



FootfallCam Smart Washroom™

Usage-based Cleaning Management

About FootfallCam™

Global Leader in People Counting System

Headquartered in the **United Kingdom**, FootfallCam started with a team of experienced engineers with the vision of creating the most advanced people counting system in the market. We are the **manufacturer** of both hardware and software; all the design and development are 100% in-house made.



- Continuously reinvesting more than 24% revenue into research and development
- **In-house R&D team** dedicated to the development of both hardware and software platform
- Combined **over 100 years industry experiences** in developing people counting solution
- **Serving multiple sectors** varying from retail, fast food, restaurants, museums to smart buildings and airports.

FootfallCam Products

FootfallCam provides a number of people counter and IoT devices, specially designed for Smart Washroom system.

FootfallCam 3D Mini™



Time-of-Flight (ToF) Technology
[Datasheet](#)

FootfallCam Mesh Hub™



Radio Frequency (RF) / LoRa

FootfallCam Space Sense™



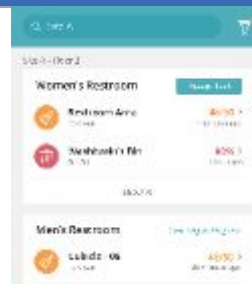
Passive Infra-red (PiR)
[Datasheet](#)

FootfallCam Depth Sense™



Time-of-Flight (ToF)
[Datasheet](#)

Washroom Management™



Mobile Application for Task Alerts

FootfallCam Analytics Manager V8™



Cloud-based Analytics Platform
[Datasheet](#)

FootfallCam Smart Washroom Solution



Watch how it works: <https://youtu.be/B6JuexuxKqQ>

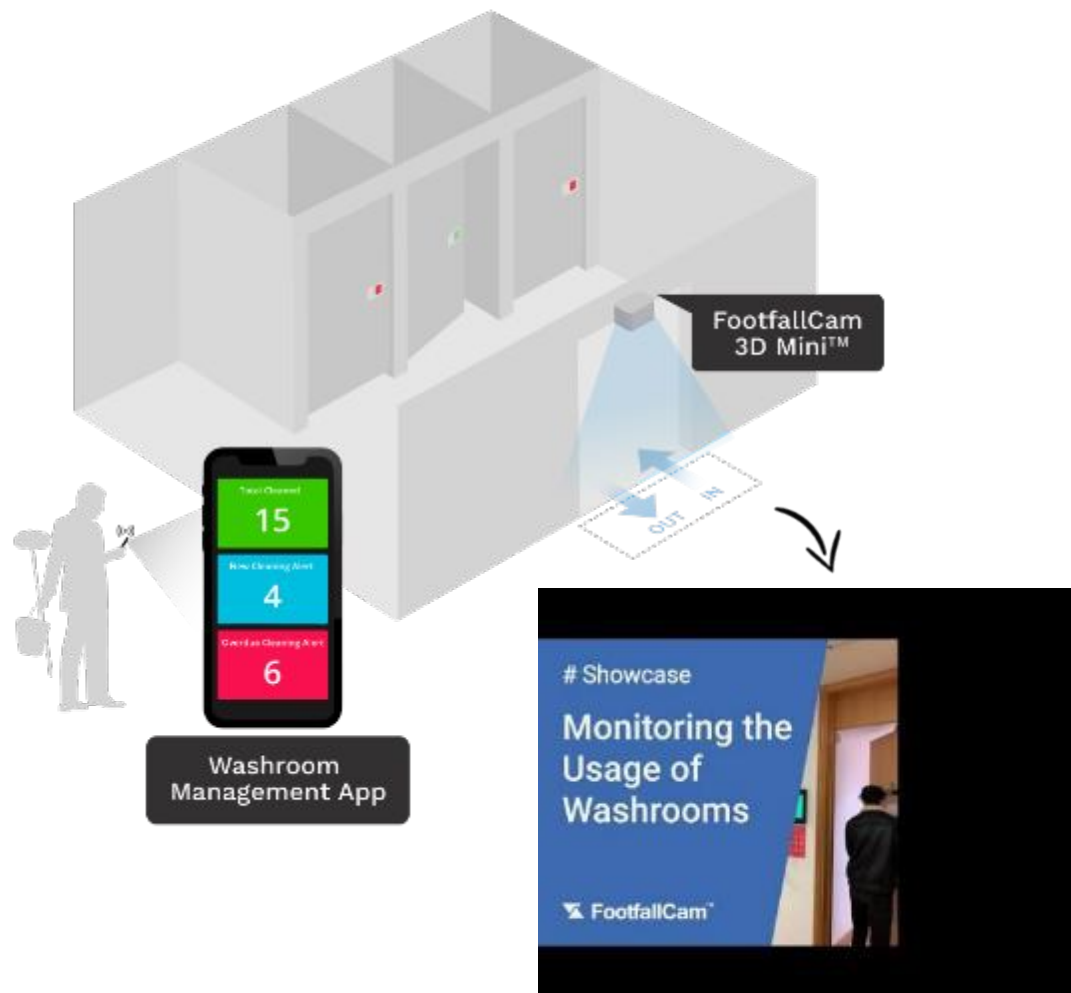
1. **Demand Based Washroom Cleaning** Management - Cleaning alert based on actual washroom usage
2. **Improve Washroom User Experience** - Odour level measurement to trigger cleaning task alert
3. Visitor **Traffic Control** and Even **Traffic Distribution** - Redirect visitors to the next available washroom, prevent long queue



Key Features

#1: Usage-Based Washroom Cleaning System

FootfallCam 3D Mini™ detects the number of people entering and exiting the washroom. Cleaning requests will be sent wirelessly to cleaners via FootfallCam Smart Washroom App™ when usage reaches a certain threshold.



- Anonymous counting, privacy protected
- Using ST Micro ToF 16x16 Sensor
- Field of view (FOV): 57°
- Low cost system
- Configurable cleaning threshold
- Automated cleaning alert via Radio Frequency (RF)

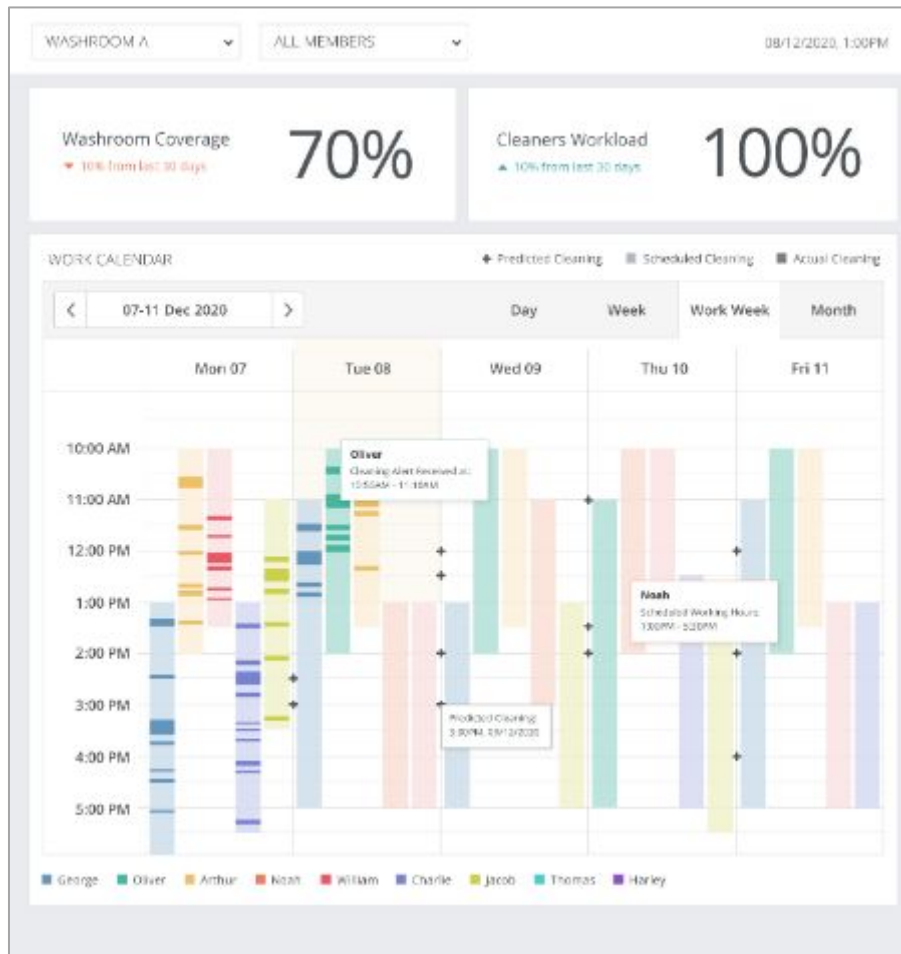


Watch product [video](#)

<https://youtu.be/mtFyAQhmwxS>

#2: Supervisor's Planner for Cleaning Schedule

Based on the **predicted usage** of washroom, cleaning supervisors can have better planning on the cleaning schedule in terms of **washroom coverage** and cleaners' **resources allocation**.

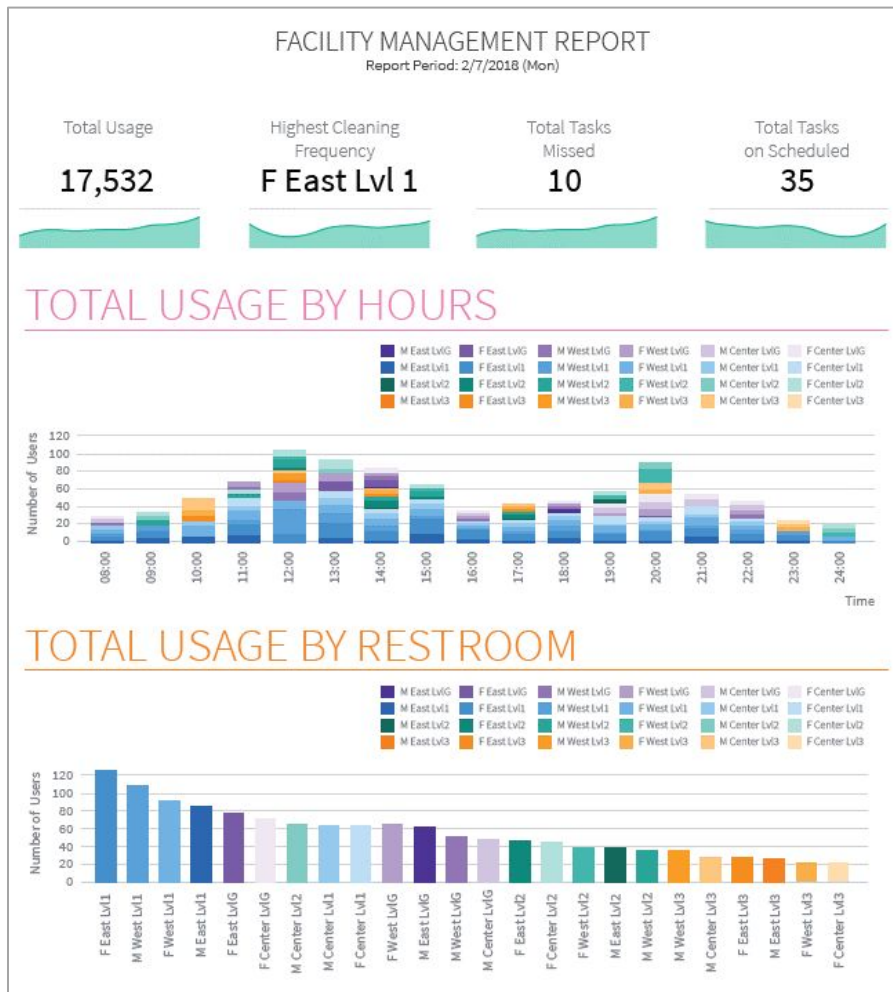


[Cleaning Schedule Planning](#)

- **Predicted usage** based on historical usage data captured
- **Workspace** for cleaner supervisors
 - Staff planning
 - Comparing the **predictive usage data** (from Historical usage data) and **actual usage** (Task alert triggered)
- Facilitate better **resources planning**
 - Washroom coverage
 - Cleaners' workload

#3: Management Report for KPI Review

With the readily available reports for washrooms, it allows management to capitalise the usage data as part of the [resources and cost audit process](#), and helps management to make informed business decisions backed by hard data.

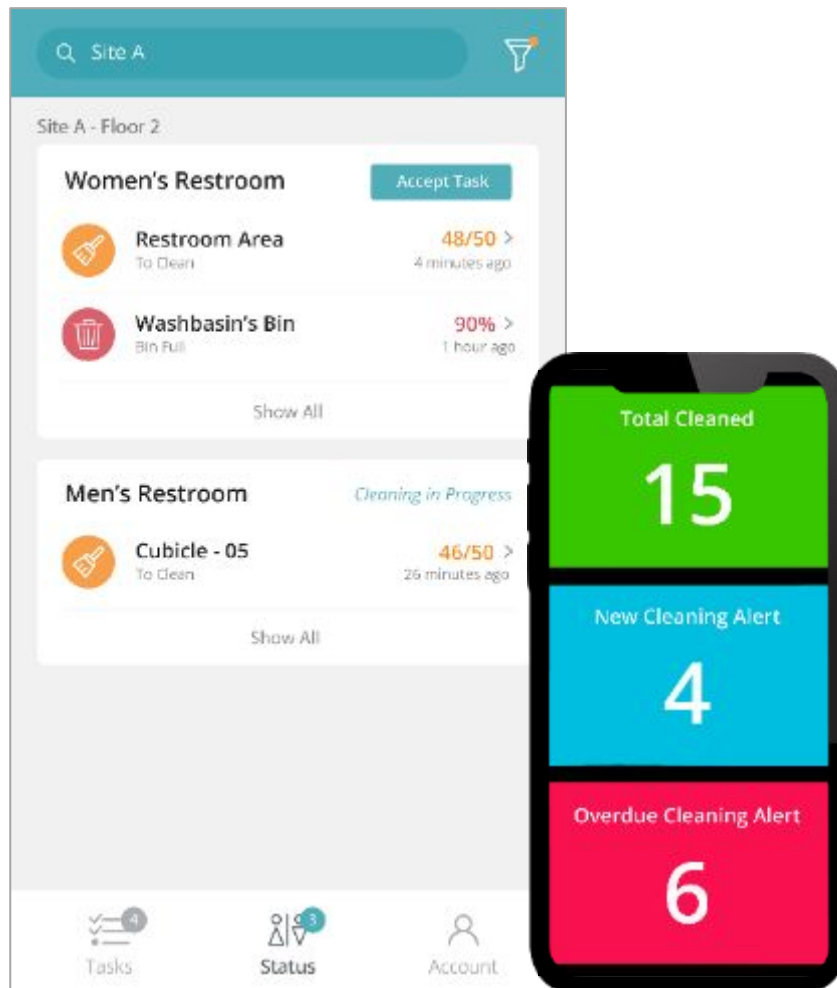


Cleanliness Reassurance

- Provide clear view on washrooms historical [utilisation rate](#)
- [Forecast](#) washroom demand usage from historical trend
- [Full transparency](#) on cleaning staff performance
- [Measurable KPI](#) for cleaning staff performance review
- Utilise available data and feedback to [improve user experience](#)

#4: Cleaner App for Task Alerts

When a **cleaning threshold** has reached, a **task alert** will be sent to the cleaning staffs via FootfallCam Smart Washroom Apps, this can ensure that all the washrooms are cleaned appropriately to **enhance user experience**.



