use natural materials and incorporate energy efficiency measures. More could have been done on the sustainability front.

Partners:

Shibuya City Government (Municipality) and Shibuya Tourism Association: Overall Management

Japan Toilet Association : Project Direction

Nippon Foundation: Funding

Toto: Toilet equipment and layout

Daiwa House: Toilet design and construction

Tokyo Sanitation Co. Ltd.: Regular Cleaning and Maintenance

Amenity Network: Monitoring performance

Some of the toilets are featured below

Sasazuka Greenway



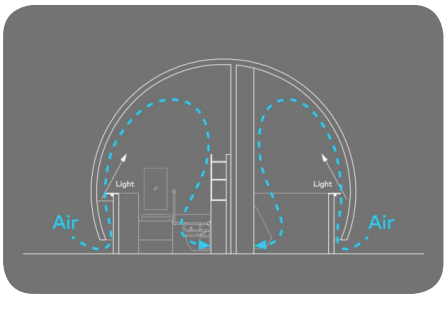


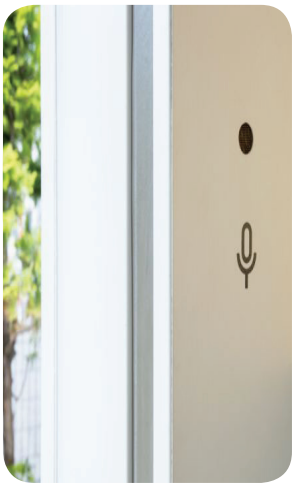
Light-weight construction using weather resistant steel cylinders. A wide entrance to create sense of safety.



Nana-gō-dōri Park

Voice command operated to open the door and flush







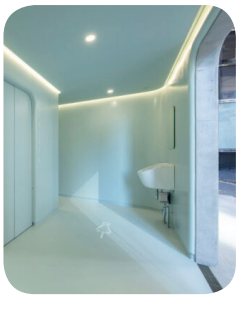
Urasandō Neighborhood



"The vernacular Japanese architecture, including the copper Minoko roof that is used for shrines and temples–triggering a sub-conscious feeling of comfort, peacefulness and trust, amid its busy, hypermodern location"







Nishihara Icchōme Park



Bright and open with frosted glass, passive design that glows in the dark like a lantern

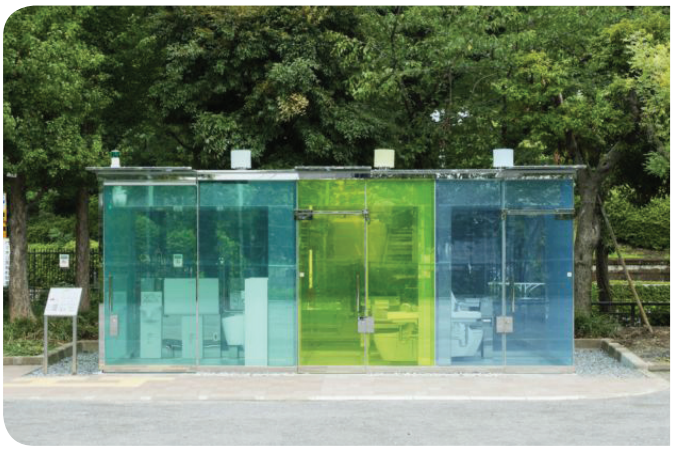


Haru-no-Ogawa Community Park





Fully transparent to ensure cleanliness and safety. The glass turns opaque when door is locked. Uses lighting, colour and motion sensors.





Hatagaya Neighborhood



"a toilet with open space that can be used for exhibitions, pop-up kiosk, information centre or public meeting place"







Nabeshima Shōtō Park

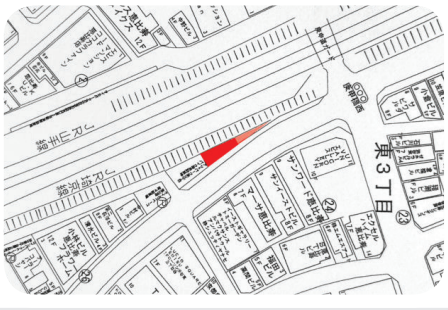


"A Walk in the Woods": the five huts are designed with different layouts and interiors, made using cedar wood–open, breezy, accommodating people of different race and cultures, a design appropriate for post-pandemic times



Higashi Sanchōme

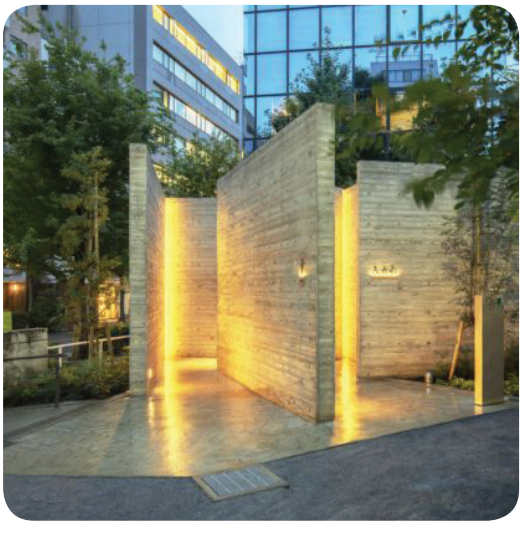


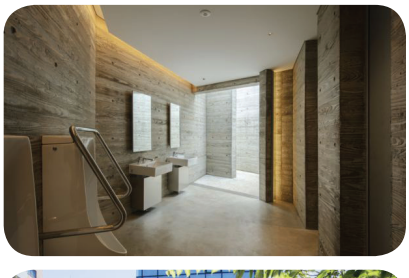


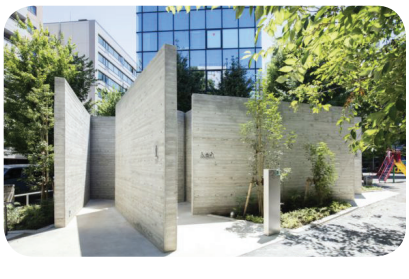


A unique geometry to fit an odd-shaped site, this toilet has three separate spaces that redefine the way a public toilet establishes personal space. The design was inspired by Origata, a traditional Japanese method of decorative wrapping, a symbol of gift-giving that embodies the spirit of hospitality towards Shibuya ward's multinational visitors.

Ebisu Park







Early Japanese toilets were simple huts above the river, made of wood and hard soil. This toilet is a maze of 15 board-marked concrete walls, creating a feeling of walking through a playground game

Financials

The entire project cost $13 Million (Rs 100 Crores) or an average of Rs 5.9 Crores per toilet.

- Maintenance is supervised by the Shibuya City Tourism Association, and conducted by two organizations:
- Tokyo Sanitation Co. Ltd. does the cleaning and maintenance
- Amenity Network is a consultant who Inspect the toilets each month to check for breakage, odours, stains and ventilation issues

Operating Model

Three times a Day	**Dry Cleaning** Thorough cleaning and wiping, checking for stains and damage
Once a Month	**Wet Cleaning** Use special solvents to remove accumulated water stains, black spots, and overall yellowing
Once a Month	**Regular Inspection** Check comfort level, urinals, air deodorization, all equipment, ventilation, and ATP wipe test
Once a Year	**Special Cleaning** Deep-cleaning of exterior walls, lighting fixtures, ventilation fans, roofs etc
Once a Year	**Annual Inspection** Measure ammonia, illumination, temperature, and humidity

Cleaner's Voice:

"Public restrooms can become dirty if they are not properly sanitized on a regular basis, but people find it hard to spoil something that has been carefully cleaned. We believe that, by keeping the toilets clean every day, users will come to appreciate their cleanliness and think about others who will be using the facility after them."



Awards and Recognition

- The One Show/Design/Spatial Design / Architecture/GOLD (2023)
- The One Show/Design/Innovation in Design/ SILVER (2023
- CLIO Awards/Design/ SILVER(2023)
- Cannes Lions International Festival of Creativitiy / Design / SILVER LION (2022)
- Most Influential Projects (2021)
- Good Design Award (2021)
- Nikkei xTECH / Nikei Architecture 'Editors' Picks 10 Great Architects of 2021 (2020)
- World Toilet Organization (WTO) Hall of Fame Award (2020)
- EDIDA Japanese Social Design Project Award (2020)

GOOD DESIGN AWARD 2021
グッドデザイン大賞

ONE SHOW

A movie, *Perfect Days*, based on the life of a public toilet cleaner, was released in 2023. It was nominated for the Academy Awards under best International feature film category, and won a lot of International acclaim in film festivals at Cannes and Montchair. Interest in these toilets and public toilets in general surged after this film.





Lessons for India

- Even a few very good quality public toilets can increase interest in and quality of public toilets in the city
- Great quality toilets need to be properly planned and funded
- An entire ecosystem of players is needed to design, build and maintain public toilets well
- A separate inspection agency is required to ensure quality
- Famous designers and architects will associate with a high quality project– and elevate the toilet and neighbouhood, and even the city
- *https://eu.toto.com/uploads/media/Mediainformation_Tokyo_Toilet_EN.pdf*
- *https://tokyotoilet.jp/en/*

03 Malaysia : **The Clean Toilet Campaign**

Malaysia is a culturally diverse, multi-ethnic country with a population of 34 million, and a major tourist hub with over 20 million annual visitors. Located in SE Asia, its climate is warm and humid for most of the year, much like India.



The Problem

There are over 25,000 public toilets in Malaysia – mostly in malls, highways, government buildings, parks, and at tourist places. Many are smelly and not clean, due to lack of maintenance, and no soap and paper. Vandalism and damage is common, pointing to lack of civic behavior. Unhygienic toilets also increase the risk of diseases, and can be a public health and environmental pollution hazard. In a poll by The Sun, tourists rated public toilets as 5/10.

The Solution

The government recognizes that public toilets affect tourist convenience and perception, and therefore, improving public toilets for tourists and citizens became an important goal.

The ***Clean Toilet Campaign*** was launched around the 'BMW-SE' concept:

Bersih : Clean
Menawan : Attractive
Wangi : Pleasant Smell
Smart, and
Environmental Friendly.

Initiated by the Ministry of Housing and Local Government (KPKT), it is implemented by 155 local authorities across the country, it has the following goals.

1. **Improving Public Toilet Standards:** Set higher standards for cleanliness, accessibility, and overall hygiene by building better toilets, maintaining them well, and ensuring adequate soap, toilet paper, and clean water
2. **Cleanliness and Hygiene Awareness:** Educate the public about maintaining cleanliness
3. **Public-Private Partnerships:** Encourage collaboration between the government, local authorities, and private businesses to meet international hygiene standards.
4. **Inclusivity:** Public toilets must be accessible to everyone, including people with disabilities - hence ramps, grab bars and other such features must be included

The Partners

The Role of the Government and Local Authorities:

The initiative is often driven by tourism and local government agencies, such as the Ministry of Tourism, Arts, and Culture (MOTAC), as well as local councils. They work together to establish clear guidelines, provide funding, and promote the program to both public and private sector entities.

