



**D.O No. 16/4/2017 – SBM I**

**Date: 26th April 2017**

**Sub: Implementation of ICT solution to monitor the cleanliness of Community and Public toilets including private establishments used by public – Reg.**

Dear Sir/Madam,

Swachh Bharat Mission is focused towards providing best possible sanitation facilities to the country. In this regard, the Ministry of Urban Development (MoUD) has been taking innovative steps by promoting the use of ICT solutions in sanitation and solid waste management.

2. The Municipal Commissioners (MC) of Urban Local Bodies (ULBs) are not only responsible for construction of community and public toilets but are also responsible for their maintenance. The MCs are also responsible for ensuring proper maintenance and cleanliness of toilets located in establishments such as petrol pumps, malls, commercial complexes, district centers etc. Hence, there is a need to provide a platform such that the MCs and various stakeholders can continuously monitor the cleanliness of toilets by seeking feedback from users.

3. In view of this, MoUD envisages implementation of an ICT-based solution to capture real-time feedback from community and public toilets including private establishments used by public in all cities. The solution allows citizens to directly give feedback from the toilet location that they visit and would provide the following functionalities:

- i. Communicate feedback back to stakeholders at Urban Local Bodies, State and National level and;
- ii. Display real-time feedback data on online Dashboard



4. In this regard, **M/s ITI limited**, a Govt. of India Undertaking under Ministry of Communication can be engaged for implementation of the ICT based solution for monitoring of Community and Public toilets including private establishments used by public. M/s ITI limited will charge **Rs 945 per device per month** for providing the solution (exclusive of applicable taxes). The cost includes all capital and operational expenditures.
5. The Urban Local Bodies (ULBs) under States /UTs (as per **Annexure A**) can engage M/s ITI limited for implementation of solution.
6. The payment terms and service levels can be mutually agreed between the ULB and ITI Limited and the contract period has to be for a period of minimum 3 years. ITI Limited will implement the solution within 8-12 weeks of placement of the work order by the ULB. The payment to M/s ITI Limited can be made from the capacity building fund of SBM allocated to the ULB.
7. For queries you may contact Mr. Jothivel Sellaiah, Chief Manager (IOT – Marketing), ITI Limited, (Phone: 080-25660539, Fax: 080-25660521, Mobile: 9449074994, email: jvsellaiah\_crp@itilttd.co.in).

Yours sincerely

  
(Praveen Prakash)

Enclosures:

1. Annexure A - list of States / UTs where the solution to be implemented by M/s ITIL Limited
2. Features of the toilet monitoring solution

To:

1. State Mission Directors as per the list of states mentioned at **Annexure A** with a request to disseminate it further to all the ULBs in their state

Copy To:

1. CMD, ITI Limited
2. Chief Manager – IoT Marketing, ITI Limited
3. Director (SBM)
4. Section (SBM I & II)

### Annexure A

List of States /UTs- Solution to be implemented by M/s ITIL Limited

Sl. No.	State Name
1	Andhra Pradesh
2	Delhi
3	Gujarat
4	Haryana
5	Karnataka
6	Kerala
7	Maharashtra
8	Odisha
9	Puducherry
10	Rajasthan
11	Tamil Nadu
12	Telengana



## Features of the toilet monitoring solution

### Physical Feedback Device

- An interactive physical device for getting real time feedback from the user using a **simple push button based system**
- Approximate dimension of the device would be **30 cm x 30 cm x 15cm (L x B x H)**

### Components of Feedback Device

- **Push buttons** – Three different colour i.e Green, Yellow and red would be used to take feedback from the user.
- **Microcontroller** – Main processing unit which will register the feedback from the pushbutton via interrupt based mechanism and push it to the central control server. Other meta data like current time using RTC (Real time clock), ID allocated to the device would also be send to the server.
- **GPRS modem** – A GPRS modem with data SIM would be used to provide backend connectivity to the server.
- **Mould** – A high quality plastic mould would be used to enclose the electronics device.

### Features of the solution

- **Simple push button based system**
- **Green, Yellow and Red Smileys** for easy to understand
- **Dashboard (Available in Public Domain)**
  - **Every day report** - Algorithm would run every morning 8 am on the server.
  - **Real time performance index** – It would be shown on the Map based dashboard with different access levels for SBM City head, SBM district head, SBM state Head and SBM country head.
  - **Statistic and Color Coding** - Depending upon the access levels, different users would be able to see data at different levels. SBM Country head would be able to see Country level statics like which state is doing well, which state is doing badly with the help of **color coding**. Once SMB country head will click on a particular state, he / she would be able to see state level statics
  - **SMS Alert and Escalation** - If the performance index of a specific public toilet is below average or bad, a SMS as an SMS as alert would be send to the caretaker of the toilet for taking a corrective action. If no action is taken and corrective index of the toilet didn't improved, an escalation SMS would be send to the higher level.
- **Regional Language** written for convenience to user
- **Internet Connectivity** via GPRS modem – A GPRS modem with data SIM would be used to provide backend connectivity to the server
- **Local data storage** - An SD Card will store the data locally and would be synched to the server depending on the availability of the GPRS network. It is used in order to avoid loss of any data if GPRS network is not available.