Cleaning Schedule Planning

Wireless alert via Cleaner App

- Send alerts to cleaners when there is a new cleaning task
- Users can add tasks to their task list to prevent task clashing
- Update via the app once the task is carried out
- Washrooms will be cleaned based on usage (prevent under-cleaning)
- Enhance user experience

#5: Visitor Signage - Washroom Cubicle Availability

FootfallCam Space Sense™ can be installed at each of the washroom cubicles to detect the occupancy and the availability of the washroom can be displayed on the Visitor Signage.



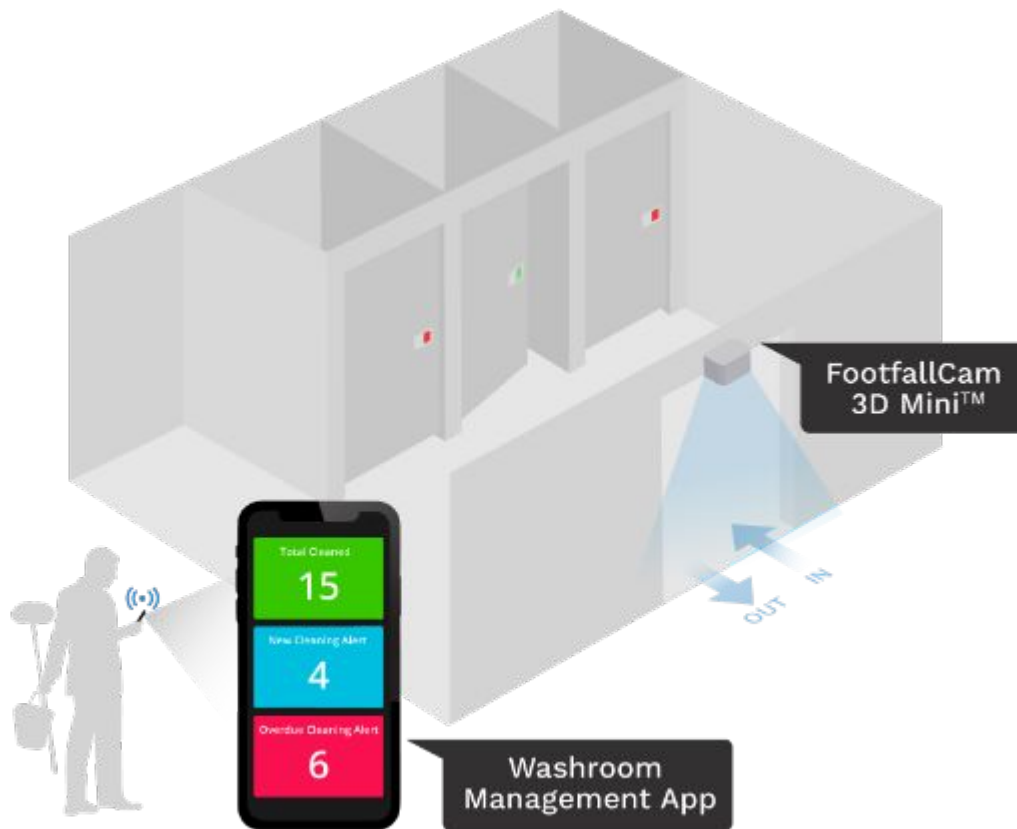
- Allowing washroom users to know the **availability of cubicles**
- Prevent cubicle manual check by washroom user
- **Redirect** washroom user to another washroom with more available cubicles
- Manage washroom **user expectation** on the wait for cubicles



Product Packages

Option #1: Usage-Based Cleaning System

By installing [FootfallCam 3D Mini™](#) at the washroom entrances, number of toilet visitors will be visible. Cleaning can then be done based on actual toilet usage with automated cleaning requests being sent wirelessly to cleaners via [FootfallCam Washroom Management App™](#) when usage reaches a certain threshold.



Usage-Based Cleaning System

- 3D Mini to monitor Toilet Visitor Count
- Send cleaning alerts via Washroom App when usage threshold is reached

Metrics/Outcome

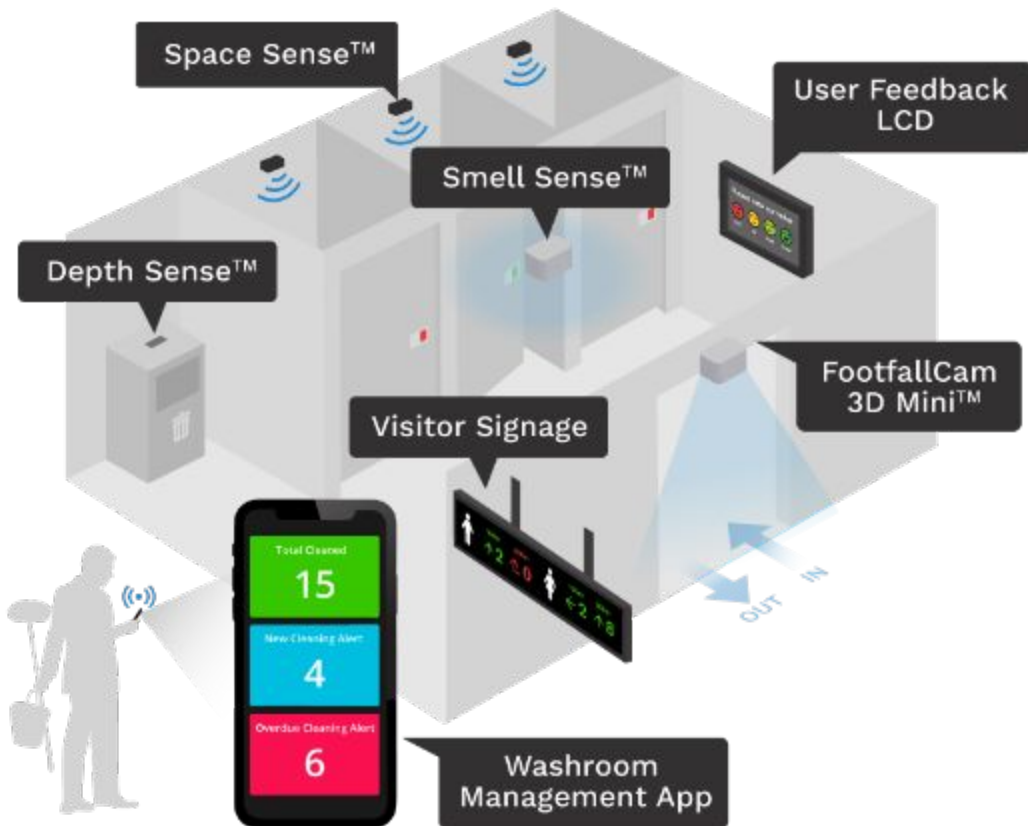
- Optimise Cleaning Resources
- Plan Cleaning Schedule based on Historical Data (Eg. for peak hours)
- Cleaning Staff KPI

Products

- FootfallCam 3D Mini
- FootfallCam Mesh Hub
- FootfallCam Washroom Management App

Option #2: Smart Washroom Solution

By extending the solution with other FootfallCam Smart Washroom product offerings, customers get a complete Smart Washroom solution. All FootfallCam products are connected via [FootfallCam Mesh Hub™](#), with [FootfallCam Smart Washroom Management App™](#) being the centralised platform for alerts, configuration and data monitoring.



Usage-Based Cleaning System

- Sensors to monitor cleanliness and the level for toilet essentials
- Send alerts for toilet cleaning and replenishment

Improve User Experience

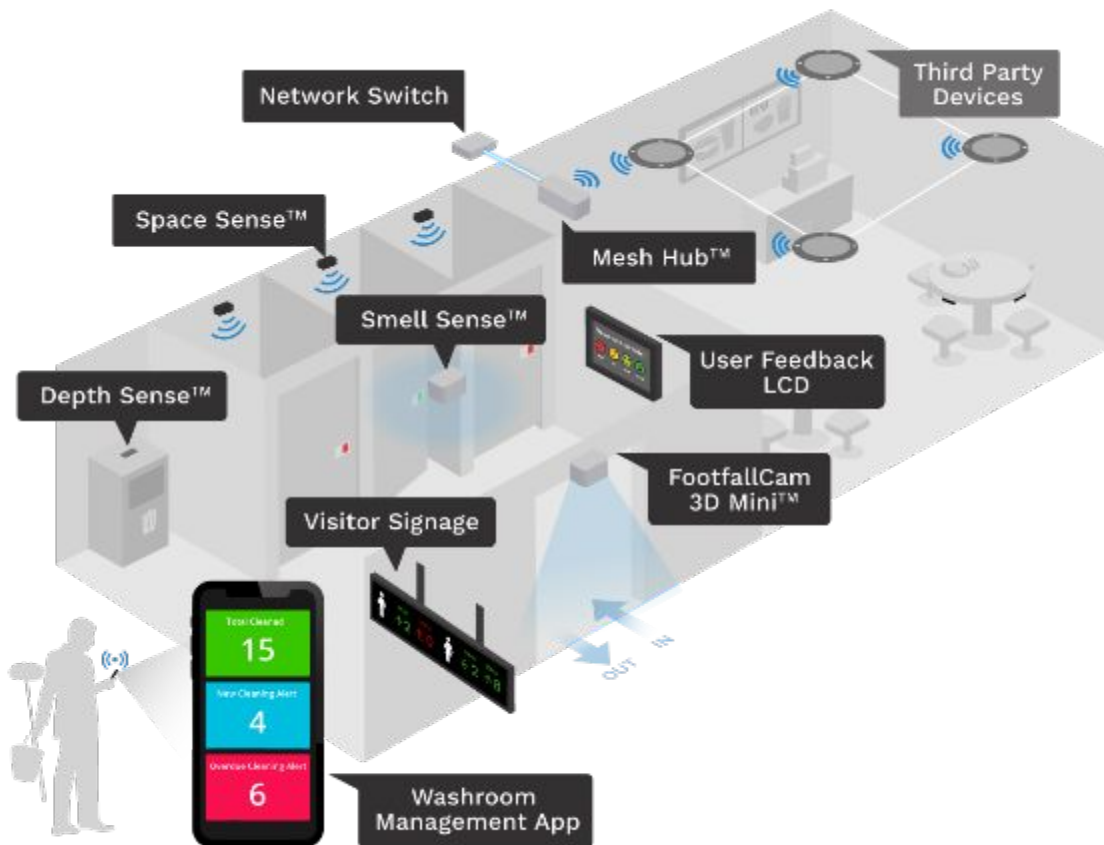
- Dashboard to show cubicle availability
- LCD Screen for User Feedback

Products

- Products in Package 1
- FootfallCam Space Sense (for cubicle occupancy)
- FootfallCam Depth Sense (for dustbin, toilet roll, soap level)
- FootfallCam Smell Sense (for odour level)
- LCD Touch Screen & Visitor Signage

Option #3: Smart Building Solution

FootfallCam provides an open architecture which allows integration with 3rd party Zigbee and LoRa compatible smart devices. With [FootfallCam Mesh Hub™](#), there can be a centralised system to control both FootfallCam and 3rd party smart devices in areas within the site, not just limited to washroom.



