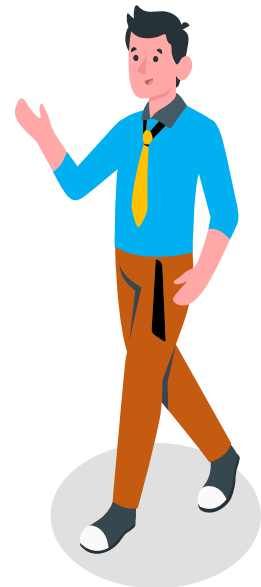
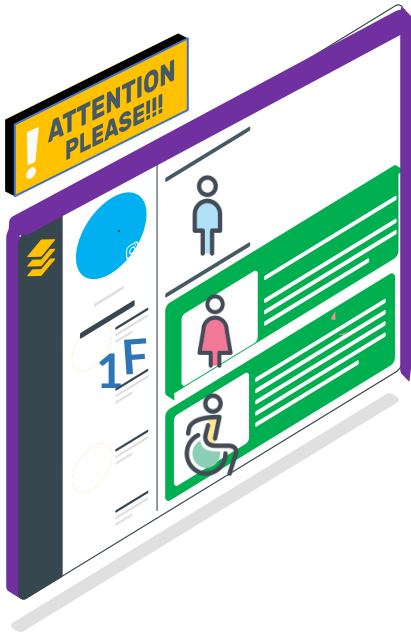


Petit.iot

Smart Toilet

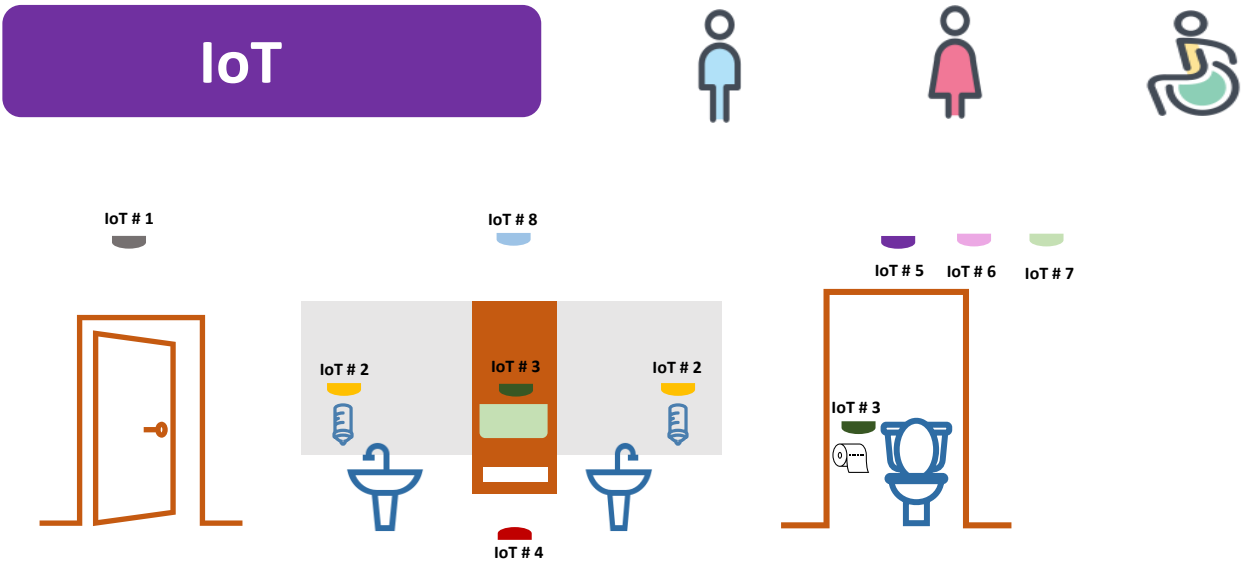


What are the benefits of Smart Toilet

It's well known that typical toilets face issues of inefficiency and overspending. **Smart Toilet** tackle these issues, make use and integrating technology by **Internet of Things** (IoT) into the smart toilet's key internal systems and workflow to develop the sustainability. Based on system can plan for schedule working foreseeable ,also easy to handle any adhoc case.

How does Smart Toilet work

Smart Toilet practice IoT data , to make key decisions and actions based on the situation that helps the toilet to perform better overall in terms of efficiency and hygiene quality control. Therefore, becoming more cost and time-efficient are benefit by stakeholders. According the system, alarm notification direct to front end operators to react any cases of toilet.



IoT #	Label	Description
1		People count for IN and OUT
2		Soap dispenser with level sensor
3		Towel paper/Toilet paper sensor
4		Water leakage sensor
5		Fall detection and occupancy sensor
6		Ammonia sensor (NH3)
7		Hydrogen Sulphide sensor (H2S)
8		Gas sensor