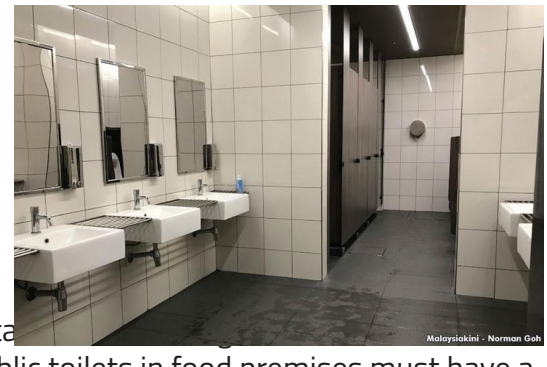
Operating Model

Monitoring and Rating:

Every public toilet is given a one-to-five-star rating based on the "Guidelines for Management and Star Rating of Public Toilets in Malaysia 2024".

The State Government and Municipality together conduct a detailed inspection and evaluation of all public toilets every six months.

The evaluation covers eight aspects including functional, clean and undamaged toilet bowels; sufficient liquid soap; clean and unclogged drainage; covered, clean and undamaged rubbish bins; environment structure; and overall cleanliness.



Five-star: Very clean
Four-star: Clean
Three-star: Satisfactory
Two-star: Moderately clean
One-star: Not clean enough
No star: Dirty

Any toilet owner who is given a two-sta immediate steps. Starting 2025, all public toilets in food premises must have a 4 or 5-star rating and achieve "BMW" standards before the premises' business licence can be renewed.

User Feedback and Tracking:

The MyWC app was developed so people can easily find the nearest public toilet. The app displays user rating and other information like timings etc.

The "Toilet of the Year Award" organized by Ministry of Housing and Local Government aims to incentivize toilet operators and local authorities to raise the quality, and also publicize the BMW-SE standards.

There are five categories (Hotels; Shopping Centres; Highway Rest Areas; Petrol Stations and Restaurants) with prize money of RM 10,000 (Rs 2 Lacs). 345 entries were received. Two categories (Schools and Government Buildings) will be added in 2025 and the award doubled to RM 20,000 (Rs 3.9 Lacs).

One of Ministries stated that *"My vision is not only to ensure that the country's public toilets are world-class, but this initiative is also aimed at developing the toilet equipment industry. Just like Korea has COWAY and Japan has Toto, we hope that Malaysia will one day produce world-class brands in this industry."*



Budget for 2024:

Build "BMW-SE" Toilets: RM 300 Million (Rs 578 Crores)

Repair, Maintain Toilets: RM 150 Million (Rs 289 Crores)

It is notable that the maintenance budget is very significant, equal to 50% of Capital Expenditure. This is partly because it includes the maintenance of existing public toilets as well, but also signals that good O&M can be expensive and must be properly provided for.

Example: Smart Toilets / IoT toilets at Sunway Pyramid Mall (Klang Valley near Kuala Lampur)

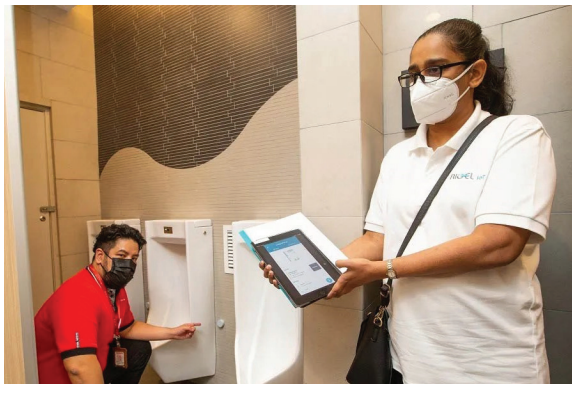
This toilet was installed by Sunway Pyramid at their mall, but developed by Rigel Technology of Singapore. The technology included:

- Sensor and monitors are attached to consumables such as soap, paper holders, paper towel dispensers and waste receptacles, as well as the main fittings including taps, urinals lavatories, and push valves. These are used to ensure adequate supply of all materials for the convenience of users.
- Environmental monitoring features for air quality, temperature, and humidity, to ensure comfort
- People counter and interactive feedback panes to track usage and customer experience
- Ammonia sensors to detect foul smells in a timely manner

All this data is transmitted to a cloud service to be analysed, and so immediate and long-term service and maintenance decisions can be taken in a timely, proactive manner by the Facility Management team, who can monitor washroom performance, water consumption, usage patterns and other data to detect anomalies and faults. This ultimately reduces downtime, lower costs and saves water and electricity. It also maximizes workforce productivity, as the cleaners get notifications for any urgent attention that is needed.







Lessons for India

1. Attention must be paid to all kinds of public use toilets for best coverage and service
2. Create clear Rating Standards and ensue regular assessments with consequences
3. Awards to boost interest and improve quality
4. Building good quality, well-maintained public toilets changes perceptions and behaviour

04 Cape Town, South Africa

Cape Town is the legislative capital of South Africa, one of its oldest city, cultural diverse and economically unequal with around 220 informal settlements.



The Problem

The city did not have enough public toilets (only 79 in all), and these are unevenly distributed, usually of poor quality with water shortages, no toilet paper and poor maintenance, and open only during normal business hours.

The Solution

Established in 2022, the Cape Town Public Toilet Project provided 14 clean public toilets at five locations for people who live, work in or visit the city center:

- **Accessibility:** Ten of these are open late into the night (7am – 11pm) seven days a week, serving the "night-time economy"
- **Flexibility:** 8 units are mobile while 6 are fixed.
- **Inclusive:** Homeless people in the area are beneficiaries, as they cannot use toilets in private establishments like restaurants or shops
- **Hygienic**: The toilets are cleaned manually between use.
- **Job creation:** The project has created 19 jobs, including for people from Khulisa's Streetscapes work-based rehabilitation program—and helps them rebuild their lives once they have a job and steady income
- **Usage:** Over 450,000 people have used the facilities since they were installed—a huge success!

The Partners

The project is a joint venture between the Cape Town Central City Improvement District (CCID) which was launched in 2022, the City of Cape Town (Municipality), and a NGO called Khulisa Social Solutions.

Financials

- The toilets cost Rs 12-20 Lacs each to install and set up
- Maintenance costs Rs 75,000 – 1,50,000 per month per facility, depending on traffic
- Currently, the City of Cape Town pays for these
- In the longer term, corporate sponsorship or advertising can provide sustainability
- **Scaling up and the Future:** Similar kind of projects, over past 2-3 years, are scaled to other places, around 6-7 Locations, in and around Cape Town to improve accessibility to local people and provide jobs. Currently these projects are funded by City of Cape Town.
- While these toilets are very simple and basic, they are well maintained and serve a deep need. **This example shows that under good management, even simple toilets at low cost can meet the public need.**







05 Singapore



The Problem

Singapore is a multi-cultural and diverse city with 5.6 million people, an economic powerhouse of Asia with large migrant populations from across the world, and over 15 million tourists visiting each year. It is known for high quality, clean, efficient and convenient public infrastructure and public spaces with strict rules and fines—and therefore, compliance by residents and tourists.

The city has over 5,000 public toilets but a survey found that public toilets in coffee shops and open markets / hawker areas, which total nearly 2,500 toilets, were dirtier than other public toilets.

It is useful to note here that like many cities globally, Singapore requires by law that any private, consumer-facing business like restaurants, cafes, retail outlets, convenience stores, mall, petrol pump etc, must have well-maintained toilets which can be used by customers as well as non-customers. Thus, these private toilets are actually public toilets for the city. Thus, improving the toilets at coffee shops and open markets, is indeed improving public toilets of Singapore.

The Solution

The Toilet Improvement Programme (TIP) was launched by the National Environmental Agency (NEA) in Oct 2020 and ended in Oct 2021, with a focus on improving toilets at coffee shops. A Public Toilets Task Force was convened to study and recommend solutions to improve the cleanliness of public toilets

Coffee shop owners and operators could get up to 90% co-funding, capped at $45,000, to improve their toilet designs, install sanitary fittings or adopt technology that improves cleaning and maintenance of their toilets.

The toilet cubicle walls depicted bathroom tiles and shelves with potted plants, as well as posters reminding the public to keep toilets clean "like you do at home".

Volunteers were stationed outside toilets to thank and hand out rewards - a packet of wet wipes - to people who displayed good etiquette, such as flushing the toilet and not flicking water onto the floor after washing their hands. Such people are dubbed SG Clean Heroes.

In November 2023, the Clean Public Toilets Campaign 2023 was launched by NEA together with the Public Hygiene Council (PHC), Restroom Association Singapore (RAS), and Singapore Kindness Movement (SKM).

The campaign, themed, "Are you nice when no one's around? Do it right for everyone", appeals to the social consciousness of citizens and encourages the socially desirable actions of 'Clean, Flush, Dry, Bin' by users of public toilets. The campaign draws parallels to the practicing of acts of kindness without reward and recognition, and nudges individuals to be more aware of their actions behind the closed doors of the toilet cubicle.

Along with the TIP and Clean Public Toilets Campaign, six hawker and food market public toilet underwent repair and refurbishment.

New design features were incorporated:

- Sufficiently illuminated and ventilated spaces
- Doorless toilet entrances that nonetheless maintain privacy
- Anti-slip floor tiles

Sustainable and hi-tech features:

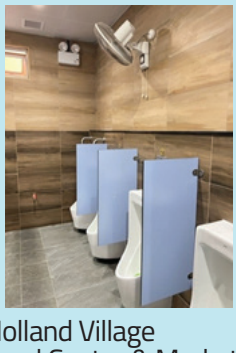
- Sensor taps
- Ceiling / Wall fans / Floor fans (to dry the floor quickly)
- Centralised soap dispenser reservoir system
- Singapore Green Building Council-certified hand dryer

Toilet Improvement Programme

The TIP has been moderately successful so far. Cleanliness scores have improved--coffee shop toilets jumped from 277 to 3.60 points out of 5.0, hawker centre toilets from 3.02 to 3.65 points, and bus interchange toilets increased from 3.52 to 3.88 points.



Senja Hawker Centre



Holland Village
Food Centre & Market



Bukit Panjang
Hawker Centre & Market



Dunman
Food Centre



Categories of Public Toilets

Toilets are usually categorized based on their location orr technology, and there are rules governing how each of these are planned for executed and operated..

1. Transit Area Toilets

- **MRT (Metro) Stations:** All major MRT stations have toilets maintained by SMRT and monitored by NEA
- **Bus Interchanges:** At major one

2. Institutional Area Toilets

- **Government Buildings:** Toilets for staff and visitors
- **Universities and Hospitals:** Toilets on campus for staff, students and the public

3. Public Toilets

These are freely available to the public at popular destinations. For example.

- **Gardens by the Bay:** Eco-friendly toilets with water-saving fixtures, maintained by park authorities.
- **East Coast Park:** Public toilets along the 15km coastline are well-maintained and eco-friendly

4. Community Toilets

- Housing Development Board (HDB) Estates have toilets for residents and visitors in community areas, maintained by town councils

5. Tourist Area Toilets

- **Orchard Road:** Public toilets in shopping centers and along major roads in this key tourist and shopping area—modern, well-maintained, and often pay-per-use
- **Sentosa Island:** Key tourist spots have free or pay-per-use toilets

6. Portable Toilets

- Temporary toilets are installed during major events like the National Day Parade and Singapore Grand Prix for the large crowds. They are provided and maintained by contracted private companies.

