Agenda

SmartClean in Buildings with LPWan in Office Buildings & Campuses

LPWan - LoRa and IQRF

Cloud SaaS Offering

Improvements for Landlords/Tenants

Key Insights

Business Benefits

How IQRF really helped

IQRF Community Opportunities

SmartClean
INTERNATIONAL

SmartClean Intelligent Cleaning Management

SmartClean is the most **cost effective** intelligent cleaning management system available, with demonstrable improvement in cleaning performance.

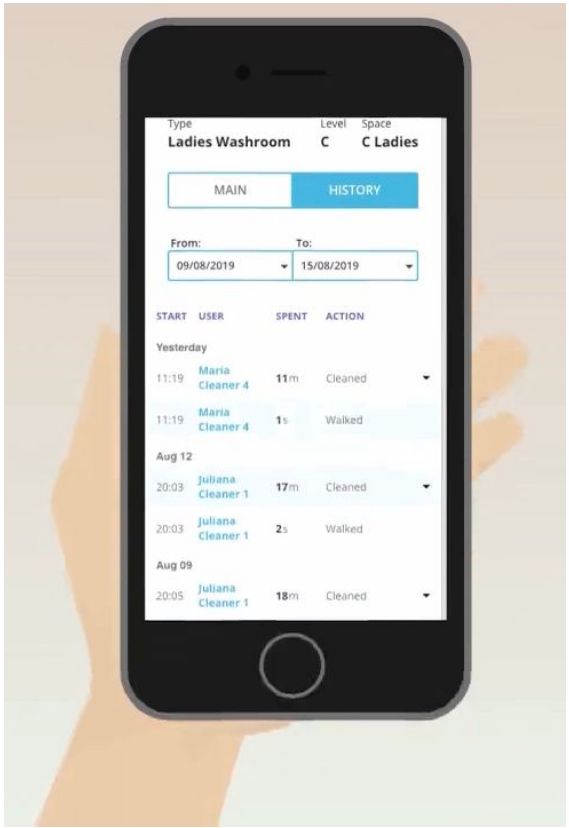
SmartClean have **extensively piloted** the system for one year in several of its flagship client sites within the UK as a Cloud SaaS offering.

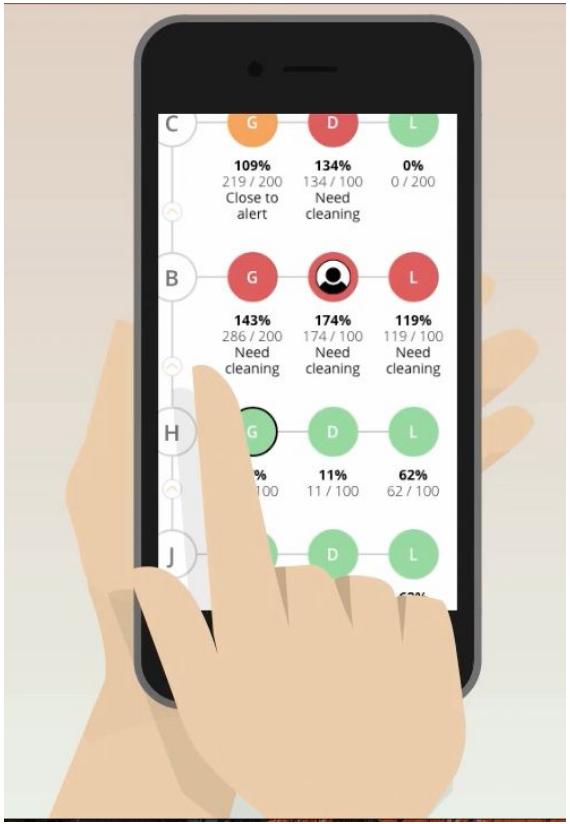
The system **dynamically routes cleaning staff** to the washrooms that need it most by connecting them to real-time footfall data through a user-friendly mobile app.

This enables **optimal use** of cleaning operatives and a reduction in washroom waste, with no limit to building portfolio size or number of floor levels or zones.

By providing measurable insights, the system supports a **continuous feedback loop** of improvement in operational efficiency.

About the Android Mobile App





Web App for Cleaning Managers

View location of Cleaners

View Washroom status R A G

View Pre-Cleaning 5* Rating status

Consumables Management

Dynamic Hygiene Resource Scheduling & Thresholds

View Priority Messages status

History of all effort by Cleaners per Zone and Washroom

Insight provided via Cloud-based Analytics

Key Insights

Pilot Results Data Insight

Questions we were able to answer after 60 days

CGA Consulting operated a pilot at a flagship client facility in London between June and August 2019

Zone B Men 235 average
What washroom had most daily visits across all Zones?