Integrate with 3rd party Smart sensors

- Open Architecture. Able to connect to thousands of third party smart devices ([Zigbee and LoRa compatible](#))
- One centralised system for both FootfallCam and compatible third party devices

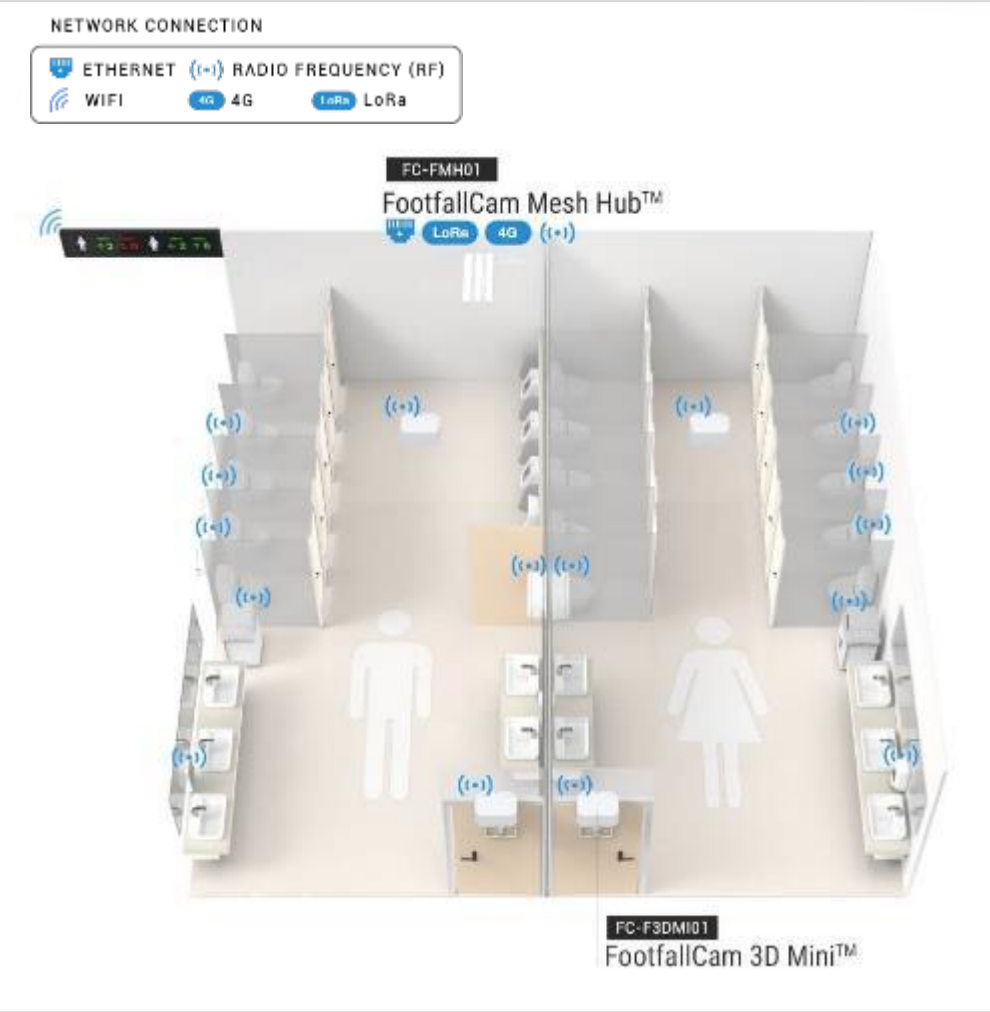
Centralised platform for:

- Remote Controlling & Monitoring
- Data Analysis
- Eg. Lights, Temperature, Humidity, Power & Water Consumption, etc.

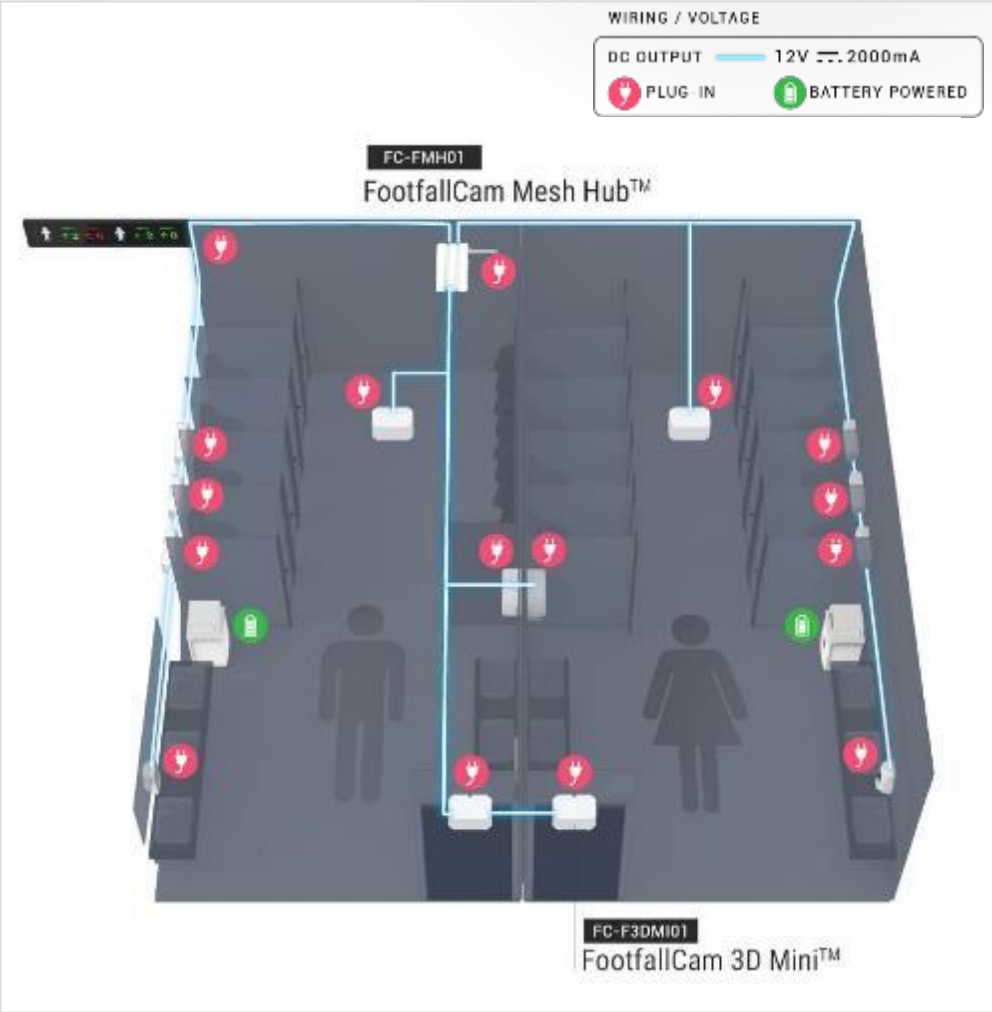
Products

- Same Products as Package 2

Connectivity and Wiring Diagram

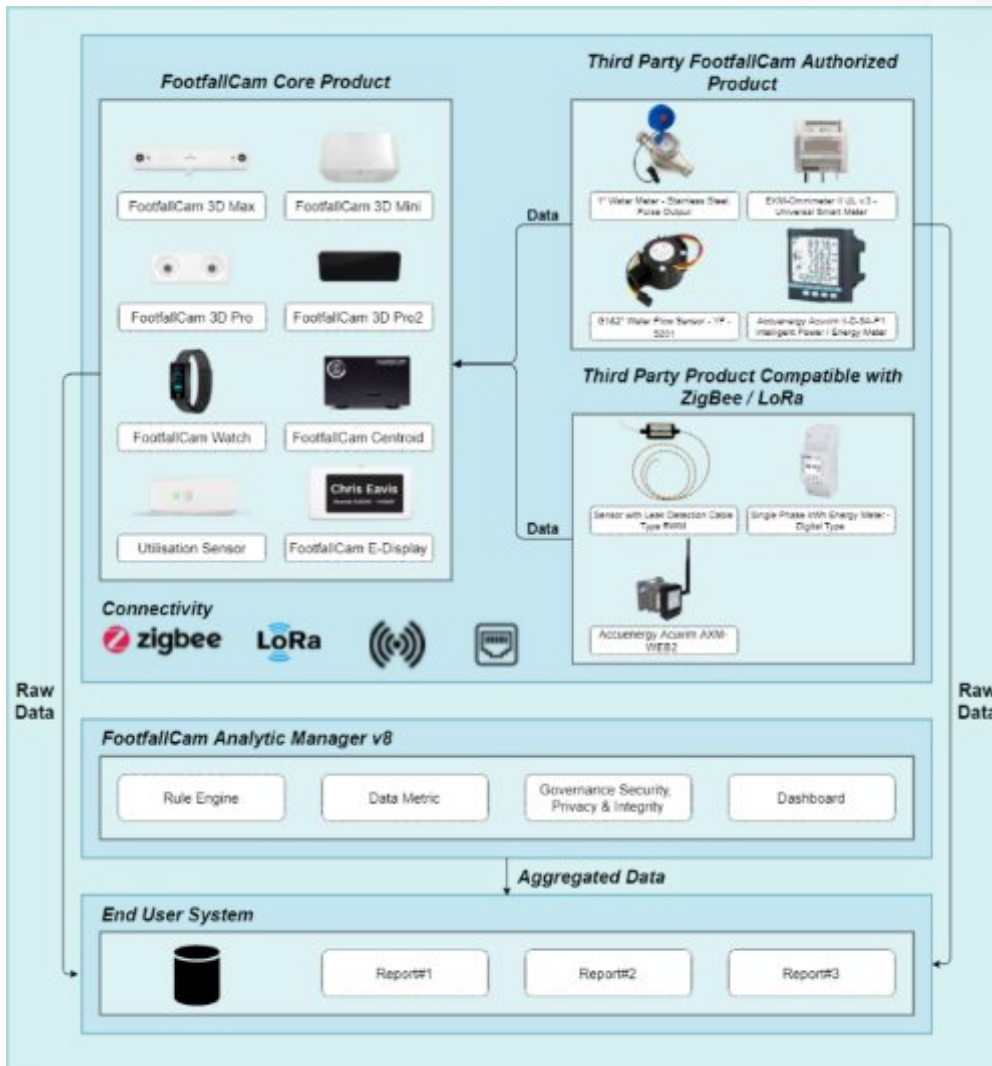


Wireless Connection between Devices



Powered by 12V power cables (can be daisy-chained)

FootfallCam System Open Architecture



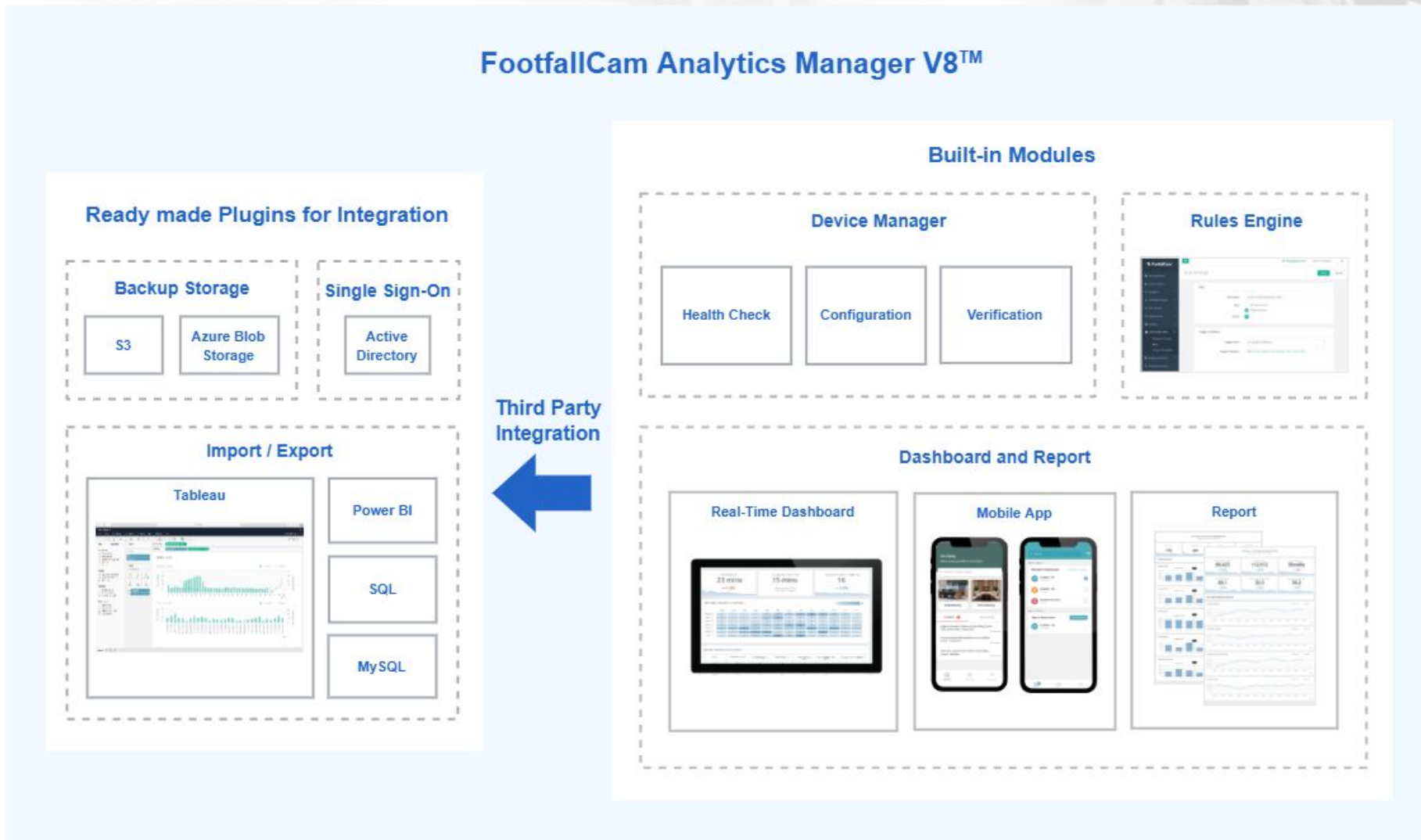
System Architecture

- FootfallCam supports:
 - Certified third-party smart sensors
 - Zigbee and LoRa compatible third-party smart sensors
- Can be hosted on FootfallCam Servers or hosted on clients' servers, as long as it is a FootfallCam Sensor with IoT gateway.
- Offers flexibility to work with a variety of smart sensors
- Dedicated FootfallCam specialist who will be responsible for integration