7. Cost-Effective Toilets

- **Hawker Centres and Markets:** These are durable, budget priced but hygienic, and regularly cleaned by designated teams

8. Self-Cleaning Public Toilets

- **Sanisette Toilets:** Automated, self-cleaning public toilets in some high-traffic locations and parks, inspired by Paris

9. PPP with Multi-Use Facility

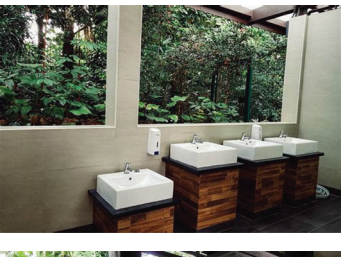
- **Loo Café Model:** A café-public toilet hybrid in areas like Clarke Quay, where private parties manage the public toilets along with food kiosks rights. Revenue from the kiosk supports the toilet, which is usually free

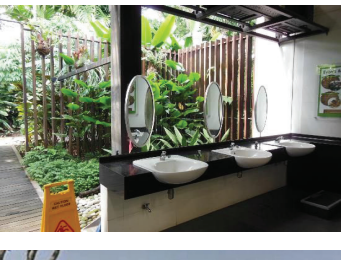
Key Players

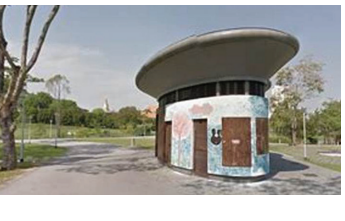
- **National Environment Agency (NEA):** Oversees public health and environmental policies, including public sanitation standards
- **Urban Redevelopment Authority (URA):** Ensures that public toilets are integrated into urban planning and zoning regulations
- **Restroom Association of Singapore (RAS):** A non-profit organization that works on public toilet standards and awareness, including the Happy Toilet Programme.
- **World Toilet Organization (WTO):** Partners with governments globally to promote innovation and standards
- **Private Cleaning Companies:** Businesses contracted by the government or private entities to maintain public toilets in commercial areas, transport hubs, and public spaces (e.g., ISS Facility Services).
- **Shopping Mall and Business Operators:** Many public toilets are in malls or shops, restaurants and cafes, and are managed by the owners of these businesses

Notable Toilets and Actions









Botanic Gardens, Singapore

The Singapore Botanic Gardens is a UNESCO World Heritage site and one of the city's most visited attractions. Public toilets within the gardens are designed with a focus on sustainability and are well-integrated into the lush, natural environment.

Key Features:

- **Eco-Friendly Design:** Toilets are built with green building materials and feature water-saving fixtures like dual-flush toilets and sensor-activated taps to minimize water use
- **Natural Ventilation and Lighting:** Natural ventilation reduces the need for air-conditioning and skylights and open-air structures maximize natural lighting, reducing electricity usage
- **Aesthetic Integration:** The toilets blend seamlessly into the lush surrounding gardens, thus becoming a continuation of the visitor experience and improving it
- **Accessibility:** Fully accessible facilities for visitors with disabilities, including ramps and wide doorways.

The toilets are managed by NParks, with regular cleaning and maintenance outsourced to private companies that specialize in eco-friendly facility management.

Bishan-Ang Mo Kio Park

Automated Self-Cleaning Public Toilets ensuring high standards of hygiene and efficiency in this large urban park, known for its innovative design and integration with natural waterways

Clarke Quay

This historical riverside quay has many restaurants and vibrant nightlife. Due to the large number of visitors, public toilets are part of a multi-use facility, integrated with small cafes or kiosks, offering a PPP model that helps sustain the toilets through revenue generation.

Eco-Friendly Toilets in Parks

As part of the ***Green Plan 2030,*** eco-friendly public toilets using water-saving and energy-efficient technologies are being installed in parks like East Coast Park and Gardens by the Bay.

The Happy Toilet Programme

Developed and implemented by Restroom Association Singapore (RAS—a non-profit that advocates for clean public toilets), it is supported by the National Environment Agency (NEA—the main government agency responsible for the country's environmental protection, public health, and sustainability efforts). and the World Toilet Organization.

RAS has been working with toilet owners in Shopping Centers, Industrial and Commercial Buildings, Parks, Hawker Centres / Markets, Tourist Attractions and Petrol Stations. The main goal is to grade all public toilets on a five-star rating. The dream is to make public toilets another icon of Singapore's star quality.

The star-grading focuses on five themes- Design, Cleanliness, Effectiveness, Maintenance and User Satisfaction. A **loo map directory** lists all the ***Happy Toilets*** in Singapore. So far, about 1068 toilets are registered as happy toilets.

Toilet Exhibition

The World Toilet Organization (WTO), founded on 19th November 2001, is a global non-profit committed to improving toilet and sanitation conditions worldwide. WTO and the Singapore Science Centre have launched a Toilet Exhibition whose main game is to improving awareness about proper hygiene and sanitation around the world as well as the science and biology of human waste. This is open to all age groups, and the audience learns about Singapore's journey to greater hygiene and the improvements made to its sanitation system over the years.





Guidelines and Regulations

1. **Code on Accessibility in the Built Environment (BCA):** Ensures that all public toilets are universally accessible, with ramps, handrails, wide doorways etc
2. **Environmental Public Health Act (NEA):** This sets standards for cleanliness and hygiene
3. **Happy Toilet Programme (RAS):** A rating system that assesses public toilets on cleanliness, design, and user satisfaction on a scale of 1 to 5, with ratings displayed for the public
4. **Planning and Zoning**
   - **Categorization of Toilets and Approach for Planning**
     - Public toilets are categorized based on location (transit hubs, public parks, malls, tourist zones) and user needs (families, disabled, elderly)
     - Each toilet is specifically designed to meet the needs of the surrounding population and footfall
   - **Site Selection Process for Toilets**
     - Toilets are placed in high-traffic locations, chosen to ensure easy access from transport nodes and public spaces.
5. **Success Factors**

   a. **Adequate toilet facilities**
   It is a legal requirement for public toilets to be equipped with basic toilet amenities:
   - Adequate liquid soap and paper towels at all times
   - Adequate supply of toilet paper in each cubicle
   - Litter bins inside toilets
   - Adequate number of hand dryers as close to the basins as possible
   - Providing a sanitary disposal bin in each female toilet cubicle
   - Ensuring that toilets are well-ventilated. Any mechanical ventilation system used should be cleaned and serviced regularly
   - Owners are also encouraged to also provide air deodorisers and sanitisers for toilet and urinal bowls

   b. **Proper cleaning and maintenance of public toilets**
   Owners should have a proper cleaning schedule and carry out the following maintenance activities regularly:
   - Ensure all toilet facilities are in good working order
   - Keep toilets clean, and the floor dry, at all times
   - Clean and sanitise toilet bowls, urinals, and basins
   - Clean mirrors, doorknobs, and any other surfaces where there is contact with toilet users
   - Spot-clean walls, ledges, vents, and partitions where dirty
   - Check for leaks in sanitary pipes, especially at the joints. Any leaks or defects should be rectified immediately
   - Use an inspection card to monitor the daily maintenance of the toilet.
   - Schedule more frequent cleaning during peak hours

Grievances

Users can provide feedback through the 'OneService' mobile application.

Awards

The Lets Observe Ourselves (LOO) Awards, initiated by RAS, recognises organisations and individuals who have contributed to help Singapore achieve a world recognised standard of restroom cleanliness, in three categories - Organisation, Cleaning Industry and Individual.

Good toilet design, good practices in maintenance and cleanliness, upgrading skills to cleaners, right equipment to cleaners, cleaners' welfare, and good customer service are some evaluation criteria.

Conclusion

Singapore has created multiple products and operating models to manage and maintain public toilets at a very high standard, emphasizing sustainability, user accessibility, revenue generation, and public-private partnerships. Singapore's holistic approach provides valuable lessons for India, where similar models could be adopted in urban parks, tourist destinations, and commercial districts.

Lessons for India

1. Private, consumer-facing businesses should have good toilets that are open to the public
2. Star rating for public toilets to promote hygiene and health
3. Awards for recognising good toilets

06 Helsinki, Finland: **The Huussi**

The Problem:

Helsinki in northern Europe is one of world's most livable city, known as an environmental and sustainability pioneer, and focussed on building strong social connections.

The city has more than 50 free public toilets and spends €1.5 million annually on maintenance. While public toilets are not a problem in Helsinki, the city has been pushing the sustainability agenda by experimenting with various types of unconventional toilets.

The Solution

The "Huussi": Off the grid, waterless composting toilet

Flushing uses 30% - 40% of urban water supply. The Huussi is a modern and comfortable outhouse-style natural dry toilet that was launched in 2021. It does not use a flush and the faecal waste accumulates in the toilet and is batch-composted into organic fertilizer, as an alternative to carbon-heavy manufactured nitrogen fertilizer and mined phosphorus widely used in farming today.

The toilet is odourless and is used like a regular toilet—only without the flushing. Currently, these are deployed outdoors on nature trails, public parks, conservation areas, and golf courses. The faecal matter collects in a container and the composting process begins. The container is taken away once full and is replaced with an empty container, and the composting process continues until completed.

Stakeholders: City of Helsinki, Biolan (Finnish manufacturer)







The Huussi type toilets are very simple to build and operate, and could be idea for park and garden areas of large cities, and for smaller cities and per-urban areas.

Helsinki has 50 free city toilets, most of which are automated or semi-automated modern toilets and open 24 hours. Almost all can be used by wheelchair users. The toilets are cleaned between one to three times per day, depending on usage levels, time of day., day of week and time of the year– depending on usage levels.

The cist spends nearly EUR 1.5 Million (Rs 14 Crores) each year to maintain public toilets.

07 Hamburg, Germany: **"Urinal Sheds"**

Hamburg is Germany's second-largest city with 1.9 million residents, covering 755 km^2. It has Germany's largest port and is known for its vibrant culture, and therefore is the commercial and entertainment center for the 5.1 million people who live in its metropolitan area as well as tourists.



The Problem

In certain parts of the inner city, like near nightclubs and the football stadium, it was very difficult to maintain public toilets because:

- Rowdy or drunk people would vandalize or dirty the toilets, and
- The capacity was insufficient to cater to high peak traffic during lunch breaks or after football games.

As a result, private parties were unwilling to operate such toilets. Further, costs kept increasing due to the water and electricity used. One study of 207 toilets in 1994 showed that only 132 (64%) were fully operational. There were 1,200 public toilets in all and they cost over Euro 1.4 million annually to maintain.

The Solution

The city improved its public toilets with four models:

1. high-tech automated toilets that re-used flush water up to 50 times;
2. toilets with attached retail kiosks;
3. toilets in public transit locations; and
4. toilets in government buildings.

Waterless urinals were introduced in all of them to save water.

Most public toilets charge €0.50 (Rs 45) per use, but users gets a discount voucher that can be redeemed at local retailers.

The innovation, however, are the 11 'Urinal Sheds' built in high-traffic areas between 2003 - 2006.

