SMART TOILET MANAGEMENT

Creating Smart Toilet Management Systems with IoT

Public toilets are a commonly used facility in every sector. Oftenly an overlooked area, the overall presentation and experience of using toilet facilities can leave a lasting impression on your visitors.

With a large number of users, maintaining the cleanliness of toilet facilities can be a time consuming task if you don't have the required man power. By installing Netvox's smart devices, you can create intelligent solutions to improve user experience and service quality.

LoRaWAN devices can be easily installed without the need for any cabling or disruption to your facilities. All devices connect wirelessly to a cloud-based server meaning there are no large set up costs or maintenance requirements. With a long battery life of up to 5 years, once deployed you can begin to manage your toilet facilities, helping you to make savings and improve overall visitor satisfaction.

We've taken a look at how Smart Toilet Management Systems can enable you to save on resources and resolve potential issues before they arise.

KEY BENEFITS

- Simple to install with minimal disruption
- Create live feeds of cubicle availabillity
- Many devices feature replaceable batteries and have a battery life of up to 5 years
- Expandable to provide a future-proof solution
- Remotely monitor toilet facilities wherever you may be
- Configure updates to alert suppliers when consumables need to be replenished or when sanitary waste may need to be collected

The Challenges

Not all premises have the man power to complete hourly checks on toilets, Smart Toilet Management solutions can be useful in a wide range of applications including; scenic spots, commercial buildings, supermarkets and department stores.
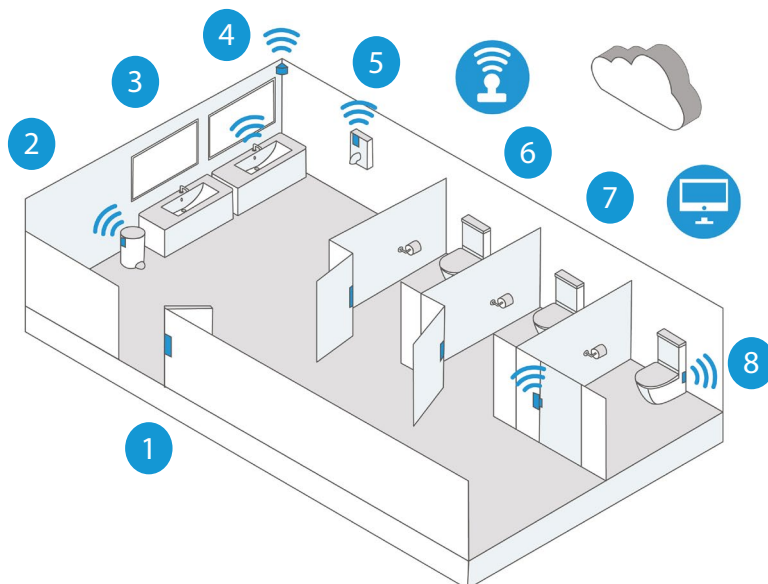
The main areas we look to address in this use case include:

- Keeping visitors happy by regularly replenishing consumables
- Improve user experience and service quality
- Reduce queues and waiting times
- Ensure facilities are operating effectively
- Monitor alerts for assistance in disabled facilities

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Use Case: SMART TOILET MANAGEMENT

The Solution

Once you are happy you have sufficient network coverage the next stage is to select your gateway and sensors. If you are unsure of your network coverage and requirements contact Alliot for expert technical advice. The diagram below illustrates how you can use different devices to optimise the maintenance and management of Smart Toilet Systems.

1 Monitor occupancy levels within the toilet area with the Netvox R718PQ Wireless Short-Range Occupancy Sensor. Offering state of the art infrared detection this smart device can pick up humans and animals at a range of 2m at a 72 degree angle.

2 Overspilling bins are unsightly and can leave a negative impression on visitors. The Netvox R718X wireless ultrasonic distance sensor can detect the distance to measured objects enabling alerts to be sent when bins are full. Messages may also be configured to alert waste management contracters.

3 Maintaining soap levels and ensuring everyone keeps their hands clean is of utmost importance right now. Ensure your dispensers are never empty with the Netvox R718VA wireless sensor. This smart device can also be useful in ensuring toilet paper levels are maintained.

4 Maintain comfortable conditions for people using your facilities with the Netvox R711 wireless temperature and humidity sensor. This compact sensor can integrate seamlessly into existing surroundings, helping you to remotely monitor the conditions of your premises.

5 Remotely monitor energy consumption with the Netvox R718PC Wireless RS485 Adapter. Simply connect to your electricity meter for a reliable record of how much energy your toilet facilities are actually using. This information can then be used to identify potential savings.

6 Keep your premises pristine with the Netvox R718WA wireless water leak detector. Ideal for use in toilet areas, this detector enables potential water leaks to be identified before they cause too much damage.

7 The Netvox R718PQA Wireless Toilet Occupancy Sensor integrates a door magnet with infrared mobile to detect when someone is moving. Simply attach to a toilet cubicle door to monitor when it's in use. Alerts can then be triggered to action a cleanse or show realtime availability of cubicles.

8 Automate alerts to visitors who may need assistance with the Netvox RB021 wireless emergency push button. Ideal for disabled toilets or to alert other members of staff, this smart button can help to raise alarms or notify people to a need to take action.

How it all works..

The devices within your solution will connect to your gateway which then transmits the collected data via the cloud to your chosen application server. Alliot can pre-provision your sensors to send data at specified times and frequencies enabling you to optimise your Smart Toilet Management right away.

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