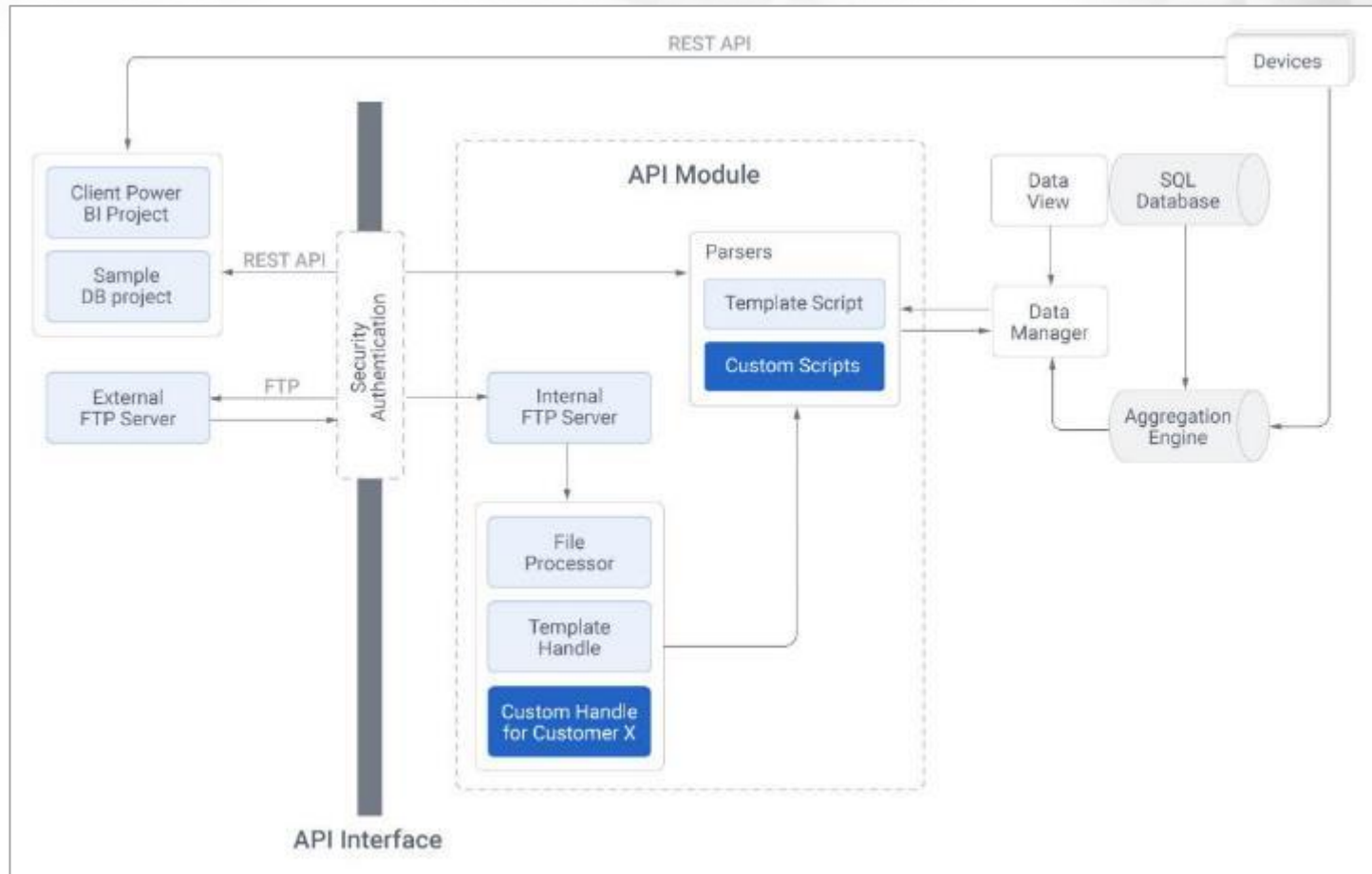
Infrastructure and Integration

FootfallCam Software Platform



- **Open architecture.** Customers will have full ownership and access to all the data
- Data can be **integrated to your own Business Intelligence (BI) system** and FootfallCam provides ready-made plugins to achieve that

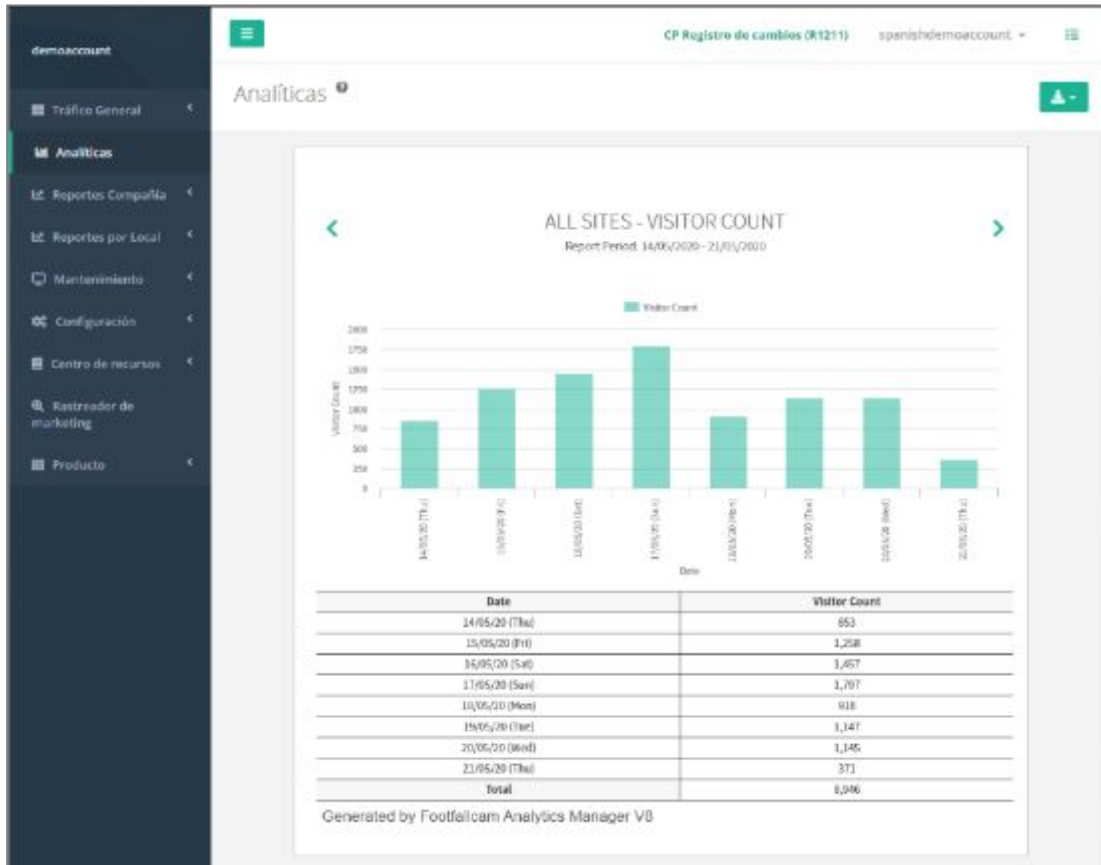
API: Integrate with your Applications



[FootfallCam API document](#)

- **Integrate** people counting data into third-party software platform or sample projects via API or FTP
- **Real-time** data retrieval
- Data in **aggregated** or **raw** format
- Allow **customised** scripts and handling for specific customer's project

Enterprise Class Software



Multi-language Interface

Different languages available such as:

- English
- Dutch
- Spanish
- French
- Italian
- German
- Arabic
- Japanese
- Chinese

Customise dashboard design

- FootfallCam will customize the language and images in the dashboard
- Provide us with the translated text and graphics, then we will help you handle the configuration

FootfallCam Analytic Manager V8™



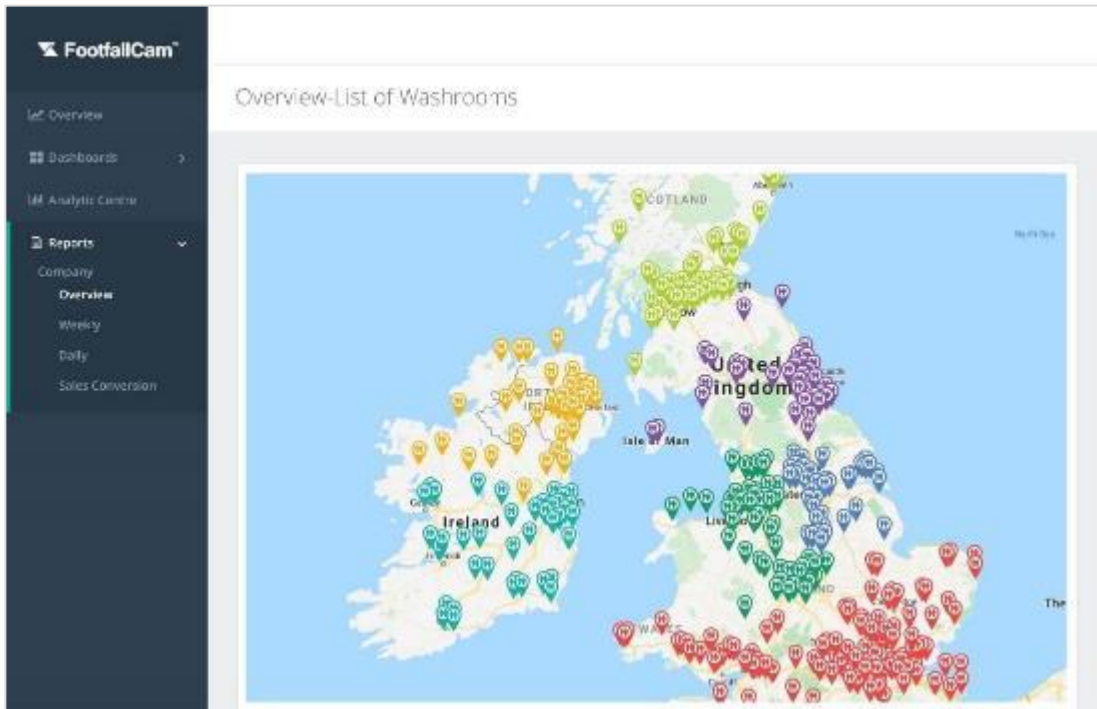
Functions:

- Staff alert if capacity limit is breached
- Centralized Management Analytics Software
- API Available for Data Integration
- Pre-defined Report Set
- Health Check Report
- User Account Management
- Automated Email Scheduler

Software Specifications	
Interface	Http; Https
Compatible Browser	IE7 or Later Mozilla Firefox or Later Chrome Version 4.0 or Later Safari
User Levels	2 levels: Administrator, Standard User
Ethernet	10/100 Mb Ethernet
Time	NTP, Adjustable time zone, automatic day light saving adjustments
Data Delivery	TCP/IP
Database Type	SQLite
Report format	csv, .xml, .txt
Data Storage	5 Years storage with auto sync
Data Backup	Yes
Backup Frequency	Daily Full Backup of Data and Configuration Weekly Backup to Sub Server for Contingency Purpose
Software Version Upgrade	Auto Upgrade

Manage Washrooms Remotely

- **FootfallCam Analytics Manager V8™** provides a central platform for customers to manage washrooms across different regions and locations.
- Dashboard that is accessible from a standard web browser remotely from anywhere
- Device Settings and Configuration can be done remotely **without the need of going on-site**



[List of Washrooms](#) (Map View)

LIST OF WASHROOMS			
Washroom	Device ID	Total Usage	Cleaning Frequency
Location 1-Female	15P01020155	335	20
Location 1-Male	15P01020176	301	19
Location 2-Female	15P01020184	224	16
Location 2-Male	15P01020175	187	14
Location 3-Female	15P01020162	112	10
Location 3-Male	15P01020104	245	17
Location 4-Female	15P01020132	335	20
Location 4-Male	15P01020112	301	18
Location 5-Female	15P01020125	214	16
Location 5-Male	15P01020122	187	13
Location 6-Female	15P01020154	70	9
Location 6-Male	15P01020121	45	7
Location 7-Female	15P01020195	323	19
Location 7-Male	15P01020185	334	20
Location 8-Female	15P01020138	223	16
Location 8-Male	15P01020134	183	14
Location 9-Female	15P01020156	112	10
Location 9-Male	15P01020144	245	17
Location 10-Female	15P01020107	223	16
Location 10-Male	15P01020185	125	10

[List of Washrooms](#) (List View)

Monitor Faults with Quick Reaction Time

CP ChangeLog (R1261) adminCompany

Device Management & Health Check

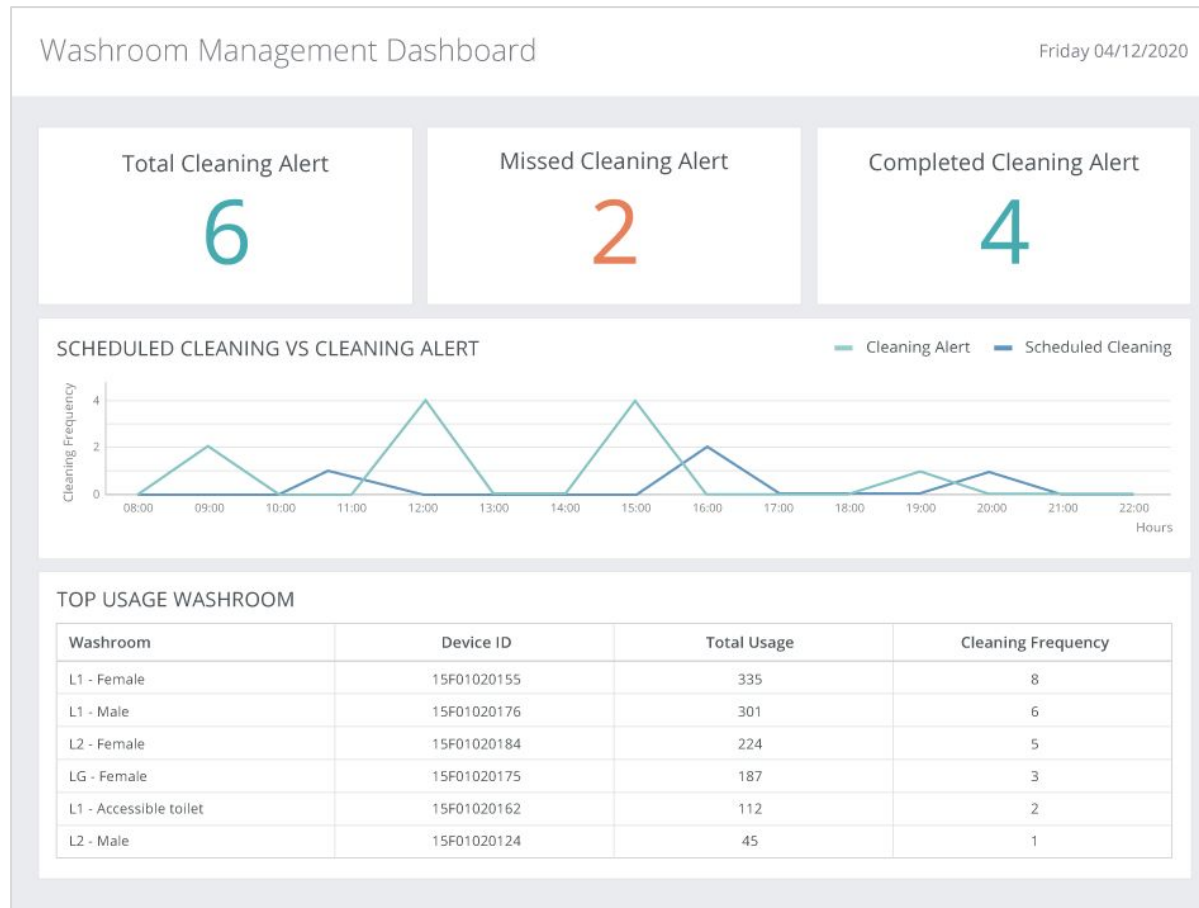
Device List [+ New Device](#)