Key Features & Benefits

1. **Small footprint:** Only 2.5m x 2m, can be easily built anywhere and much smaller than full toilets
2. **Waterless:** Saves water, wastewater generated, and costs–but no handwashing is a hygiene issue
3. **Partly transparent "See-in" design:** Provides privacy but discourages misuse and vandalism

4. **Unmanned Operations:** Reduces labor costs
5. **Vandalism-proof:** Designed so parts can be removed only with special tools; simple but robust construction with high quality parts
6. **Urine Storage:** Urine is captured in underground GRP tanks (glass-fibre reinforced plastic, 2,500 Liters) and can be used to make fertilizer. This also reduces nitrogen in the wastewater, which is hard to remove and leads to eutrophication in natural water bodies. The tanks have an overflow into the sewer network, if not emptied on time.
7. **Trough-style urinals:**
   - Cheap to build with rounded corners so it is easy to clean
   - Made of durable materials for longevity
   - 2m wide for 3 people, 2 feet deep to prevent splashing
   - Have a flat rubber pipe at the center outlet drain which collapses and closes to block odours returning from the storage tank, but open up when the urine flows through it





Environmental Impact:

- **Water Conservation:** Significant reduction in water used
- **Energy Savings:** Energy is used to pump water, and at STPs–these toilets eliminate both needs
- **Reduced Pollution:** No wastewater that can pollute the environment, and removes nitrogen from water bodies

Financials and Operating Model

- Each toilet cost Euro 35,000 - 45,000 (INR 31 - 41 Lacs) of which the underground tank and foundation was 75%. High quality materials were used, else costs can be much lower.
- Decaux was the outsourced service provider, paid Euro 9,500 per urinal shed per year (Rs 8.5 Lacs) for complete O&M–cleaning twice daily, replacing old or broken parts, cleaning any rubbish thrown by people etc.
- The municipality empties the urine storage tanks (though private operators) and take the urine to the STP–though it can be used in agriculture also
- The municipality conducts a thorough inspection every 3-4 months

Lessons for India

- Urination is a big problem–well designed urinals can be low-cost and easy to build. Building along walls further reduce costs
- Full-time supervisor is not needed–so O&M cost reduces significantly
- Waterless urinals are easier to maintain–and are eco-friendly
- But regular maintenance is needed to ensure they do not smell–outsource to a good company
- Voucher system used by regular toilets can bring in advertisers and financial support

08 China: **The Toilet Revolution**



The Problem

In the early 2000s, China faced significant sanitation issues in both rural and urban areas. From the early 90's, China started subsidizing six different types of sanitary toilets in rural areas, so that over 50% of the rural population had safe sanitary toilets. On the urban front, while less than 20% of people didn't have sanitary toilets, the quality of toilets and treatment of sewage and faecal sludge was abysmal, leading to water body pollution and public health crisis. A leading reason many tourists cited for not wanting to visit again was the unhygienic, filthy, anxiety-inducing, and often unavailable public toilets.

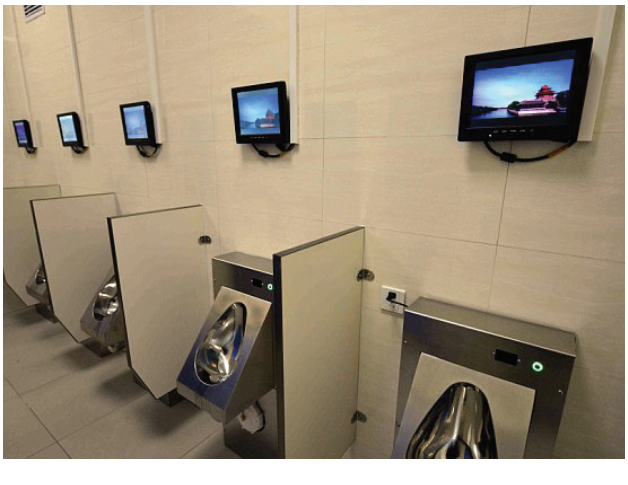
The Solution

In 2015, Chinese President Xi Jinping announced a "Toilet Revolution," a government campaign aimed at modernizing China's toilets. In urban centers, the primary objective was to boost tourism by improving public toilets. In rural regions, the aim was to improve health and environment conditions.

Over $140 million from the Ministry of Finance (Rs 1,100 Cr) and about $3 billion from municipalities (Rs 25,000 Cr) was invested, and by 2017, 68,000 new public toilets had been constructed and another 64,000 were planned by 2020.

Public toilets were often poorly constructed, not maintained well, and posed health and environmental hazards. The "Toilet Revolution" initiative for civilized tourism targeted modernization, accessibility, and cleanliness in public restrooms nationwide.





The Outcome

There are two ways to measure the outcome of the Toilet Revolution:

- Counting the number of toilets built, coverage, technology used, and budget spent
- The second-order outcomes, such as improved health, better workforce productivity and school attendance and performance, resource recovery from the excreta, and the progress China made in SGDs and MDGs.





China developed a country-wide standard for toilets, and focused on six targets / outcomes:

1. **Numbers of toilets retrofitted / built**
   - **Urban China:** Over 68,000 in the first three years + over 60,000 in the next few years
   - **Rural China:** Over 47 million upgraded or built, resulting in >73% population (90%+ in some regions) having flush toilets by 2022
2. **Improvement in labor productivity:** A reported 7%+ improvement in the time available for productive labor per day due to time saved in cleaning and maintaining unsanitary toilets, and reduced sanitation-related diseases, such as diarrhea. Women particularly benefited from this
3. **Achieving SDG 6** (clean water and sanitation for all), **SDG 3** (Good Health and Well-being–by reducing sanitation-related diseases), and **SDG 11** (Sustainable Cities and Communities)
4. **"Civilized Tourism:"** While improvement in the tourism sector cannot be fully credited to the Toilet Revolution, there was a 20% increase in visitor satisfaction due to improved public toilets
5. **Environmental Impact:** Many rural toilets used composting systems, which reduced water usage by up to 30%, and also reduced environmental pollution from untreated wastewater
6. **Raising public awareness** about sanitation and hygiene, and encouraging citizens to demand and maintain better sanitation standards across the country

Innovations

The Toilet Revolution either helped developed, or to scale up, several innovative solutions:

- **Water-saving technology:** Water-efficient flush systems and dry toilets
- **Eco-friendly materials:** Recyclable materials to build toilets, and energy-efficient designs
- **Mobile toilets:** Especially in tourist areas, these increase capacity and flexibility during peak requirement periods
- **User Data and Feedback:** This helped create new features like mobile charging stations
- **GIS and mapping toilets:** The National Public Toilet Cloud App helps users locate the nearest toilets with filters for availability of amenities like toilet paper and baby changing units
- **Sensors and Smart Toilets:** Conditions like air quality and odor are tracked and used for improved cleaning and maintenance

Key Partners

- **Leading the Program:** The Ministry of Culture and Tourism and Ministry of Housing
- **Responsible for Implementation:** Local governments, with support of philanthropy foundations such as the Bill and Melinda Gates Foundation, UNICEF, and the China Global Philanthropy Institute

O&M

Operations and Maintenance (O&M)

Urban public toilets and sewage systems were typically managed by local governments, with contracts awarded to private companies for maintenance. Some of the key terms of these contracts included:

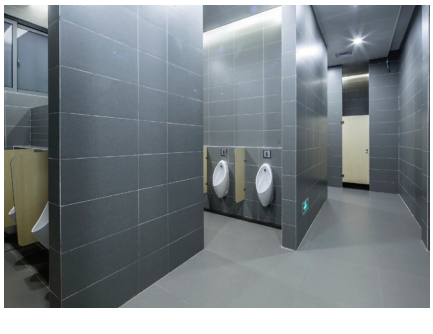
- **Qualification Criteria:** Awarded on a competitive basis to companies with experience in sanitation services
- **Tenure:** Typically 2-3 years with periodic performance reviews
- **Accountability:** User feedback and cleanliness metrics were used to assess service quality, with penalties for poor performance
- **Other Requirements:** On-going training for maintenance staff on sustainability practices

User Experience

The National Public Toilet Cloud App helps users locate the nearest toilets, and they can also provide feedback through this app and through on-site feedback kiosks. These inputs are used to adjust maintenance schedules and prepare future designs and layouts. On-site inspections are regularly conducted by the operators to ensure they meet the contract criteria.







09 Buenos Aires, Argentina

The Problem

Buenos Aires is a rapidly growing city. 12% of its population live in slums, and the city struggles with its public toilet infrastructure. In recent years, the city has embarked on a few lighthouse toilet projects.

The Solution

Green Roof Public Toilets in Urquiza Park, Rosario, Argentina

This toilet integrates with the park it is situated inside, with a green, grass-covered roof, cement surfaces that are easy to wash and galvanized sheet iron stall doors to deter vandalism. Sustainability and durability were key considerations in designing these toilets, as was convsenience and beauty.

This facility includes a viewing area with great views of the river, and a play area for disabled children, so that the space is multi-use, creating an open, bright and easily accessible location. The toilets are under a busy street and easily accessible by a ramp or staircase.

Sustainable Design

- **Solar Panels:** Most of the electricity needed is generated on-site
- **Locally Sourced and Recycled Materials:** Reclaimed wood and locally sourced stone are used to reduce the environmental footprint of the toilet
- **Rainwater Harvesting:** Rainwater is collected and used for flushing toilets and irrigating the green roof
- **Low-Flow Fixtures:** Low-flow taps and dual-flush systems ensure minimal water use
- **Ventilation and Air Flow:** To keep the toilet naturally fresh and odourless

Public-Private Partnership:

This toilet was developed by the Municipality of Rosario and local environmental organizations as a model for sustainable urban amenities.

The toilet cost about Rs 25-32 Lacs to build, and its design will ensure the lowest O&M cost possible, resulting in a low lifecycle cost.





Toilet **Awards**

There are several international and regional awards that recognize excellence in public toilet design, maintenance, innovation, and accessibility. These awards celebrate efforts to improve public sanitation by honoring public toilets that excel in cleanliness, sustainability, user experience, and inclusivity. Here are some notable awards for exceptional public toilets:



1 International Toilet Tourism Awards by MyTravelResearch

- Recognize public toilets worldwide that enhance the tourism experience by incorporating local culture, unique designs, and creating positive, memorable experiences for travelers
- Categories include Best Accessible Toilet, Best Location, Best Design, Quirkiest Toilet Experience, and People's Choice

2 Loo of the Year Awards (UK)

- Began in 1987 to celebrate high standards in public toilets including at shopping centers, parks, transport hubs, and hospitality venues
- Toilets are assessed on hygiene, accessibility, sustainability, and overall user experience, with categories for Accessible Toilets, Changing Places, and Eco-Friendly Toilets.
- Winners often feature high-tech solutions, green initiatives, and user-centric designs.

Golden Toilet Award (Japan) by the

3 Japan Toilet Association

- Recognizes restrooms designed with comfort, cleanliness, and accessibility in mind, at public facilities, restaurants, and private businesses
- The award often honors toilets with unique cultural features, innovative layouts, and advanced amenities, such as heated seats, privacy features, and energy-efficient fixtures

4 Public Toilet of the Year by the World Toilet Organization

- This award celebrates outstanding public toilets that demonstrate commitment to sanitation improvement, sustainability, and accessibility.
- Award criteria include impact, design, hygiene, and functionality

5 America's Best Restroom Contest by Cintas Corporation

- Annually recognizes public restrooms across the United States for their cleanliness, design, and innovation.
- People vote for restrooms that deliver an excellent user experience.
- Categories include Best Design and Best Themed Restroom
- Past winners have included quirky, themed restrooms, eco-friendly spaces, and restrooms with exceptional architectural features.