234 visits
What was the average daily washroom visitor footfall?

Yes 20% overstocked
Were the consumables stocked on-site sufficient?

61,847 visits
What were the total washroom visits in July ?

Between 11am & 3pm
What time of day does Pre-Clean status seem poor

Monday & Tuesday
What are the busiest days ?

12am to 2pm
When were the most RED Threshold periods observed?

8am - 10am & 1pm - 2pm
What times of day are the peak periods?

Zone J Disabled 85 average
What washroom had least daily visits across all Zones?

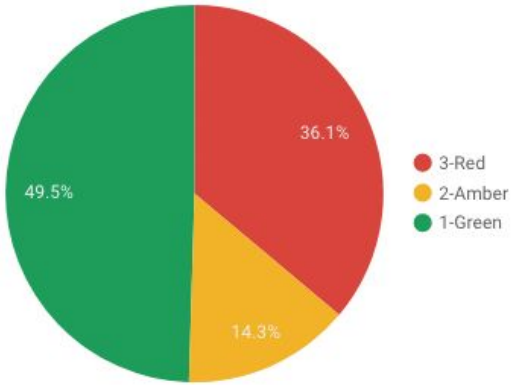
Data Insight 1a

Washrooms require cleaning throughout the business day

Their cleanliness is a major yardstick used to judge commercial premises
Washrooms are the most labour-intensive to clean

On average 1,000 sq ft per hour vs 4,000 sq ft for office space

(Reference British Institute Cleaning Science)



Opportunity to Improve **Red** status

During the monitored key six hour working period, washrooms were overdue to be cleaned by an average of 2.1 hours (36.1%).

Min Red was 17% in H Zone
Max Red was 55% in C Zone

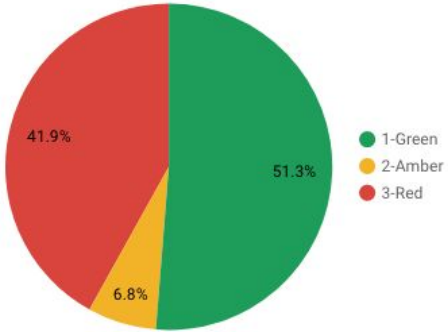
All 4 Zones monitored - 12 washrooms
Key working period was 10:00 till 16:00
Whole Month of July 2019

Data Insight 1b

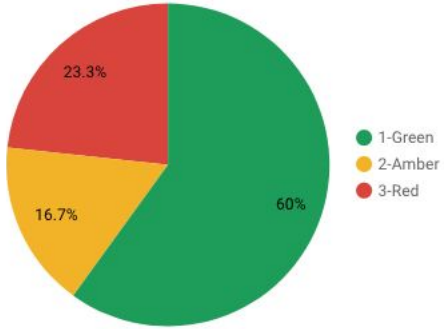
Washroom Cleanliness 44% Improvement in Zone B

It was observed that over the active period of the Pilot (Jly-Aug) there was a marked reduction in the period of time that washrooms remained overdue for cleaning RED status.

The improvement was 44% (from 42% to 23%)