Device	Serial	Type	Site	Accuracy Audit	Device Health Check	Device Profile	Pending Issue
● MainEntranceL	00000015fd651 15F010552566	Counter	Bath	#2 Second Line Tuning		Lack of Trading Area Swinging Door	Live view changed
● MainEntranceR	00000015fg58g65 15F010552654	Counter	Bath	#4 Completed			
● Exit	00000015fhr556 15F010552559	Counter	Bath	#4 Completed	Low Storage: 55		
● CentroidRetail	142241904729800808afe 19j01010101003	Centroid	Bath	-			
● ComputerRetail	100000018d0b681 20R010000001	Mini Computer	Bath				

- Monitor if all sensors are connected and counting.
- Scheduled daily checks at a predefined time. Display counters that are offline for more than 30 mins
- Send automated email alert to person-in-charge detailing any faults found
- Proactive yet manageable approach. Low maintenance solution for customers.
- Detects issues such as:
 - Network issue or failures
 - Abnormal data alert
 - Counting data and Wi-Fi data upload checking
- Action plans to ensure issues are rectified within 1 working day

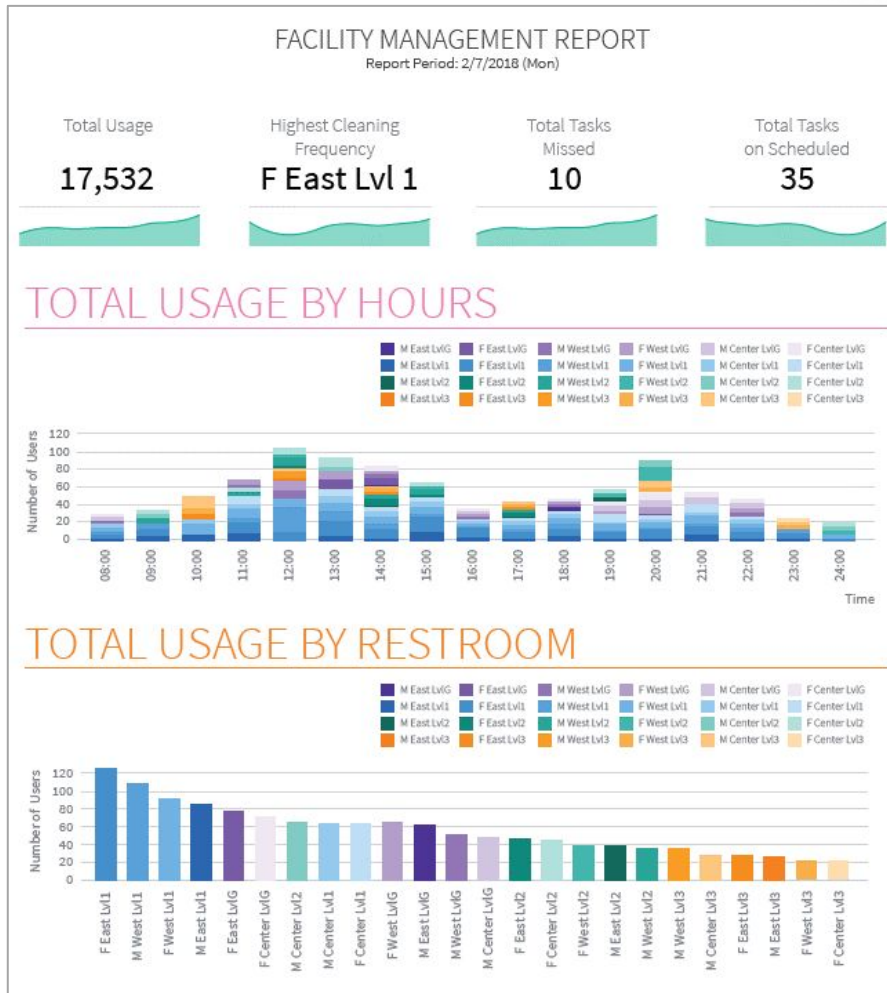
Gain Insight to Optimise Cleaning Operation

- Conduct **Operation Review** based on Washroom Management Dashboard & Reports:
 - Cleaning Staff KPI
 - User Experience, etc
- Come up with Actionable Plan to **Optimise Cleaning Operations**



[Washroom Management Dashboard](#)

Monitor and Review Washroom Usage data

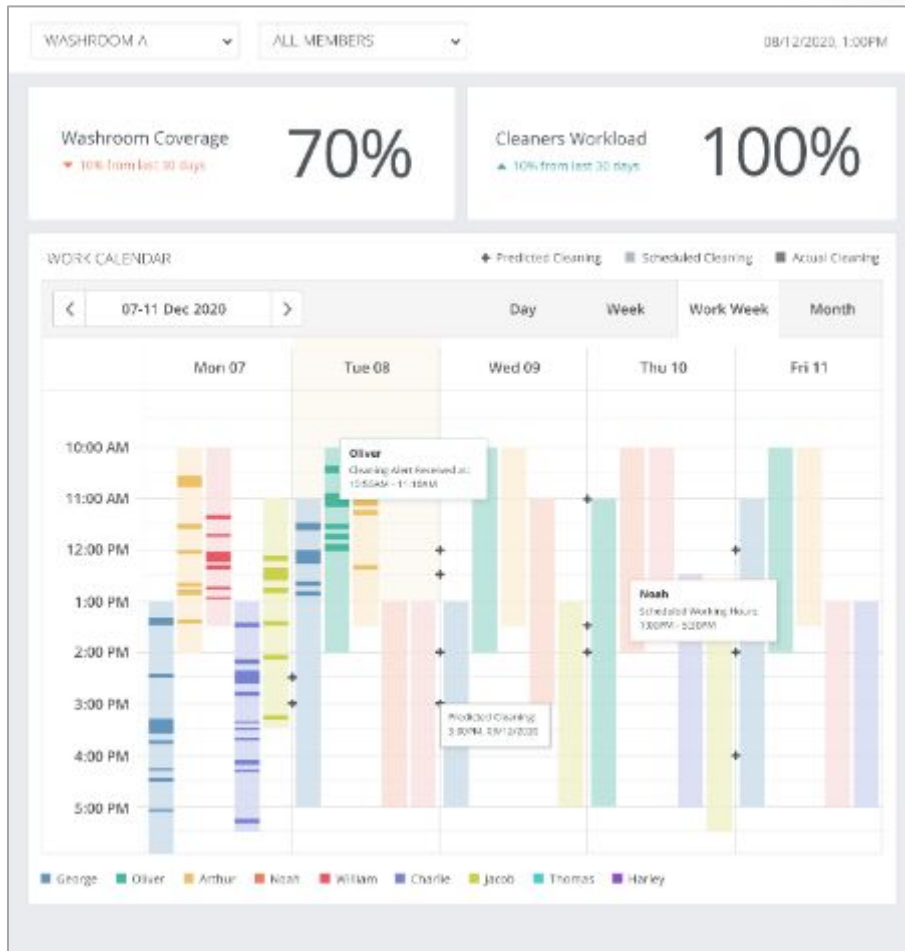


Management Review for Cleaning SLA

- Provide clear view on washrooms historical utilisation rate
- Forecast washroom demand usage from historical trend
- Full transparency on cleaning staff performance
- Measurable KPI for cleaning staff performance review
- Utilise available data and feedback to improve user experience

[Smart Washroom Management Report](#)

Reduce Cost & Enhance User Experience



[Cleaning Schedule Planning](#)

Reduce Unnecessary Costs for Cleaning Operations

- Prevent Overcleaning from Usage-based cleaning system
- Reduce labour cost by optimising staff allocation

Enhance User Experience

- Prevent Under-cleaning
- Immediate feedback from toilet users

Reporting Suite



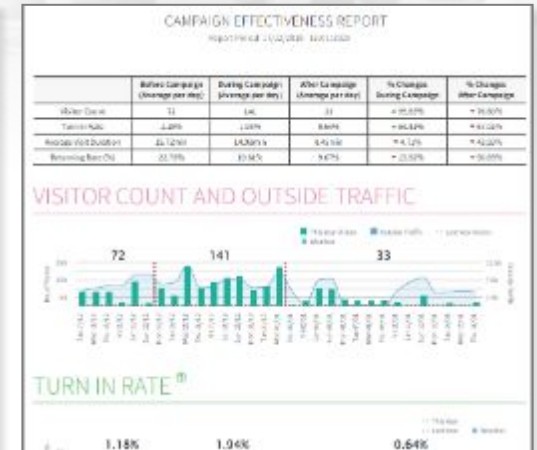
[Analytics Center](#)



[Company Weekly Report](#)



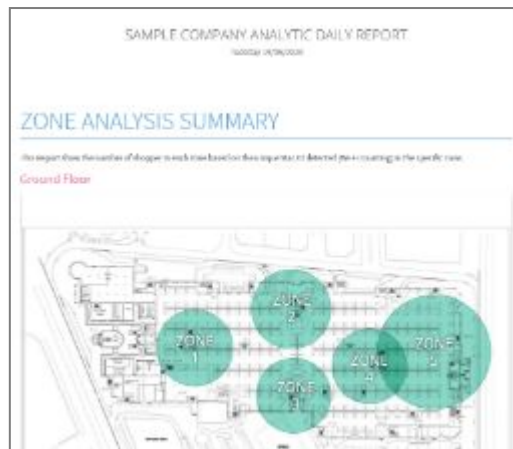
[Site Weekly Report](#)



[Marketing Effectiveness](#)



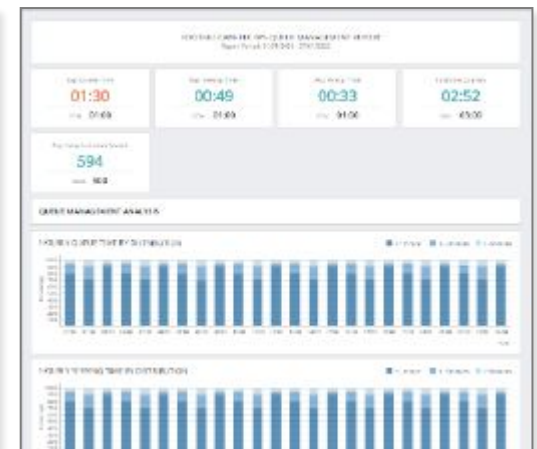
[Live Occupancy](#)



[Zone Analytics](#)



[Mecca Occupancy](#)



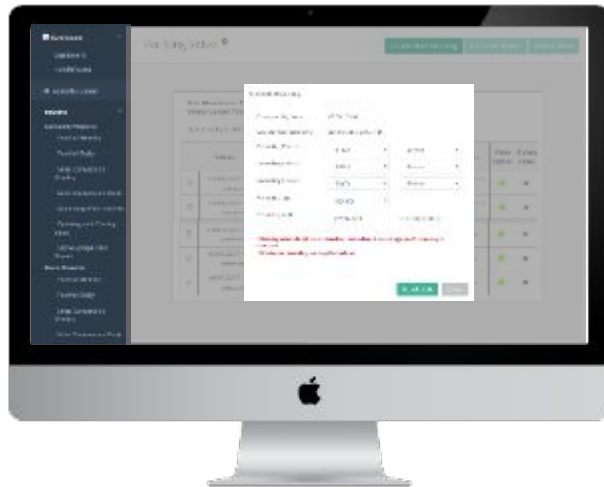
[Queue Counting](#)



Support and Maintenance

Accuracy Audit

How do we audit accuracy to ensure up to 99.5% counting accuracy?



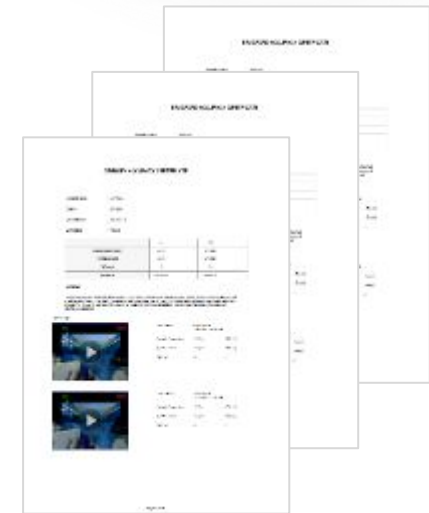
1 Schedule video recordings

Schedule video recordings of peak hours to ensure there is sufficient sample size (20 and above) for to audit the accuracy of the counter.



2 Compare system count and manual count

Compare the system count generated by the FootfallCam device against manual observations to determine the accuracy of the FootfallCam.



3 Generate verification report

Once there is sufficient sample size and the accuracy is satisfactory, a verification report with the video proof used in manual observation will be generated.

Verification report:
[Sample 1](#) & [Sample 2](#)

Maintaining Data Integrity

The [Data Integrity Report](#) allows users to monitor data discrepancies and site changes. For example:

1 Site Summary for the last 14 days

No. of Visitor (IN)	No. of Visitor (OUT)	Discrepancy (%)
8,888	8,888	0.00

Discrepancy (%)
0.00

0% in Discrepancy would mean that the counters are functioning ideally with high accuracy.