6 Singapore Public Toilet Standard (SPTS) Awards by the Restroom Association Singapore (RAS)

- SPTS Awards were established to recognize toilets that meet strict standards of cleanliness, accessibility, and environmental responsibility
- Awards are given to facilities in shopping centers, schools, parks, and hawker centers

7 Australian Best Public Toilet Award

- Launched by the Water Services Association of Australia (WSAA), this Award focuses on excellence in design, functionality, and environmental sustainability
- Criteria include architecture, accessibility, eco-friendliness, and community impact
- Winners have included facilities with composting systems, rainwater harvesting, and aesthetic integration with surrounding landscapes

8 Toilet Design Awards by Japan Toilet Association

- The Japan Toilet Association (JTA) also offers the Toilet Design Awards recognizing creative public restroom designs across Japan, focussing on functionality, accessibility, aesthetics, and integration with nature.

9 New Zealand's Best Loo Award

- New Zealand's Best Loo Award was created to honor innovative, clean, and accessible public toilets across the country
- This award values facilities that improve the visitor experience and contribute positively to local communities

10 National Public Toilet Map (Australia)

- The National Public Toilet Map includes locations, accessibility information, and amenities

These awards also inspire cities to improve their public sanitation facilities.

Policies, Regulations and **Processes**

01 Institutional Mechanisms

Institutional Structures, Policy Frameworks and Accountability

As many cities have common provisions, only unique or unusual ones may be listed against a certain city.
This section includes institutional mechanisms in various cities globally for Planning, Designing and Construction, O&M, Monitoring Service Levels and Quality, and ensuring Customer Satisfaction.

Tokyo Toilet Project, **Japan**

As a special project which is only a small part of Tokyo's overall public toilet network, a group of diverse organizations with the requisite skills and authority came together to develop and deliver the Project.

Planning	• **Visioning:** Koji Yanai, founder of retailing giant Uniglo conceptualized the idea. • **Local Authorities:** Shibuya City Government and the Shibuya Tourism Association took overall responsibility for execution. • **Funding:** The Nippon Foundation, a non-profit charity organization, funded the entire project, providing clarity of budget and timely payments.
Implementation and Construction	• **Construction:** Daiwa House Industry Co., Ltd., a major Japanese construction and home-building company, worked with designers across the world to finalize designs that focused on inclusiveness, ease of access, suitable design and sustainability, and then built the innovative restrooms. • **Layouts and Equipment:** TOTO Ltd., a major toilet equipment, manufacturer advised on toilet layout and provided all the fixtures and fittings so they were standard across all toilets and hence maintenance would be easier.
Operations and Maintenance	• Tokyo Sanitation Co. Ltd. does regular cleaning and maintenance. They trained staff, created protocols.
Monitoring	• Amenity Network visits regularly to monitor and ensure that standards are met.
Customer Satisfaction	• Ultimately, Shibuya City Government and the Shibuya Tourism Association were responsible for the project.

- In this Project, a group of non-profits, government entities and private companies, each with strong competencies, were responsible for each component.
- Clear vision, defined roles, expertise of each player, and adequate financing were critical for success.
- Multiple players were not involved for the same activity at different locations–thus quality can be standardized and accountability increases rather than fragments

Singapore

Singapore has vast amounts of commercial, indoor real estate, and all private entities (shops, restaurants, hotels etc) have to make their toilets available to everyone, not just customers. This creates a huge network of private owned and managed, yet public toilets.

Planning	• Multiple bodies are involved in planning right from the start. • **Visioning:** The National Environment Agency (NEA) leads planning efforts under the Happy Toilet Programme (HTP). • **Local Authority/ Government:** The Urban Redevelopment Authority (URA) • **Private Partners:** Real estate developers, MRT operators, and Retailers who actually own the toilet, are involved from the start • **Non-Profit Organisations:** Singapore Kindness Movement, and Restroom Association Singapore
Implementation and Construction	• The real estate developers, MRT operators, and retailers actually build the toilets. • The NEA's Toilet Improvement Programme (TIP) offers co-funding (up to 90%) and incentivizes modern designs and sustainable technologies.
Operations and Maintenance	The toilet owners maintain toilets and must adhere to NEA's standards. These include regular cleaning schedules, inspection cards for tracking maintenance, and the use of WSQ-certified staff for cleaning and supervision.
Monitoring	NEA
Customer Satisfaction	The Restroom Association Singapore (RAS) collates public feedback through the Happy Toilet ratings and shares with all stakeholders for suitable action

Singapore has a well-structured institutional framework including government authorities, commercial businesses and NGOs. All these institutions are involved from the starting, and have long-term roles as this institution framework develops and manages all public toilets in Singapore (unlike the Tokyo Toilet Project which covers only a part of Tokyo)

Vancouver, **Canada**

Planning	**Overall Ownership:** Various teams of the Vancouver Parks Board which is part of The City of Vancouver (municipality) work with non-profit agencies and business owners to ensure that public washroom services are aligned with community needs. **Policies and Strategy:** The Public Washroom Strategy, a published document, has the rules and directions, framing public toilets as a human right and public service priority. An internal Working Group with representatives from various local government departments (eg. Park Operations, Commercial Operations, Engineering, City Protective Services etc) participates in the planning and strategy process.

Implementation and Construction	**Overseeing Institution:** The City of Vancouver, alongside its civic infrastructure teams, handles the construction phase of public amenities. Building or renewing washrooms is led by the Park Board's Park Development and Facilities Development teams. **Support and Partnerships:** Construction can involve partnerships with private developers, non-profit organizations, and civic facility operators to expand facilities.
Operations and Maintenance	**Responsible Authorities:** The Vancouver Park Board and other relevant City departments manage O&M tasks. Park Operations and Janitorial teams are primarily responsible for O&M, with Facilities Maintenance and Operations supporting them, **Program Support:** The City's Washroom Trailer Program, initiated during COVID-19, exemplifies efforts to maintain service continuity, especially under public health emergencies. Staffing for daily cleaning, maintenance, and security includes Building Service Workers, live-in caretakers, and third-party contractors depending on site-specific needs
Monitoring	Regular evaluations are embedded within the City's broader infrastructure and utility management framework. The City commits to periodic reviews to ensure infrastructure meets accessibility and service quality targets. Attendants or community members are placed in some toilets to ensure safety and supervision, particularly at socially sensitive sites. Attendants are trained in Emergency Response Capabilities, including naloxone and First Aid training.
Customer Satisfaction	Although the plan does not detail specific mechanisms for customer complaints related to public toilets, general city feedback channels like municipal services desks, helplines (311) and digital reporting platforms are employed.
The Process for **Automated Public Toilets (APT)**	**1. Planning:** The General Manager of Engineering Services is involved in planning, installation and approving these toilets. **2. Implementation and Construction:** The Street Furniture Program by CBS Decaux supplies, installs, and ensuring utility connections. This work is conducted under a contractual agreement. **3. Operation and Maintenance (O&M):** CBS Decaux maintains and services the APTs, including cleaning, stocking supplies, and handling graffiti. **4. Monitoring:** CBS Decaux provides dedicated staff during the day (8am to 8pm). Outside these hours, police or community organizations may be considered.
Vancouver's model shows how various agencies need to come together to provide good public toilets. And how special processes can be created for different types of toilets or needs (for example, the APTs).	

London, **United Kingdom**

Planning	**Sub-city level Local Councils** (borough councils) are primarily responsible for planning public toilet facilities within their jurisdictions. They assess community needs and develop plans to ensure adequate provision. The **Greater London Authority (GLA)** provides overarching guidance through the Mayor's London Plan, including policies on accessibility and inclusivity. *[https://www.london.gov.uk/press-releases/mayoral/mayor-plans-for-more-public-toilets-across-london]* **Process:** Local Councils assess community needs, demographic trends, and urban development plans to determine the necessity and optimal locations for public toilets. This planning is integrated into broader urban design and public health strategies. Public consultations are consulted and adherence to national guidelines such as Building Regulations, are integral to this process. *[https://publications.parliament.uk/pa/cm200708/cmselect/cmcomloc/636/636.pdf]*
Implementation and Construction	Construction is typically managed by **Local Councils**. They may directly oversee construction or collaborate with private contractors through public-private partnerships. In some cases, they implement **Community Toilet Schemes (CTS)**, wherein private businesses offer public access to their facilities in exchange for certain benefits or concessions, thereby expanding the public toilets without new construction. *[https://www.ageuk.org.uk/bp-assets/globalassets/london/campaigns/out-and-about/london-loos-in-focus---local-authorities-community-toilet-schemes.pdf]*
Operations and Maintenance	**Local Councils** are responsible. They may employ in-house staff or outsource to private companies specializing in facility management. In CTS, the participating businesses maintain the facilities, often receiving financial incentives from the Local Council.
Monitoring	Monitoring the condition and accessibility of public toilets is a role of the Local Councils–Regular inspections, assessments to ensure facilities meet health and safety standards and ensuring that O&M partner is performing as expected. Some Local Councils collect feedback from users and may even employ 'mystery shoppers' to evaluate the quality of services at public toilets.
Customer Satisfaction	There are public feedback mechanisms to report issues or lodge complaints through council websites, dedicated helplines, or mobile applications. **Local Councils** are responsible for addressing grievances, coordinating with maintenance teams or private partners as necessary to resolve reported problems.

London is an example where the city provides a framework and guidelines, but Local Councils at a neighbourhood level are ultimately responsible for all aspects of public toilets. They have the flexibility to work with private businesses in various formats to best serve the public and thus accountability is pushed to the hyper-local level.

Sydney, **Australia**

Planning	**Institutional Framework:** The City of Sydney has a defined Public Toilet Strategy that aligns with Sustainable Sydney 2030, focusing on public health, safety, accessibility, and sustainability. This includes the provision of facilities at accessible locations, **within a 400-meter distance from each other** in central areas and village centers **Policy Guidelines:** The planning integrates Environmentally Sustainable Design (ESD) principles and Crime Prevention Through Environmental Design (CPTED), ensuring that public toilets are well-sited and designed to minimize vandalism and anti-social behavior. Policies prioritize inclusivity, with facilities designed for diverse needs, including unisex, family, and accessible toilets **Community and Stakeholder Engagement:** Public consultation is embedded in planning, using community feedback to identify high-demand areas and guide strategic placement, particularly in entertainment and commercial precincts
Implementation and Construction	**Construction Standards:** Facilities are constructed to robust standards using vandal-resistant materials, with a focus on durability and ease of maintenance. Automated Public Toilets (APTs) are installed in high-traffic areas to streamline operations and hygiene maintenance **Funding and Partnerships:** Funding allocations are often guided by the City's strategic plans, such as Sydney's Night Time Economy initiative, which includes provisions for additional toilets in high-demand nightlife areas. Partnerships with private entities and developers are encouraged to supplement public facilities
Operations and Maintenance	**Protocols:** A structured schedule for cleaning and servicing is maintained, with high-usage toilets receiving more frequent attention. Automated features in some toilets reduce cleaning demands and enhance hygiene. Regular asset condition audits are conducted to ensure quality and functionality
Monitoring	**Ongoing Assessments:** Public toilets undergo regular inspections and quality audits to monitor cleanliness, accessibility, and safety. User feedback and incident reports are actively collected to address any emerging issues and maintain accountability. **Data-Driven Improvements:** User data and feedback from initiatives like Sydney's Public Toilet Satisfaction Surveys inform planning updates and operational adjustments, contributing to a responsive approach in meeting public needs.
Customer Satisfaction	**Community Feedback Mechanisms:** The City of Sydney provides channels, including a 24-hour reporting system, for users to report maintenance or safety concerns. Additionally, satisfaction surveys and public consultations help capture community needs and preferences **Signage and Accessibility Information:** Wayfinding signage and maps, including digital tools like the National Public Toilet Map, support customer ease of access and information about facility locations and amenities