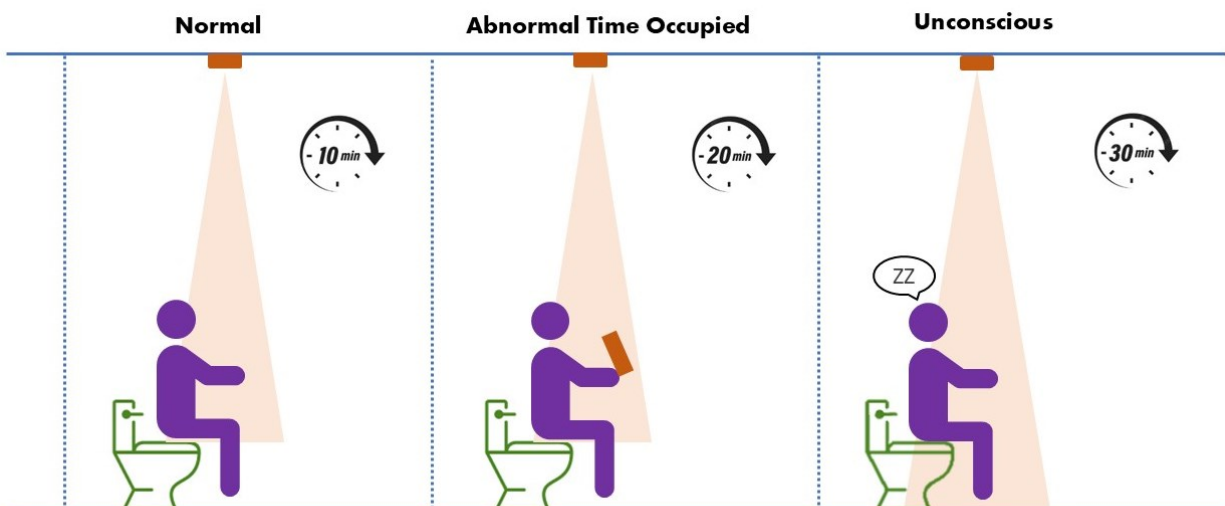
Characteristics of abnormal detection

Objective

Prolonged occupancy in toilet cubicles — particularly accessible facilities — poses a critical safety risk. In the event of fainting, medical emergency, or accidental fall, individuals may remain undetected for extended periods due to lack of visual monitoring or human presence. To mitigate this life-threatening scenario, **Petit.iot** Smart Toilet deploys a privacy-preserving, non-invasive detection system designed to identify potential incapacitation events — without compromising user dignity.

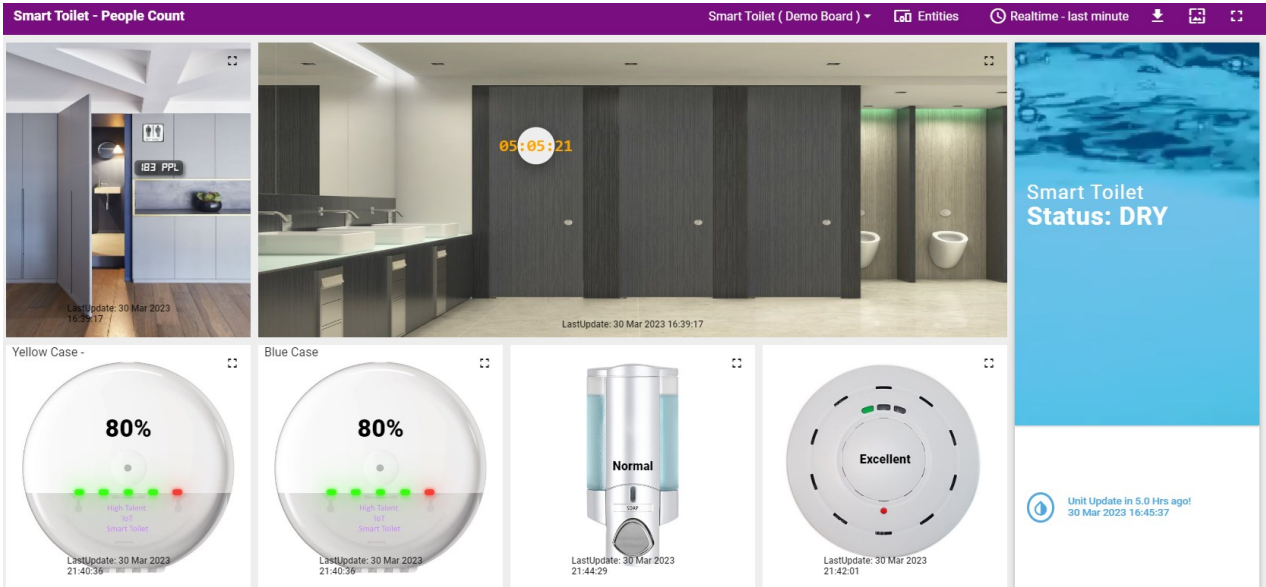
Technology

- **Overhead mmWave Radar Sensors:**
Deployed above each cubicle, these sensors detect micro-motions (respiration, posture changes) and classify body position (standing, sitting, lying) — enabling accurate identification of unconscious or fallen states.
- **AI-Powered Anomaly Detection Engine:**
Built on operationalized ML models trained on motion signatures and dwell-time patterns. Continuously learns from environment-specific data to maximize detection accuracy while minimizing false positives through adaptive thresholding and contextual filtering.
- **Privacy-by-Design Architecture:**



Realtime glance visibility dashboard

Dashboard makes even the most complex data easy to read and interpret and provides on-demand visibility and insight.



Easy to start-up

The **Petit.iot** Smart Toilet system provides support for both on-site and cloud-based operations. Users can conveniently access data dashboard metrics through a web portal, eliminating the need to store large amounts of system data on their personal computers or mobile devices.

Technology benefit

Petit.iot products are committed to sustainability, incorporating eco-friendly practices throughout their product life cycles and minimizing the use of hazardous materials. The systems are designed to scale up or down flexibly, avoiding version discrepancies and thus reducing potential waste. With a robust API and adherence to open standards like **BACnet** and **Modbus**, these products can easily interface with various BMS, CCMS, SCADA, and other ecosystem connections.