2 Site Detail for the last 14 days

Date	No. of Visitor (IN)	No. of Visitor (OUT)	Discrepancy (%)
SUN 01/12	1000	1000	0.00
MON 02/12	1000	1000	2.32
TUE 03/12	1000	1000	0.00
WED 04/12	1000	1000	32.26
THU 05/12	1000	1000	4.92
FRI 06/12	1000	1000	1.66
SAT 07/12	1000	1000	3.48
SUN 08/12	1000	1000	0.00
MON 09/12	1000	1000	1.44
TUE 10/12	1000	1000	-9.67
WED 11/12	1000	1000	0.00
THU 12/12	1000	1000	2.56
FRI 13/12	1000	1000	1.51
SAT 14/12	1000	1000	21.88

16.67

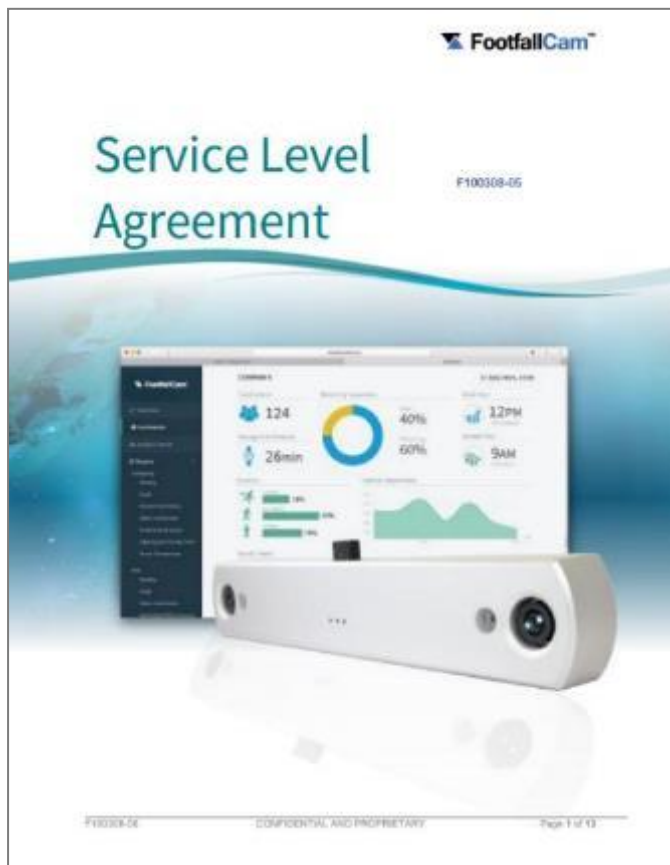
16.67% in Discrepancy would require sourcing out the root cause of this occurrence.

- To recover the missing data, FootfallCam server will re-aggregate the raw data stored in counter level and store the re-aggregated data in the server
- Hence, users can retrieve back the missing daily or hourly data so that macro trends will not be affected

Service Level Agreement

FootfallCam has categorised the support service into three tiers based on its priority levels:

- Priority Level 1: Business critical
- Priority Level 2: Urgent support needed
- Priority Level 3: General issue with no major business impact



- Service Level Agreement ([view full document](#))
- Includes:
 - Daily counter health check
 - Accuracy audit
 - First-line, second-line, and onsite support
 - Software and firmware upgrade
 - And more
- Applicable for FootfallCam products including FootfallCam Centroid and third-party CCTV camera

Built-in maintenance support portal

The one-stop support center for all FootfallCam Analytics Software users.

Any technical issues can be raised via the Support Portal and this will be assigned to a technical personnel accordingly.

The screenshot shows a 'Raise a Trouble Ticket' modal form. The form includes the following fields and options:

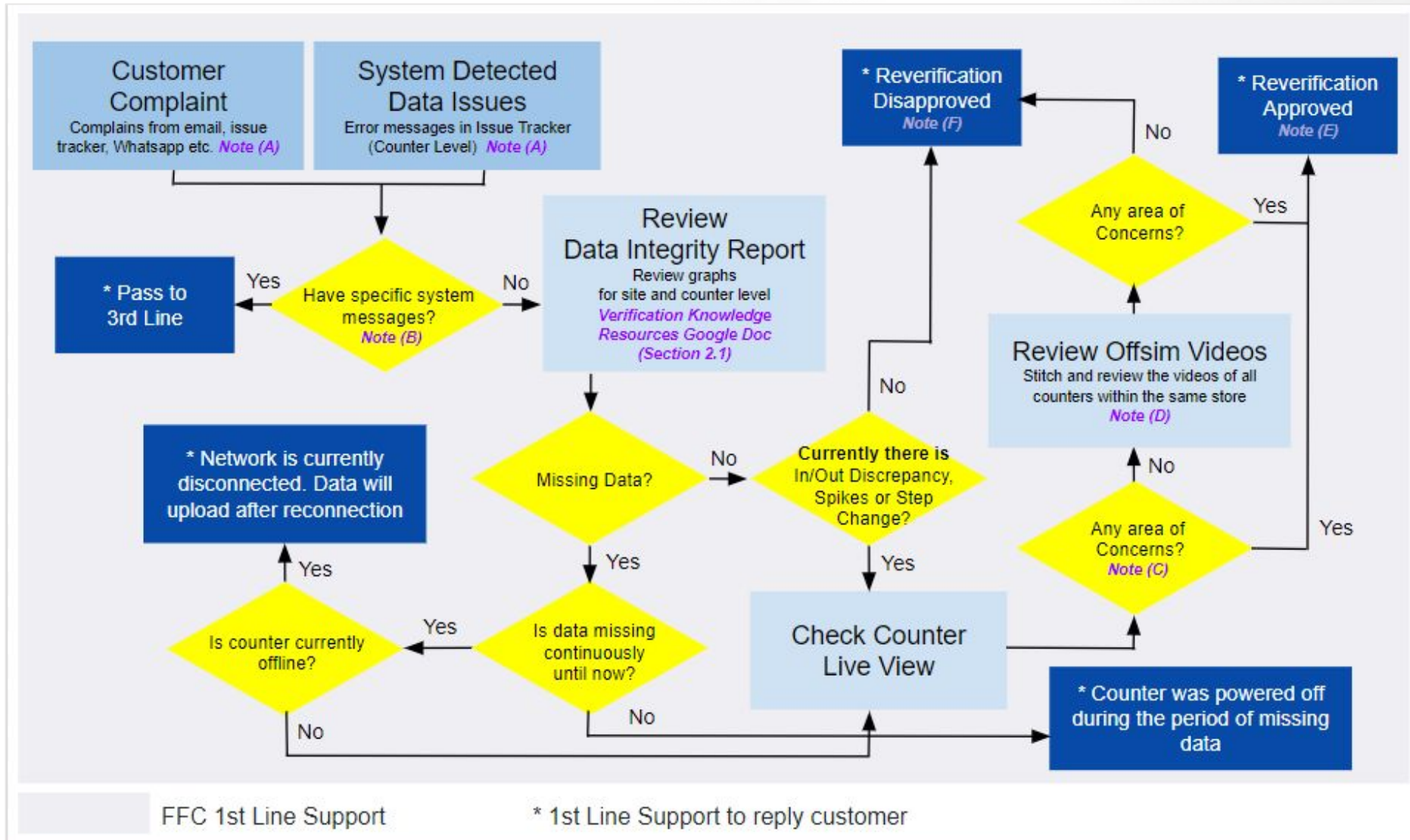
- Reported Device(s):** Radio buttons for 'Company level' (selected) and 'Device level'.
- Ticket Subject:** Text input field with placeholder 'Please input ticket subject.'
- Category:** Dropdown menu with 'Data Not Accurate' selected.
- When does it happen?:** Date range input with a 'to' separator.
- Comment:** Text area for additional details.
- Attachment:** 'Attach File' link.
- CC:** Text input field for additional email addresses.

At the bottom of the modal are 'Cancel' and 'Submit' buttons. The background shows a 'Trouble Tickets' table with columns for Ticket #, Ticket Subject, and Status. A 'General Search: Input Ticket' bar is also visible.

More information can be found [here](#).

Reactive & Proactive Support Workflow

This section outlines the parameters of all supporting services by FootfallCam.



Flow chart of the support flow and diagnostics when issues are raised to FootfallCam.

Account Management

Individual user accounts can be setup for team members and assign access rights accordingly.

Account Type	Description	Example
Admin	Can create more accounts and remove unwanted accounts.	CEOs are able to restrict the store managers' access to certain data metrics.
User	Limited access in account creation and removal.	Store managers are only allowed access to their own store's data.

User Accounts ⁹
Add User

Users	Account Type	Email	Last Login	Delete User
Joules	admin	marcin.klosok@joules.com	4/16/2020 5:44:14 AM	
Marcin Klosok	admin	Marcin.Klosok@joules.com	4/2/2020 10:38:30 AM	✕
Jeannette Copeland	user	jeannette.Copeland@joules.com	6/21/2017 8:15:58 AM	✕
Ben Warren	admin	Ben.Warren@joules.com	2/20/2020 11:22:57 AM	✕
Marc Donch	user	Marc.Donch@joules.com	9/7/2017 8:49:57 AM	✕
Lindsay	user	Lindsay.Rowley@joules.com	1/29/2018 3:26:43 PM	✕
JamesH	admin	james.hollingsworth@joules.com	8/9/2019 10:22:21 AM	✕
Jody Boye	user	jody.boye@joules.com	10/5/2018 4:46:27 PM	✕
Lauren	user	Lauren.Peace@joules.com	10/2/2019 12:25:47 PM	✕
Jess Welsh	user	Jess.Welsh@joules.com	1/1/1970 12:00:00 AM	✕
Kelly Perkins	user	Kelly.Perkins@joules.com	10/8/2018 5:09:33 PM	✕
James O'Neill	admin	James.oneill@joules.com	1/30/2019 10:17:04 AM	✕
Alex Kirk	admin	Alex.Kirk@joules.com	11/13/2018 3:02:23 PM	✕
Chris Sutton	admin	chris.sutton@joules.com	4/14/2020 4:06:28 PM	✕
Tajal Chandarana	admin	Tajal.Chandarana@joules.com	3/11/2019 10:59:12 AM	✕
Nick Weare	admin	Nick.Weare@joules.com	4/14/2020 4:05:56 PM	✕
Danie Earl	admin	Danie.Earl@joules.com	2/17/2020 2:26:20 PM	✕
Richard Sortwell	admin	Richard.Sortwell@joules.com	1/1/1970 12:00:00 AM	✕

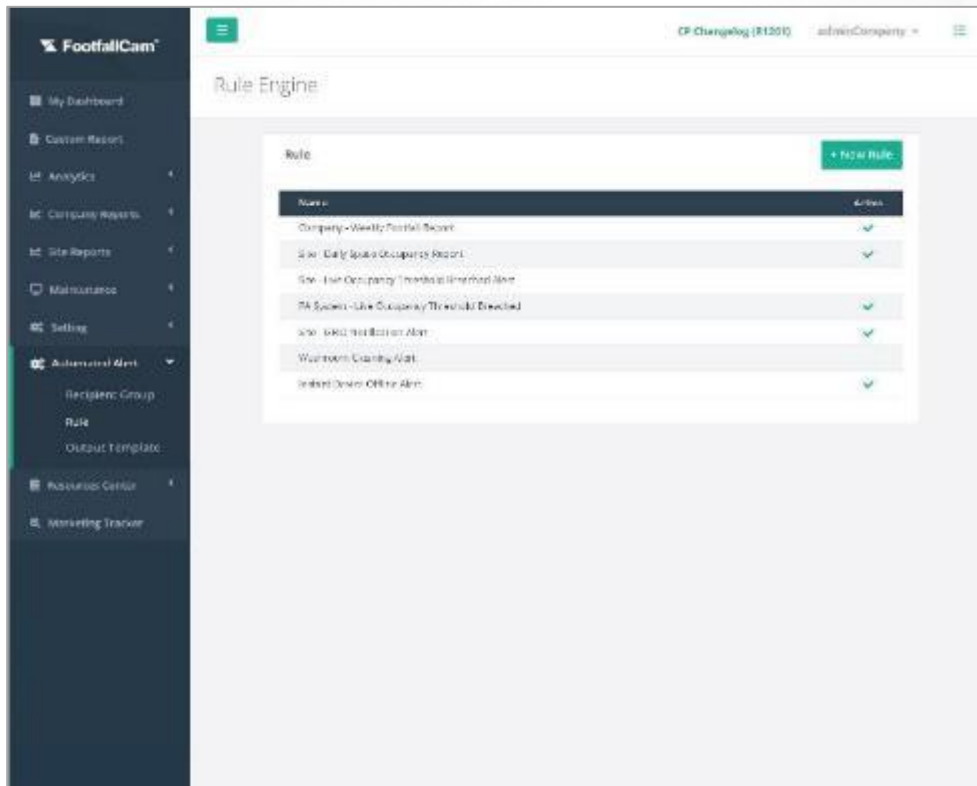
Add New Account

Account Type: User

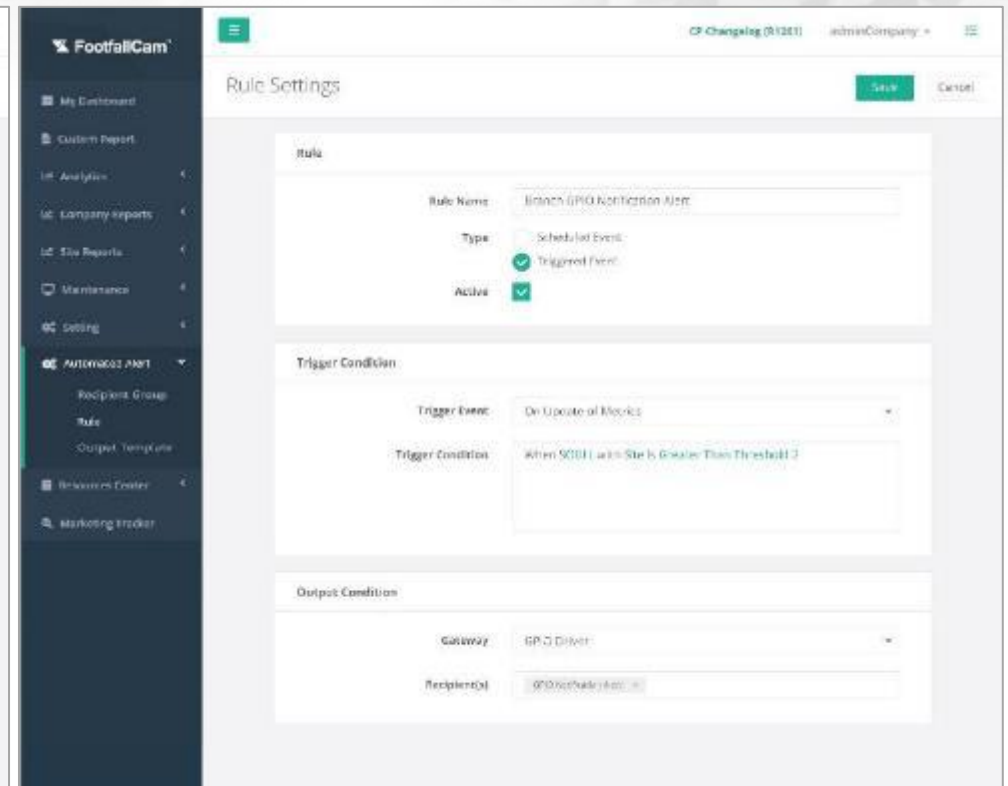
Site: Available Accessible by this account