China

The "Toilet Revolution" in China aims to improve urban sanitation infrastructure, with a focus on high-traffic areas like transit hubs, markets, and tourist attractions.	
Planning	**Municipal administrations** release local regulations to ensure proper placement and accessibility, based on the city's land availability, traffic patterns and population density. **Key Documents:** • "Toilet Revolution" National Initiative (2015) – Framework for urban sanitation upgrades. • Design Standards for Urban Public Toilets (城市公共厕所设计标准) – Outlines layout, accessibility, and durability requirements. • Urban Environment and Sanitation Policies – Municipal standards for cleanliness and service quality in high-density urban zones.
Implementation and Construction	**Construction:** Usually outsourced to private firms, based on public procurement / tendering norms and following strict national standards for urban construction. This ensures high-quality, accessible, and durable facilities suited for urban density. **Key Document:** 2016 Revised Urban Toilet Construction Guidelines – Specifies accessibility, eco-friendly materials, and gender balance in stall allocation.
Operations and Maintenance	• Managed by municipal sanitation departments, with cleaning outsourced to private contractors. • Frequent cleaning schedules and eco-friendly supplies are mandated, especially for high-traffic locations. • **Key Document:** Municipal Sanitation Management Standards – Dictates cleaning frequency, supply standards, and maintenance protocols.
Monitoring	• **Digital monitoring:** Infrared counters and sensors track usage and schedules maintenance, ensuring cleanliness in high-demand areas. • **Monitoring Method:** Regular inspections and penalties for contractors who do not meet maintenance standards.
Customer Satisfaction	• Feedback kiosks and digital systems in public toilets allow users to provide real-time input, facilitating quick adjustments based on user needs.

Hong Kong

Planning	The **Food and Environmental Hygiene Department** oversees placement of public toilets, ensuring high-traffic areas (e.g., transit hubs, commercial districts) have adequate facilities. **Key Documents:** • Handbook on Standard Features for Public Toilets – Provides guidelines on hygiene, accessibility, and design. • Hong Kong Planning Standards and Guidelines (HKPSG) – Specifies public toilet distribution, accessibility, and design for high-traffic zones.
Implementation and Construction	• Public toilets are constructed in collaboration with the **Architectural Services Department**, integrating feedback from community councils to meet local needs. • **Key Document:** Sustainable Public Toilet Design Guide – Encourages eco-friendly materials, waste management, and accessibility.
Operations and Maintenance	• Cleaning services are outsourced, with high-traffic areas receiving frequent cleaning and deep-cleaning teams. • **Key Document:** FEHD Maintenance Contracts – Specify hygiene standards, cleaning schedules, and contractor compliance requirements.
Monitoring	• Routine inspections are conducted, with automated counters tracking usage in busy areas. Non-compliance with standards results in contractor penalties. • **Monitoring Method:** Digital tracking and regular inspections ensure timely maintenance and resource allocation.
Customer Satisfaction	• Feedback mechanisms (e.g., surveys and complaint platforms) allow the public to provide input, with multilingual support for tourists in key locations.

Cape Town, **South Africa**

Planning	**City of Cape Town** and the **Cape Town Central City Improvement District (CCID**) oversee the planning and placement of public toilets in high-demand areas. Planning is guided by the National Sanitation Policy (2016) and the Cape Town Integrated Development Plan (IDP), ensuring that sanitation facilities meet the needs of the Central Business District (CBD) and transit hubs. The city considers population density, foot traffic data, and the unique needs of different zones (e.g., tourist spots, commercial areas) when planning new facilities to ensure accessibility and convenience for all residents and visitors.
Implementation and Construction	• Construction and installation are carried out by the City of Cape Town in collaboration with **NGOs like Khulisa Social Solutions** and private contractors. The CCID has been instrumental in supporting the placement of public toilets, particularly in high-footfall areas within the CBD. • Public toilet facilities are constructed with a focus on durability, accessibility, and sustainability. Materials used include anti-vandal features and eco-friendly elements, ensuring the toilets withstand high usage and align with environmental goals. • **Service Level Agreements (SLAs**) define the construction standards and compliance requirements for contractors, ensuring that facilities meet city specifications for safety and accessibility
Operations and Maintenance	• The Streetscapes Program, managed by Khulisa Social Solutions, employs local individuals for daily cleaning and sanitization, providing a job creation component alongside facility maintenance. This community-based approach to maintenance helps ensure hygiene and accessibility while supporting economic opportunities. • **Standard Operating Protocols:** The CCID and municipal sanitation teams establish specific cleaning schedules based on location and foot traffic, with high-use areas like the CBD receiving more frequent attention. Eco-friendly cleaning products and water-saving fixtures are standard to reduce environmental impact.
Monitoring	• Regular monitoring is conducted by CCID officers and municipal inspectors to ensure safety, cleanliness, and compliance with maintenance standards. • Community involvement, especially through direct feedback from users, helps monitor conditions in real-time. • Performance-based monitoring holds contractors accountable, with penalties for any lapses in service quality. Compliance checklists and routine inspections ensure that facilities meet municipal and national standards for cleanliness and usability.
Customer Satisfaction	• The City of Cape Town and CCID actively collect feedback from users through digital kiosks and community outreach, addressing concerns promptly. Public feedback plays a critical role in adjusting service schedules and making facility improvements. • Community education campaigns promote responsible use and awareness about maintaining cleanliness, helping enhance user satisfaction and reduce vandalism. The high usage rates since the facilities' installation reflect positive public reception

Kuala Lumpur	
Planning	**Location Selection:** Toilets are placed in high-demand areas, such as commercial districts, public parks, transportation hubs, and near major pedestrian routes. Consultation with local residents and businesses is recommended to address location-specific concerns or requirements. **The Ministry of Housing and Local Government (KPKT)** provides overarching frameworks for planning public toilets, but local councils and transport agencies have the right to accept, modify and implement these plans. Thus, the **final planning is done by the Local Councils**.
Implementation and Construction	**Overseeing Institution:** Local Councils handle the construction and renovation of public toilets, partnering with contractors for design and material standards that promote durability and anti-vandalism. **Support and Partnerships:** Private businesses are required to maintain public toilets on their facilities, though the requirement is subject to local rules and therefore may vary from State to State. This reduces the need for Local Councils to build new toilets.
Operations and Maintenance (O&M)	**Responsible Authorities:** The operation and maintenance of public toilets in Kuala Lumpur are managed by Local Councils, including Janitorial and Building Services teams. Some high-traffic locations have attendants, and private contractors are engaged for specialized maintenance needs. **Maintenance Protocols:** Structured schedules ensure routine cleaning, particularly in busy areas like public transport stations. Facilities undergo regular audits for cleanliness and maintenance standards
Monitoring	**Regular Inspections:** Public toilets are regularly inspected by Local Council teams to maintain cleanliness, accessibility, and safety. Some stations have attendants for direct supervision, especially in socially sensitive areas.
Customer Satisfaction	**Feedback Mechanisms:** Municipal helplines and council websites are available for complaints, and the Local Council addresses these issues. **Service Adjustments:** User feedback from surveys at facilities like the KTM Commuter public toilets has helped improve support measures, such as staffing at high-traffic locations.

02 Categorizing Public Toilets

Categorization of Public Toilets and Alignment of Standards and Norms

Toilets are typically categorized based on where they are located, as the needs of users, usage patterns and peaks, as well as user expectations, vary mainly with location. At transit points or markets, people will want speed and efficiency while in a park or mall, aesthetics and eco-friendly designs may matter more.

While these categories help with planning, specific decisions like exact location, size, capacity and features, depend on the assessment of that specific location or neighbourhood, budgets available, the objectives of the local authorities or Government program that is sponsoring the toilet program.

The nature of urban development and environment also affect how toilets are planned and executed. A city with well-organized urban planning, streets and utilities, will find it easier to integrate good quality public toilets rather than cities where planning and rules are less rigorous or where the streetscape is not well designed.

Japan

- Publicly available and well-maintained toilets are a requirement for commercial establishments like malls, shops, restaurants, cafes, and even convenience stores
- Train stations and popular tourist destinations have washrooms provided by the authority that manages that location
- Toilets in Parks and other non-commercial public areas are managed by the municipality

Singapore

- Public toilets should be located in high-traffic "hot spot" areas: parks, immigration checkpoints, shopping centers, main transport stations, airports, and tourism sites
- If no separate baby changing facilities exist, disabled toilets should accommodate baby care needs, doubling as multi-purpose spaces
- These special facilities should have clear signage and be easily identifiable from outside and nearby areas
- Public toilets are provided in:
  - Shopping centers, supermarkets, wet markets, eating establishments, and food centers
  - Bars, nightclubs, conference halls, cinemas, and theaters
  - MRT stations, stadia, public swimming pools, and petrol stations

Vancouver, **Canada**

1. **Transit Locations**
2. **Community and Civic Facilities:** Libraries, recreational centers, and playgrounds, with designs suited to the needs of users of those facility
3. **Cultural and Heritage Areas:** Design may be given more attention, to blend into the neighbourhood
4. **Public Parks and Plazas:** The Parks Washroom Strategy categorizes public toilets based on park classifications, which influence the applicable standards and norms:
   - **Urban Plaza (< 0.4 ha):** Small, stand-alone washrooms for high day-time population
   - **Local Parks (< 2.5 ha):** Small, standard washrooms serving the immediate neighborhood
   - **Neighborhood Parks (< 10 ha):** Medium-sized standard washrooms with some amenities
   - **Community Parks (< 20 ha):** Medium to large custom washrooms with many amenities
   - **Destination Parks (> 20 ha):** Large washrooms with numerous amenities, with ability to handle peak event traffic

Influence of Categories on Standards/Norms:

- **Safety and Accessibility:** High standards for safety and accessibility, particularly in areas like transit hubs and community centers, where diverse user demographics are anticipated
- **Inclusivity Requirements:** Inclusive design addressing the needs of people with disabilities, elderly, children, and other vulnerable populations
- **Strategic Placement and Availability:** Close to high foot traffic areas (e.g., entry / exit points, meeting or recreational areas, event spots etc

London, **United Kingdom**

Public toilets are categorized based on their location and the specific needs of the users they serve. These categories influence the design standards and norms applicable to ensure accessibility, hygiene, and user comfort. Categories include:

- **Transport Hubs:** Train stations, bus terminals, and airports
- **Parks and Recreational Areas:** Public parks, beaches, and recreational grounds
- **Shopping Centers and Markets:** Found within retail environments, these toilets maintained high standards of cleanliness and comfort, and open hours depend on traffic patterns to these areas
- **Tourist Attractions:** Located at museums, galleries, and historical sites, these usually incorporate aesthetic considerations to blend with the surroundings and add to the visitor experience through information, interior design etc
- **Community and Public Buildings:** In libraries, community centers and town halls, these toilets are usually simple, clean, safe and accessible

The **British Standard BS 6465** outlines toilet design and operations norms. For example, Toilets in transport hubs must accommodate large numbers of users efficiently, necessitating more cubicles and urinals, have large, multilingual signage so people find it quickly, and need features like luggage shelves, baby-changing stations and accessible toilets. Facilities in parks may prioritize durability and ease of maintenance due to exposure to outdoor elements, eco-friendly elements, and extensive and suitable signage so people can find it even in large wooded areas.