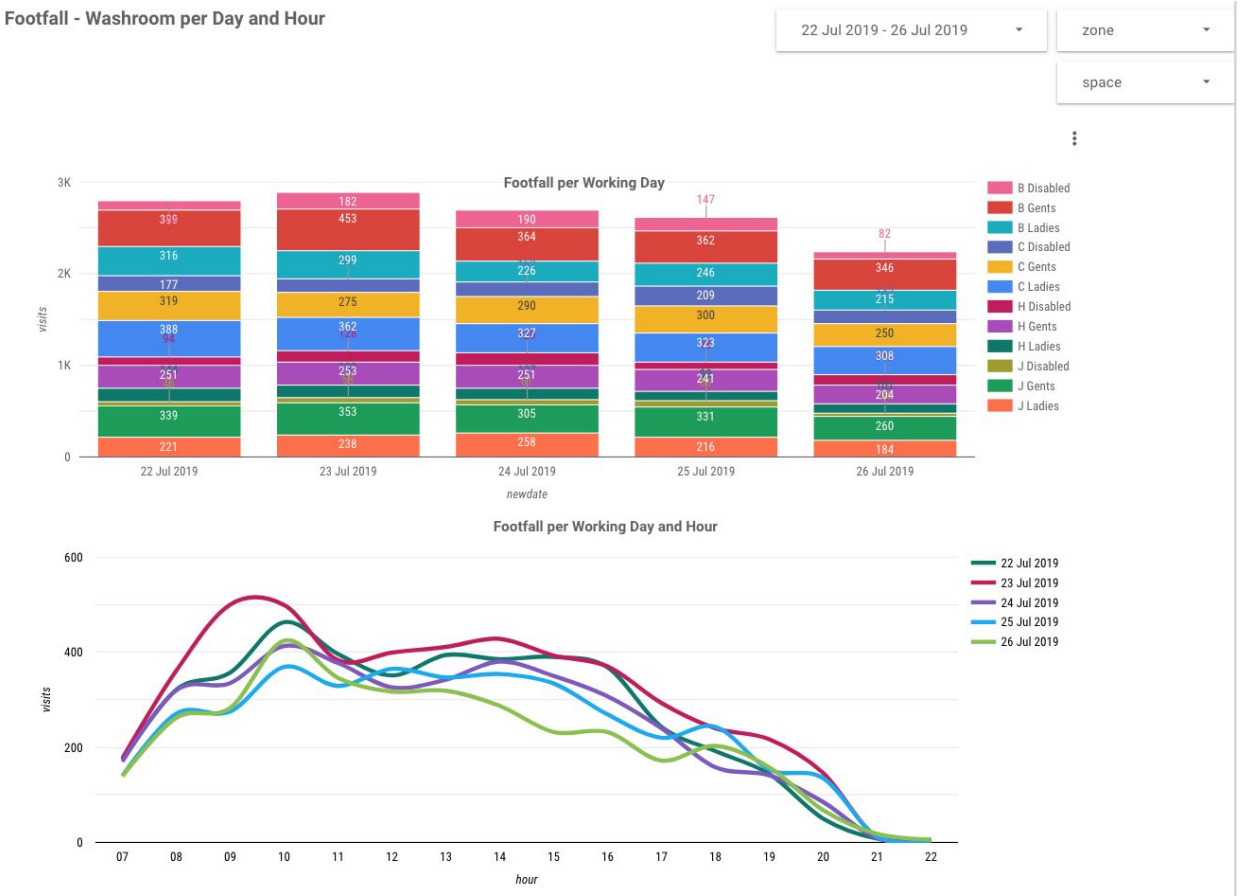
w/e Jly 6th



w/e Aug 31st

Other positive improvements were observed in the other Zones

Data Insight 2



Improvements to Occupiers

Washrooms & Showers Consistently Clean - Dynamic Scheduling

Timely Replenishment of All Consumables - Data-Driven, History

Improved Community Operational Support - In-App Messaging

Increased Hygiene Resource Productivity - Data-Driven, History

Continual Service Improvement - Data-Driven, Machine-Learning History

Business Benefits

Measurable Improvement in Cleaning Productivity

Service Improvement Driven by Continual Cleanliness Audit

Standard Service Model across Global Communities

Priority Alerts Tracking & Response Time Improvement

Improvement in Communities Satisfaction Level

Return on Investment

Washroom Consistent Cleanliness 47% Improvement

Supported by data from our pilots we have measured these improvements (Doc A)
Those spaces really requiring immediate cleaning do get cleaned quicker

Consumables Management 20% Improvement

Continual Audit trail of Replenishment enables correct stocking levels (Doc B)
Enables Global Procurement approach due to no lock in to single vendor

Resource Share - partial reallocation of cleaning resource

Possible when Insight highlights a below standard daily cleaning hours factor
Leads to a pro-rata reduction in site cleaning resource costs (Doc C)

Standardised cleaning model for all Client Bids

Contains costs, particularly in global locations due to proven known methods
Enables faster commissioning of community sites

Technical Issue Resolved

The Building and Campus had 2 below ground levels

Assumed LoRa signal strong enough to penetrate the concrete - 2 levels

Wrong!

Solution

Placed a single IRQF Gateway on 1st floor
Various sensors -2 Shower Level
up to -1 Garage level
then into 0 level

Implemented IRQF sensors mesh

So we now include IQRF in our solution offering

Technical Issue Resolved

We retained the LoRa Gateway in-situ for office levels 2 to 6

LoRa signal strong enough for office levels

Opportunities for IQRF Community

We purchase the following wireless battery sensor types

Magnetic: Reed & Hall Effect for Doors

Very focussed beam PiRs for sensing people movement

Lidar/time of flight

Key Requirements

Firmware must be flexible to enable aggregated data transmission

Time periods for transmissions to be flexible

e.g. Monday to Friday 06:00 to 23:00

Transmit payload each 10 minutes

Come and Talk to us about SmartClean and promote it in your marketplace