Page Access: Available Accessible by this account

FootfallCam Rule Engine



FootfallCam Rule Engine - List View



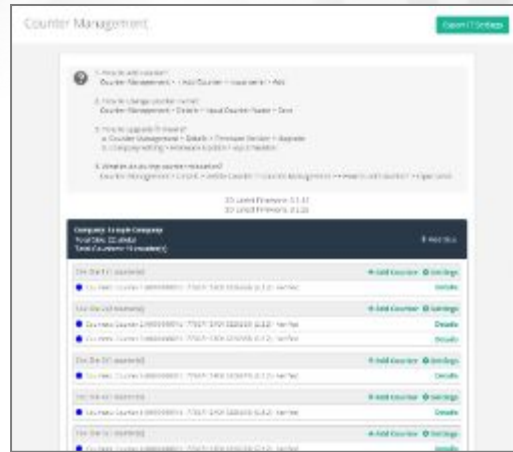
FootfallCam Rule Engine - Settings

- 500+ different [rule templates](#)
- Customised rules using Python, interface with:
 - FootfallCam raw data, or
 - Aggregated metrics
- [Automatic notification](#) via SMS, Emails, FootfallCam Watch, Android and iOS Apps

Management Control



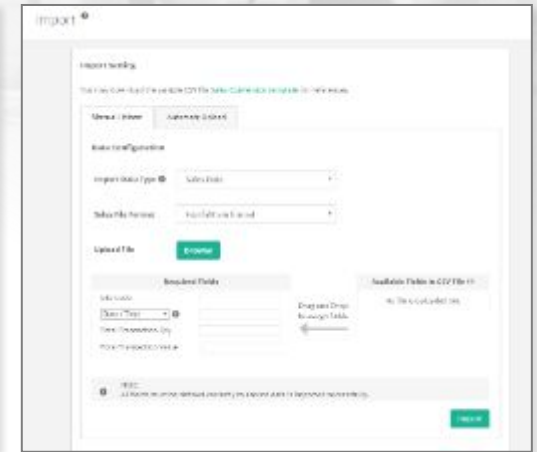
User Control



Branch Control

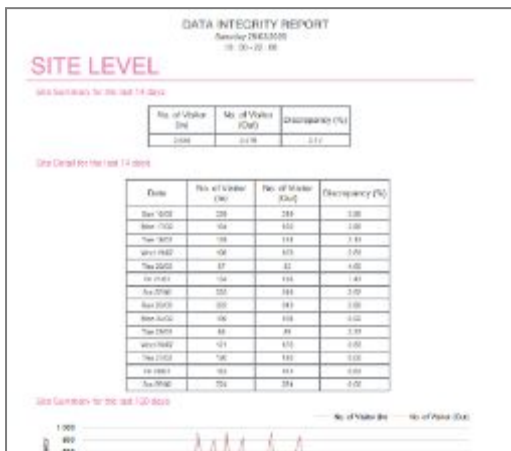


Email Scheduler

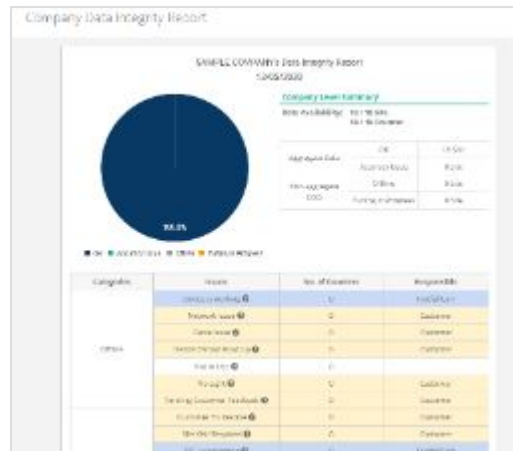


Import/Export

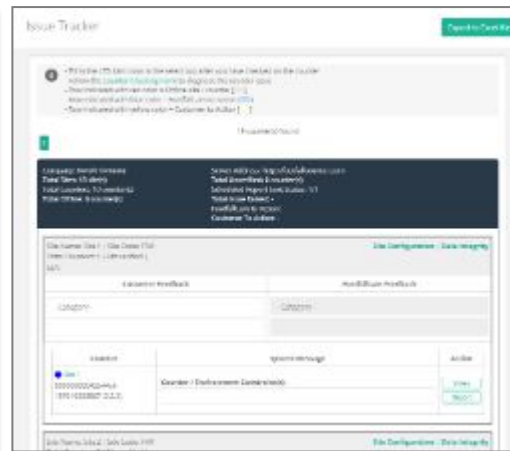
Health Check and Maintenance Tools



Data Integrity



Company Data Integrity



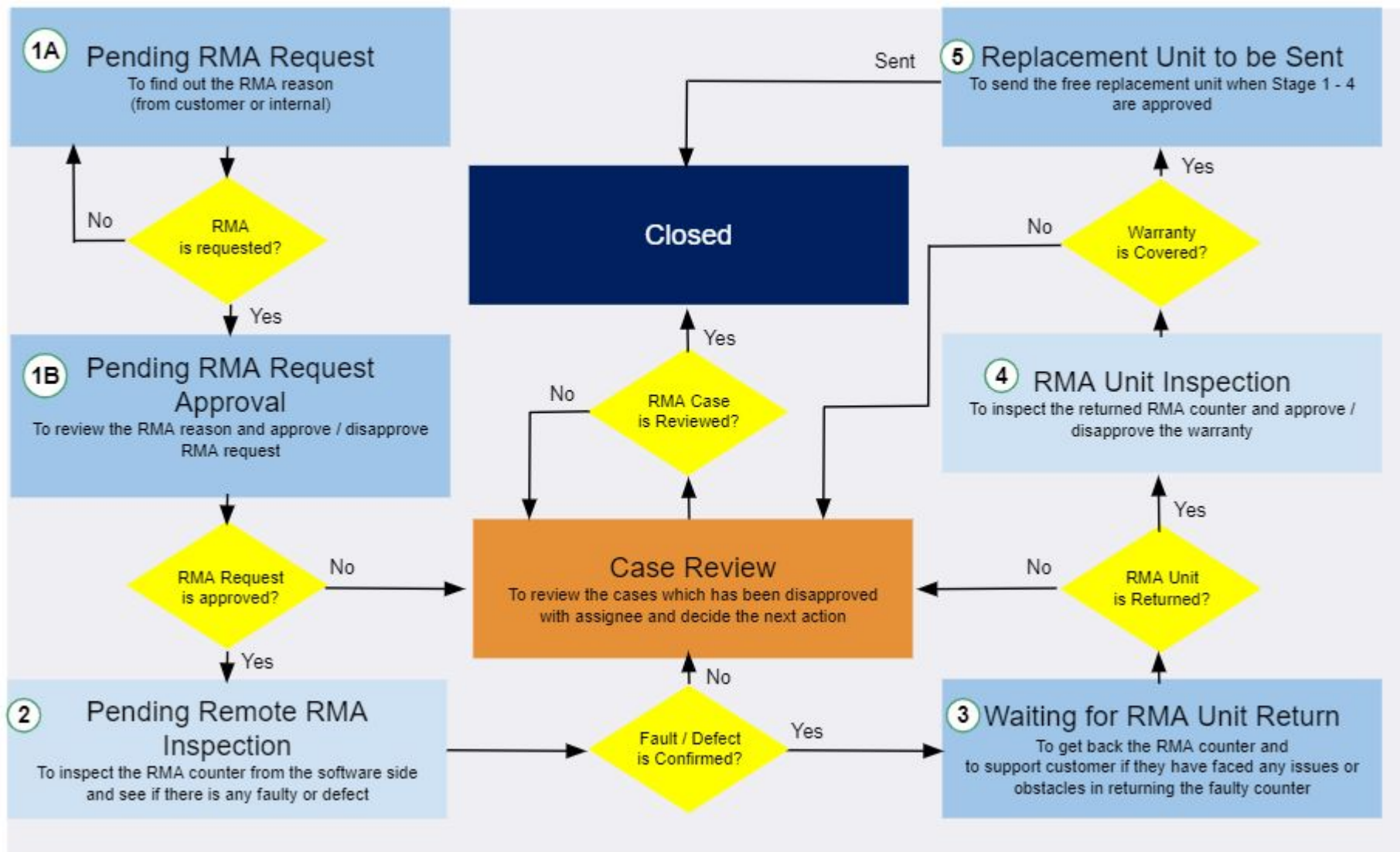
Issue Tracker



Support Portal

Return Merchandise Authorisation (RMA) Process

Upon diagnosis by FootfallCam that a device is suspected faulty, the device will be sent back to FootfallCam to undergo further inspections through the Return Merchandise Authorization (RMA) Process.

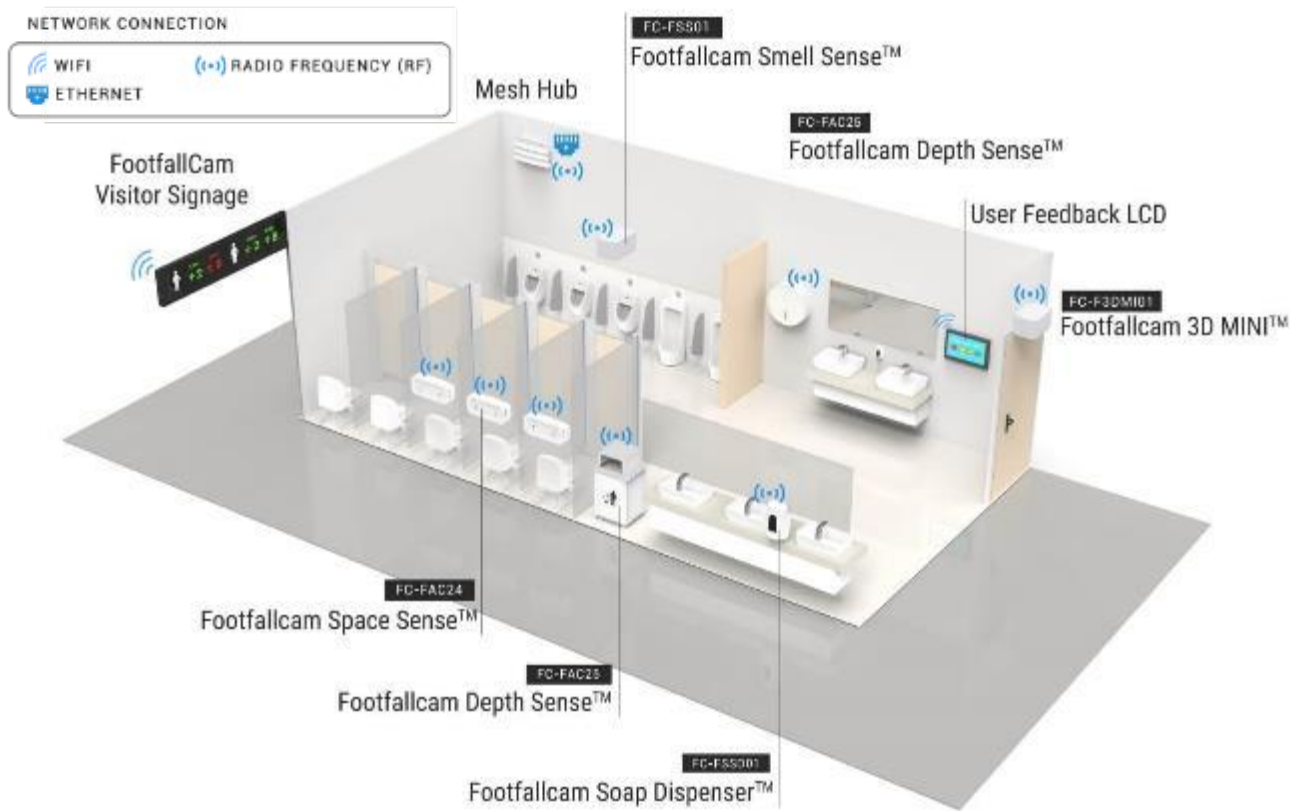




Solution Deployment

Scalable and Future-Proof Solution

With a range of IoT devices and functionalities, the facility managers may choose to extend the existing Demand-based cleaning management system to other business solutions.