Timings of operations and materials used also depend on the exact location and use case. Non-slip flooring must be used in outdoor or wet areas, and locations with nightclubs should include extra safety features for users including mirrors. Grab bars, emergency helplines, minimal stairs / uneven floors, and robust fixtures that cannot be vandalized or broken easily.

The **Building Regulations Approved Document M** focuses on access to and use of buildings, including toilets.

China, Hong Kong, Sydney, Kuala Lumpur, Cape Town, Paris and most other global cities have similar categories and design guidelines.

03 Standard and Norms

Standards and Norms for

- **Planning** (sitting and sizing)
- **Design and Construction**
  (signage, façade, building codes, amenities, features, materials and fixtures)
- **O&M** (service levels)
- **Monitoring Service Levels and Quality**
- **Customer Grievance Redressal**
  (how to register complaints, how is it resolved, turnaround times)

Tokyo Toilet Project, **Japan**

Planning

There must be at least one washroom unit in public facilities larger than 550 sq. ft.:

Public facilities includes shops, convenience stores,malls, petrol pumps, restaurants, cafes etc–and anyone, even non-customers, can use them freely–thus, there are over 50,000 such public toilets available across the country

Many public toilets are located in parks near housing complexes

Since 1967, guidelines for residential land development require that developers should create certain free public amenities of a high standard and hand over to the local municipality, depending on the size of their development

Norms for Design of Public Toilets:

a. General Features

- Public toilets often have taxi parking and can include shower facilities
- Handrails, easy-use sinks, baby chairs, and umbrella hangers
- Toilets with heated seats, ostomate toilets, and wall-mounted child seats
- Many washrooms have sinks for ostomy and adult changing tables
- Large, clear washroom signs are integrated into public space aesthetics
- Washrooms often have tactile maps and braille for easier navigation

b. Accessibility and Special Features

- Audio guidance is provided in toilets to assist people with disabilities, and to provide safety warnings (slippery floors)
- TTT project includes symbols for features like wheelchair accessibility, grab bars, and baby-changing boards
- Older public urinals do not have doors to increase safety and reduce vandalism

Planning	**c. Design and Innovation** • The Japan Toilet Association works with designers and local governments to create innovative and relevant restroom designs • Annual toilet design competitions are prestigious for graduate students • Award-winning toilets are designed by renowned architects and designers • Various materials include stainless steel, glass, and painted walls are used
	d. Sustainability • Increasingly use sustainable technologies like rainwater harvesting, solar power, and user-generated kinetic energy, and water efficient devices • Self-cleaning technologies increase hygiene and extend product life (and thus save money)
	e. Safety and Maintenance • Voice instructions for door operation, locking, and flushing • Maintenance is prioritized with professional cleaners, routine and deep cleaning schedules, regular inspections, and monthly reviews for improvements
Operations and Maintenance	• A well-designed product is the first step in responsible O&M: automatic cleaning, disinfection, and even self-regulating air conditioning systems reduce the need for human O&M–which can have benefits like consistency, quality and lower costs • Cleaning includes daily, monthly, and annual specialized routines for comprehensive maintenance • Professional, trained staff wear clean uniforms, encouraging positive interactions with users and expressions of gratitude • Local volunteers sometimes help manage the restrooms once operational
Monitoring	• Toilets are inspected monthly by professional consultants to enhance maintenance procedures • Monthly meetings are held to review cleaning reports and improve toilet management

Singapore

Planning

- **Location:** Public toilets should be situated in high-traffic and essential public areas such as parks, immigration checkpoints, shopping centers, transport stations (e.g., MRT stations), airports, tourist sites, bus terminals, public resorts, stadia, public swimming pools, and petrol stations.
- **Provision Requirements:**
  - Minimum of 1 cubicle per 550 women and female children
  - Minimum of 1 cubicle (or urinal) per 1,100 men
  - 1 unisex cubicle for people with disabilities per 10,000 population
  - 1 unisex baby changing facility per 10,000 people. If separate baby facilities are not available, disabled toilets may serve multiple purposes such as baby changing or feeding
- **Guidelines for Multi-Use Spaces:**
  - Handicapped facilities should be designed for dual use (e.g., handicap and baby care) and must have proper signage to indicate functionality
  - Facilities must be equipped with essentials like sinks, soap dispensers, tissue dispensers, foldable diaper changing benches, and foot-pedal-operated waste bins with liners

Implementation and Construction

- **Mandatory Amenities:**
  - Public toilets must include basic amenities such as toilet paper, liquid soap, hand dryers or paper towels, and litter bins
  - Sanitary disposal bins are required in each female toilet cubicle
- **Accessibility and Inclusivity:**
  - Compliance with COPEH 2021, covering provisions for bidet fixtures and accessible wash hand basins
  - Universal design principles should be followed, as highlighted in the Universal Design Guide for Public Spaces
- **Features and Comfort:**
  - Toilets should be well-ventilated, with regular cleaning and servicing of mechanical systems
  - Placement of hand dryers near wash basins and provision of air deodorizers and sanitizers for toilets and urinals
- **Material and Aesthetic Standards:**
  - Use of durable, vandal-resistant materials like stainless steel and ceramic tiles.
  - Clear, contrasting signage that is easily recognizable and accessible to visually impaired individuals
- **Grading and Recognition:**
  - The Happy Toilet Programme's grading system, ranging from 3 to 5 stars, assesses cleanliness and amenity standards

Operations and Maintenance	• **Legal and Operational Standards:**
	  - Owners must ensure the availability of liquid soap and paper towels, an adequate supply of toilet paper, sufficient litter bins, and hand dryers close to wash basins
	  - Toilets must be kept clean, dry, and free of litter at all times
	• **Training and Workforce Standards:**
	  - The On-site Training Programme (OTP) on restroom cleaning is available to enhance maintenance practices
	  - Cleaning staff and supervisors are encouraged to complete WSQ (Workforce Skills Qualifications) courses specific to restroom maintenance
	• **ASEAN Public Toilet Standards:**
	  - Owners are encouraged to align with regional public toilet standards for best practices in maintenance and cleanliness.

Monitoring	• NEA conducts regular inspections and oversees the use of maintenance checklists. Toilets should have clear inspection records, and CCTV is recommended for high-traffic locations to deter vandalism • The NEA public toilet task force evaluates performance and implements necessary improvements for facilities that do not meet standards
Customer Satisfaction	• The Restroom Association Singapore (RAS) manages public feedback, including the Happy Toilet ratings. Ratings and feedback can be accessed and submitted through the RAS website • Public participation is encouraged through feedback mechanisms and nominations for high-performing toilets. The STAR Awards Programme also recognizes exemplary maintenance efforts and promotes responsible toilet usage

Vancouver, **Canada**

Planning

- **Population and Activities:** The strategy emphasizes placing washrooms in parks that serve as high-traffic areas or near community amenities like playgrounds, sports fields, and beaches to ensure accessibility and address user needs.
- **Zoning and Location:** Washrooms should be sited for visibility and safety, ensuring clear connections to park features and accessibility via pathways. Proximity to utility connections and consideration of site-specific needs, such as archaeological significance, are essential(parks-washroom-strategy).
- **Design** (page references from "Guidelines: Technical - Public Washroom Design")
  - **Signage and Integration:** Emphasizes function-based signage to support inclusivity, ensuring that it accommodates various communities including Two-Spirit, transgender, and gender diverse individuals (Page 8).
  - **Building Codes:** Lighting/Ventilation/Size of Stall: The guidelines outline general requirements for size, ventilation, and lighting, ensuring adherence to accessibility standards and safety codes (Pages 13-17).
  - **Inclusivity Features:** Universal and accessible washrooms are designed with clear spaces and accessibility considerations, including transfer spaces and grab bars for people with disabilities (Page 10, Appendix B).
  - **Amenities and Materials:** The standards call for durable, washable finishes and vandal-resistant materials like concrete and steel (Page 23). Accessories such as grab bars, baby change tables, and emergency call buttons are also included (Pages 30-36).

Implementation and Construction

- **Signage and Façade:** Clear, accessible signage is crucial for visibility and usability. The strategy highlights consistency in signage for wayfinding and accessibility features
- **Inclusivity Features:** Universal and single-user washrooms are recommended for inclusivity, accommodating families, individuals with disabilities, and gender-diverse users. Specific considerations include adult and child changing tables, accessible fixtures, and clear safety measures like lighting and emergency buttons
- **Building Codes and Amenities:** New washrooms must adhere to CSA B651 standards for accessibility, include proper ventilation, lighting, and use non-slip, durable materials that support easy cleaning. The strategy also recommends exterior handwashing stations and bottle filling points

Operations and Maintenance

- **Service Levels:** Facilities should be maintained with a focus on high-use areas receiving increased cleaning frequencies. The strategy suggests that washrooms be cleaned multiple times a day in summer and based on usage patterns
- **Maintenance Staffing:** Expanding staff resources to include mobile crews and attendants for busy sites to improve safety and cleanliness

Monitoring	• **Checklists and Frequency:** Regular monitoring by park staff and third-party workers is critical. The use of attendants and innovative solutions like remote locking systems to support effective maintenance is proposed • **Innovations:** Exploring harm reduction principles and staff training for emergency response and naloxone administration
Customer Satisfaction	• **Feedback Mechanisms:** Public input on service quality is facilitated through signage communicating how to report issues. The strategy emphasizes community feedback incorporation for ongoing improvements

London, **United Kingdom**

Planning	• **Population Density**
	  • The British Standard BS 6465-4:2010 provides recommendations for the provision of public toilets based on population size and usage patterns [*https://tinkle.rca.ac.uk/resource/bs-6465-42010-sanitary-installations/*]
	• **Zoning and Land Use**
	  • Local Councils consider zoning regulations to determine appropriate locations, ensuring they align with land use policies and urban development plans
	  • Public toilets are strategically placed in commercial zones, recreational areas, and transport hubs to serve the needs of residents and visitors
	• **Nature of Activities in the Area**
	  • The type of activities prevalent in an area influences the design and capacity of public toilets. For instance, tourist attractions may require facilities with higher capacity and additional amenities
	• **Accessibility and Inclusivity**
	  • The Building Regulations Approved Document M focuses on access to and use of buildings, including toilet facilities, ensuring they are accessible to all users, including those with disabilities [*https://www.gov.uk/government/publications/toilet-accommodation-approved-document-t*]

Implementation and Construction	• **Signage**
	  • **Clear and Visible**
	  • **Inclusive:** Symbols that anyone can understand
	  • **Guidance:** The British Standard BS 8300-2:2018 provides recommendations on signage for accessible and inclusive environments

- **Building Façade and Urban Integration**
  - **Aesthetic Harmony:** The exterior design should complement the surrounding architecture and urban landscape
  - **Visibility and Safety:** While blending in, facilities should remain easily identifiable and located in safe, well-lit areas
  - **Guidance:** The "Draft Design Guidelines for Public Toilets" emphasize the importance of aesthetic integration and suggest design principles that harmonize with surrounding architecture [*https://www.ukpt.org.uk/media/attachments/2017/09/28/design-guidelines.pdf*]
- **Building Codes**
  - **Lighting:** Adequate lighting for safety and usability, while maximizing natural light supplemented with artificial lighting that minimizes shadows
  - **Ventilation:** Proper ventilation for hygiene and air quality (preventing odors and dampness)
  - **Stall Dimensions:** Sufficient space for user comfort and accessibility, adhering to dimensions specified in building regulations
  - **Guidance:** Approved Document M of the Building Regulations outlines requirements for access to and use of buildings, including toilet facilities. [*https://www.gov.uk/government/consultations/toilet-provision-in-buildings-other-than-dwellings-technical-consultation/annex-e-draft-approved-document-t-toilets*]
- **Inclusivity Features**
  - **Gender Inclusivity:** Facilities should cater to all genders with privacy and comfort
  - **Accessibility:** Designs must accommodate individuals with disabilities, incorporating features like grab rails, accessible sinks, and appropriate signage
  - **Child-Friendly Amenities:** Inclusion of baby-changing stations and child-sized fixtures where appropriate
  - **Guidance:** BS 8300-2:2018 provides detailed recommendations for designing inclusive environments
- **Additional Features and Amenities**
- **Hygiene Facilities:** Handwashing stations, hand dryers or paper towels, and sanitary disposal units
- **Security Measures:** Emergency assistance alarms and surveillance systems
- **Sustainability:** Use of water-saving fixtures and energy-efficient lighting to promote environmental responsibility

Sydney, **Australia**	
Planning	• **Siting and Sizing:** The Public Toilet Strategy aims to provide public toilets within 400 meters of any point within central Sydney, village centers, and major neighborhood parks
Customer Satisfaction	• **Reporting Issues:** Users can report issues or lodge complaints through the City of Sydney's official channels. The NSW Ombudsman provides guidelines for making complaints against government agencies, including local councils

China	
Planning	• **Urban Zoning Laws:** Require public toilets within 400 meters in high-density areas, particularly around transit and commercial zones
Implementation and Construction	• Strong emphasis on eco-friendly materials, water-saving fixtures, and building for high durability in high-density environments • Use durable, anti-vandal materials such as stainless steel for fixtures and hard-wearing tile for floors. This reduces the frequency of repairs and maximises asset life. Recycled materials, low-VOC paints and ecofriendly cleaning agents are also encouraged
Maintenance	• Heavy use of sensors and digital technology for real-time monitoring and quick feedback to improve maintenance—IoT systems with odour sensors, footfall counting, automated flushing and disinfection etc are common • Toilets are inspected daily by municipal sanitation teams, and repairs are prioritized—any equipment failure in high-footfall toilets is addressed within hours
Customer Satisfaction	• **Feedback Kiosks:** Many urban toilets have digital kiosks where users can rate cleanliness, accessibility, and facility functionality. Data is reviewed monthly to adjust cleaning schedules and address common complaints. • **Public Campaigns:** The "Toilet Revolution" includes a public education aspect to promote responsible use of facilities. Campaigns are displayed in facilities and public areas to encourage users to help maintain cleanliness and reduce vandalism.

04 Contracting Models

Contracting Models used for Construction and O&M

As many cities have common provisions, only unique or unusual ones may be listed against a certain city.

Japan	**Shibuya City Government** (Municipality) and **Shibuya Tourism Association**: City Governments that own the project **Japan Toilet Association:** Overall technical support **Nippon Foundation:** Funding **Toto Co. Ltd.:** Toilet equipment and layout **Daiwa House Co. Ltd.:** Toilet design and construction **Tokyo Sanitation Co. Ltd.:** Regular Cleaning and Maintenance **Amenity Network:** Monitoring performance Partners were selected for each role based on their competency and experience. Thus, contracting was kept to a minimum across all 17 sites, and consistency of quality and outcomes could be expected.
Singapore	**Construction:** Public-private partnerships with NEA's TIP co-funding (up to 90%) for enhanced facilities. **O&M:** Managed by toilet owners, following NEA standards with WSQ-certified staff and inspection protocols. **Innovations:** Use of smart solutions for higher ratings and efficient maintenance under the Happy Toilet Programme.
Vancouver	**The Parks Washroom Strategy lays out all aspects of toilets in public parks.** **For Automated Public Toilets:** **Construction:** Partnership under the Street Furniture contract between City of Vancouver and CBS Decaux, which supplies, installs, and services various street furniture elements, including public toilets, at no direct cost to the city. CBS Decaux funds these installations in exchange for the right to sell advertising space on street furniture (Page 3) **O&M of Toilets:** CBS Decaux is responsible for the ongoing maintenance and operation of these toilets, which includes cleaning and graffiti removal (Page 4)

London

Construction Contracting Models

Traditional Contracting: Local Council engage in traditional procurement processes, issuing tenders for the design and construction of public toilets. Contracts are awarded to construction firms based on criteria such as cost, quality, and experience.

Public-Private Partnerships (PPPs): Some councils enter into PPPs where private entities finance, design, build, and sometimes operate public toilet facilities. This model can alleviate the financial burden on public funds and leverage private sector expertise.

Operation and Maintenance (O&M) Contracting Models

In-House Management: Certain local authorities manage O&M internally, utilizing their staff for cleaning, maintenance, and repairs.

Outsourcing to Private Companies: Many councils outsource O&M services to specialized facilities management companies. Contracts outline service level agreements (SLAs) detailing performance standards, frequency of cleaning, and maintenance protocols.

Community Toilet Schemes: Innovative approaches include partnerships with local businesses, such as cafes and shops, that allow public access to their restroom facilities. In return, businesses may receive financial incentives or increased foot traffic. This model expands public toilet availability without significant capital investment.

Performance-Based Contracts: Some councils implement performance-based contracts, where payment to service providers is linked to the achievement of specific cleanliness and maintenance standards. This incentivizes high-quality service delivery.

Technology Integration: The adoption of digital tools, such as sensor-based monitoring systems, allows real-time tracking of facility usage and maintenance needs. This data-driven approach enables proactive maintenance and efficient resource allocation.

Social Enterprises: Engaging social enterprises in O&M contracts can provide employment opportunities for marginalized groups while ensuring the upkeep of public facilities. This model combines social value with service provision.

Ideas for India

Improving our Public Toilets

Public toilets, counterintuitively, pose requirements that are more complex than many other urban infrastructure:

- They require space in prime locations and have to be constructed, so require urban planning and civil engineering skills.
- A large number of people from diverse economic and social groups use them, so they must accommodate the preferences and needs of people—which vary based on age, gender, socio-economic status etc.
- Unlike most infrastructure, they need continuous O&M, multiple times a day—so they need staffing and should be easy to keep clean and maintain.
- They must be aesthetic to fit into the neighbourhood and be inviting.
- And toilets tend to be abused and vandalized, so the interiors must be designed to be robust.

In high population environments like Indian cities, there requirements can easily overwhelm designers, operators and municipalities. That is why it is important that India learn and adapt from everywhere in the world, to meet the needs of its diverse cities and people.

Institutional Frameworks & Accountability:

1. Involve a mix of government, private entities, and NGOs who have expertise in planning, funding, and management (Japan).
2. Define clear roles for each stakeholder, who must have long-term roles and accountability (Japan) with communication structure to coordinate across entities (Vancouver).
3. Every Municipality can have a **city-wide Public Toilet Mission** to play this role.
4. As is done in many cities, certain types of business establishments can be required to make their toilet available to the public—though this can be challenging in India, but money can be offered to these businesses (Malaysia)
5. Create **National Design and Operations Guidelines** to create good quality public toilets, which are modified and adopted by all Municipalities—**IoT sensors and technology to improve maintenance and hygiene must be mandatory**, offered and managed by licensed players only.

Planning and Financing:

1. Have a clear city policy on identifying where toilets are needed—high-traffic zones like transit hubs, parks, markets, tourist spots, office districts, and near slums—and the **ideal distance between toilets** (a toilet within 400m from any spot is a good target in dense areas).
2. Engage the local community in making decisions—while **expecting NIMBY** (Not In My Back Yard) reactions as people expect dirty, smelly public toilets.
3. **Build urinals** to the extent possible—they can reduce the need for and load on for public toilets (Hamburg)
4. Then, **be creative in seeking the exact location**. Seek unusual sized, unused land (see Tokyo: HIgashi Sanchome). Where street-level space is not easily available, consider unconventional locations:
   - Underground (London)
   - On Foot over-bridges or elevated above the ground (with shops below)
   - **In an existing building** (commercial or residential) but with outside access from the street. This can be part of building permissions wherein the developer has to build and maintain a street-facing public toilet on the property premises. This may be the **best way to cover dense areas**

5. Implement Community Toilet Schemes, partnering with private businesses to expand the toilet network (London, Malaysia).
6. Build a few "Aspirational Toilets" in each city that elevate the status of public toilets, and maintain them very well.
7. Put the **financing in place to build AND maintain** the toilet, ideally in perpetuity but for at least 7 years (Japan). Every Municipality can have a specific budget to build and maintain public toilets.
8. Evaluate **contract structures that maximize accountability and quality**—like Build-Own-Operate (BOO), possibly with Hybrid Annuity Models (HAM) payment structures.

Design & Construction:

1. The **National Design and Operations Guidelines** should create a menu of options for Municipalities to use in terms of layouts, dimensions, materials, fixtures and devices, IoT sensors and technology, to create good quality, easy to maintain, safe, inclusive, comfortable and robust public toilets at different costs.
   - Employ **durable** materials and fixtures that cannot be broken
   - **Sustainability must be incorporated—the most water efficient fixtures, waterless urinals, solar panels, rainwater harvesting, energy-efficient appliances, floor-fans, and even wastewater treatment (and re-use) systems where practical**
   - Climate Change-proof designs—protect from flooding with suitable wastewater systems, and reduce heating with passive cooling systems (e.g. structural cooling), insulated walls and roofs, and ventilation
2. Subsidize **automated toilets** that improve the toilet experience.
3. Clear signage and multilingual support so people can find and spot the toilet.
4. Use modern, **low-cost construction techniques and materials** like hollow concrete block load-bearing structures, pre-fabricated components, standardized doors and windows etc.
5. **Only pre-registered and trained / certified contractors** should be allowed to build them. Ideally, all contracts should be Build-and-Operate.
6. Design advertising space, kiosks and other features to improve the revenue model of each toilet.

Operations & Maintenance (O&M):

1. Have protocols for cleaning and regular maintenance and repairs (Japan) with suitable monitoring mechanisms (checklists, video and sensors)
2. **Outsource O&M to trained players with long-term contracts**, with clear Service Level Benchmarks for turnkey operations and maintenance responsibility.
3. Deploy smart technologies like IoT sensors and video analysis for real-time monitoring of usage, cleanliness, and maintenance needs.
4. On-time payment, if any, to service providers.

Monitoring & Customer Feedback:

1. Digital feedback board at every toilet for real-time user input.
2. Regular inspections by the Municipality, using "**mystery shoppers.**"
3. Penalize non-compliance by contractors and reward high performance.
4. **Institute City and National Level Awards** for the Best Public Toilets in multiple categories (innovation, women, transit, marketplace etc)

Indian cities must develop good quality public toilets to improve mobility and health for women and other groups, to clean up streets, and improve tourism and business activity. Adapting lessons from cities across the world will help in this.

NOTES

NOTES

आवासन और शहरी कार्य मंत्रालय
भारत सरकार
MINISTRY OF HOUSING AND URBAN AFFAIRS
GOVERNMENT OF INDIA

स्वच्छ भारत
एक कदम स्वच्छता की ओर

· accessible · convenient · sustainable · robust ·
· hygienic · inclusive . private · ventilated ·
· comfortable · odourless · beautiful ·
· welcoming · aesthetic · gender sensitive ·



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