- Flexibility to start with a **usage-based system**, and extend to **Smart Washroom System** in the future
- Current deployment can be expanded to full-fledged smart washroom solutions
- Other IoT devices include:
 - **Space Sense** – Detect occupancy in each cubicle
 - **Depth Sense** – Detect toilet roll usage
 - **Smell Sense** – Detect odour level in the toilet

FootfallCam IoT Devices:



[FootfallCam 3D Mini™](#)



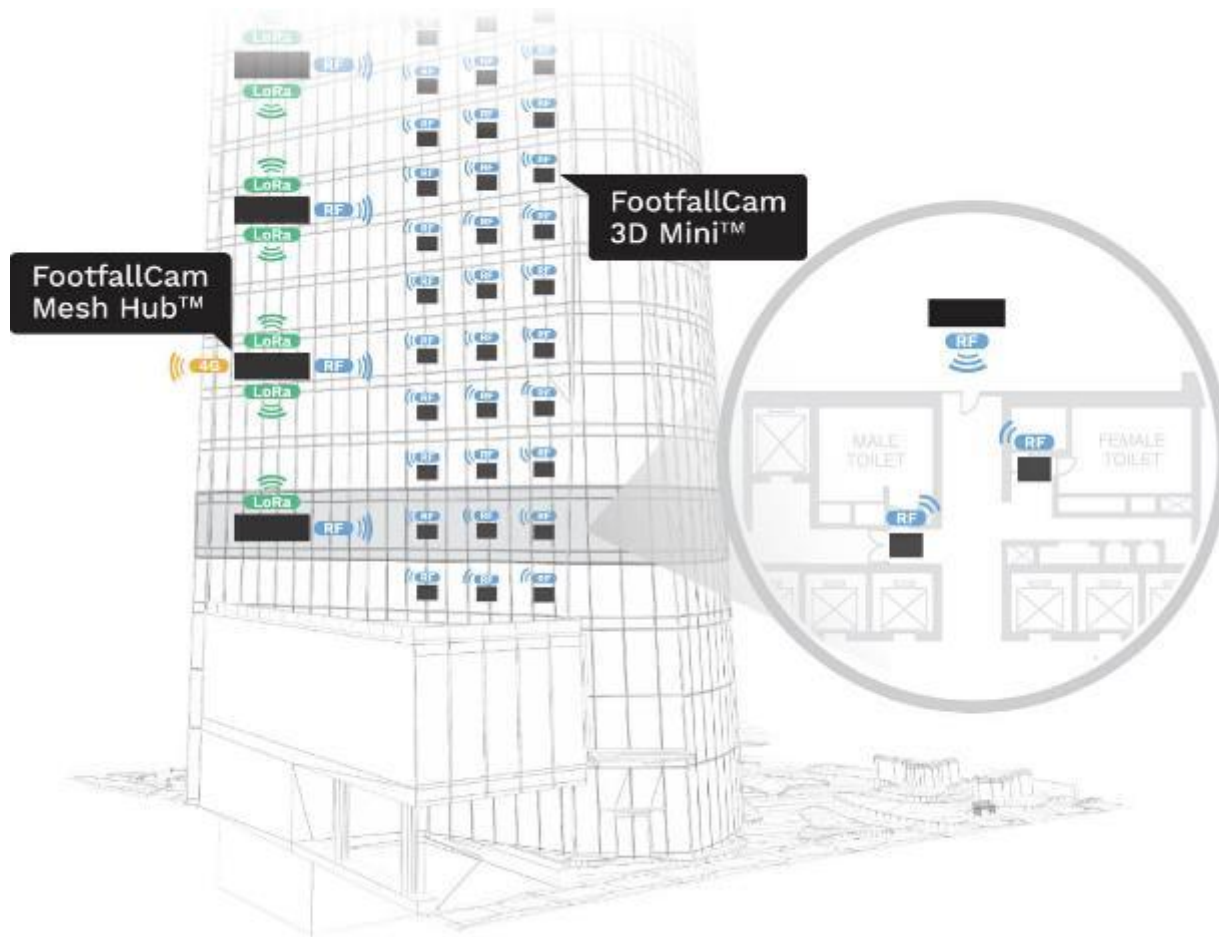
[FootfallCam Depth Sense™](#)



[FootfallCam Space Sense™](#)

Wireless Connectivity : FootfallCam Wireless Mesh

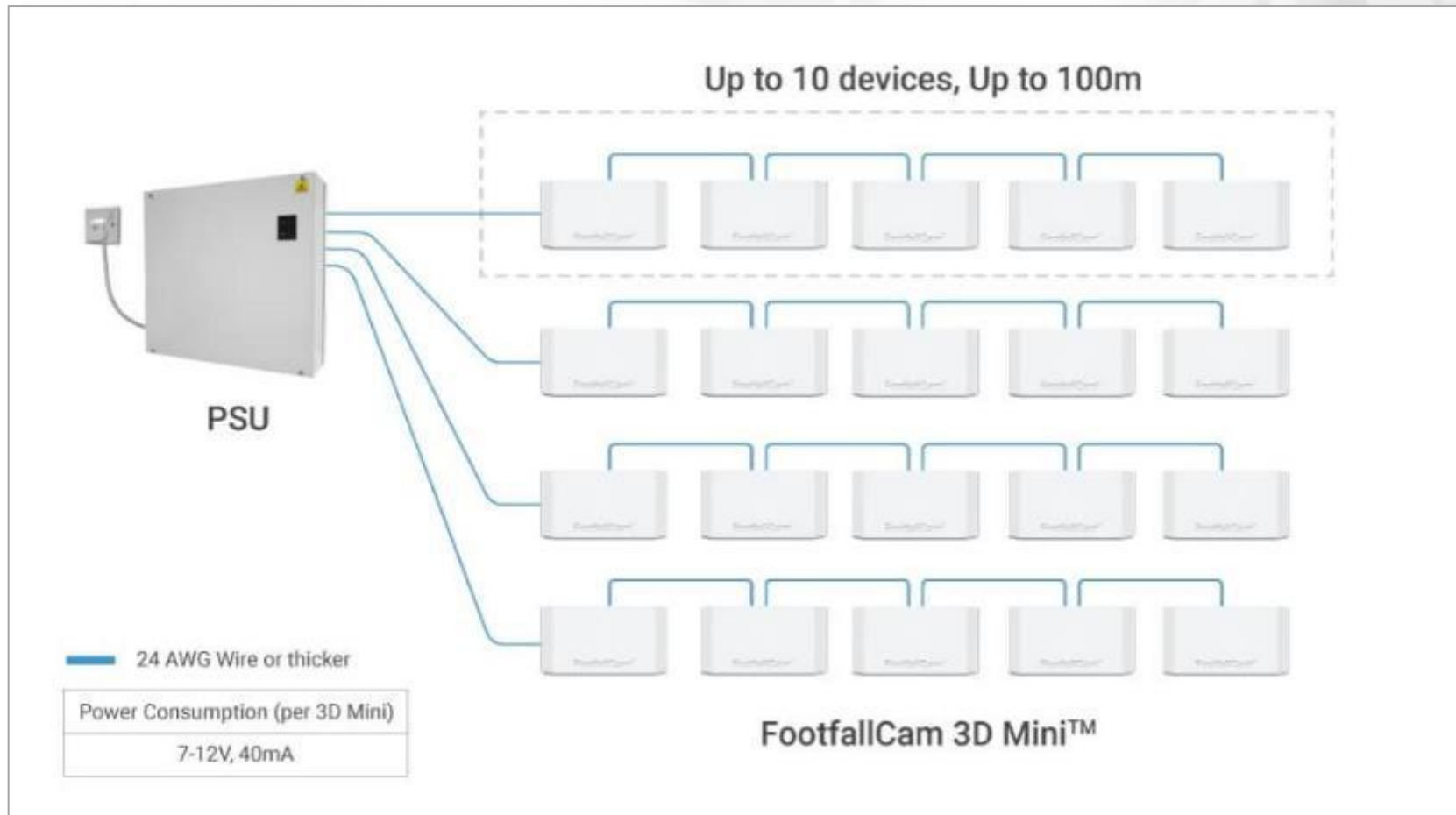
With a range of IoT devices and functionalities, the facility managers may choose to extend the existing Demand-based cleaning management system to other business solutions.



Cost Efficient and Quick Deployment

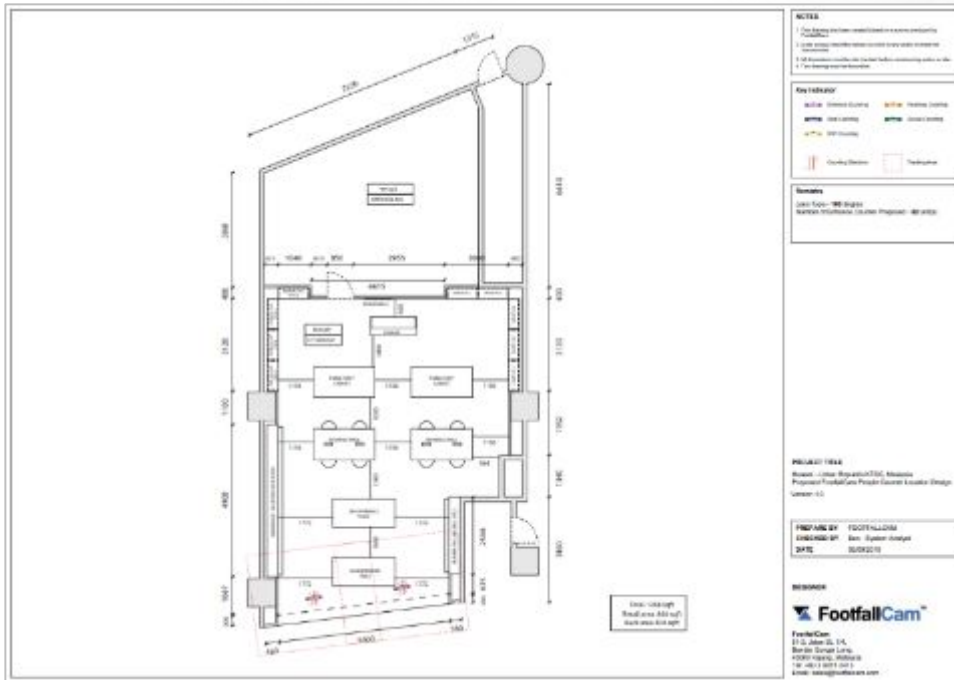
- Mesh network infrastructure
- **Wireless connectivity** to send data to central server
- LoRa enables long-range connectivity for deployments in multiple floor buildings
- Save cost and planning needed by minimizing cabling works

Wiring Diagram for FootfallCam 3D Mini™



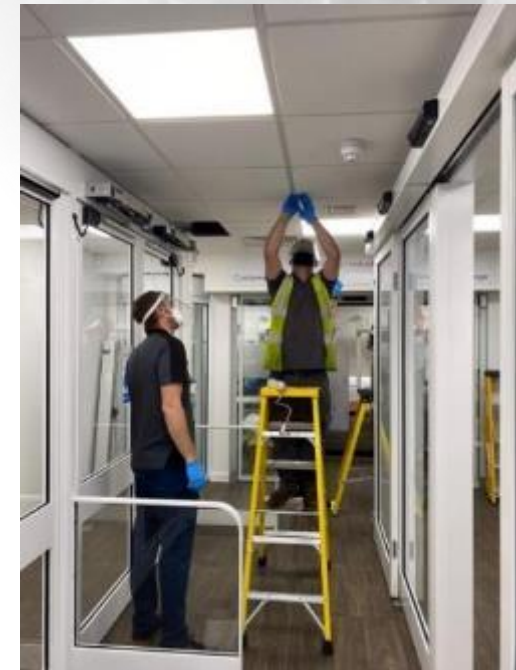
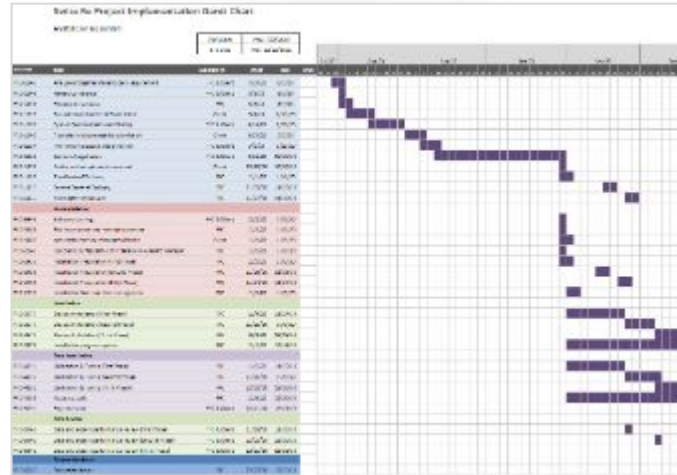
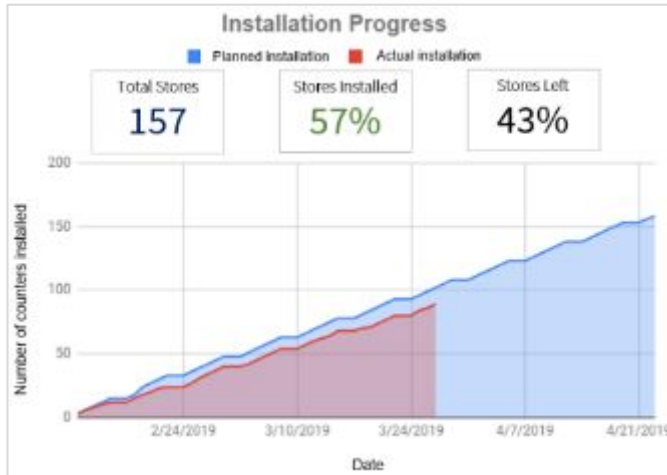
- Support up to **10x daisy-chained** devices, up to **100m** for each channel of Power Supply Unit (PSU)
- **Cost effective**, reduce infrastructure cost
- **Low power consumption**, environmental-friendly

Floor Plan Design



- FootfallCam provides the service of designing customers' floor plans to facilitate the installation for the **quantity of counters** required, **cabling location** and **mounting position** of the counter before every installation.
- Determine where to position the device during each event to ensure no props are obscuring the live view of the device
- The [sample floor plan](#) serves as an example of standard floor plan plotting done by FootfallCam system analyst.

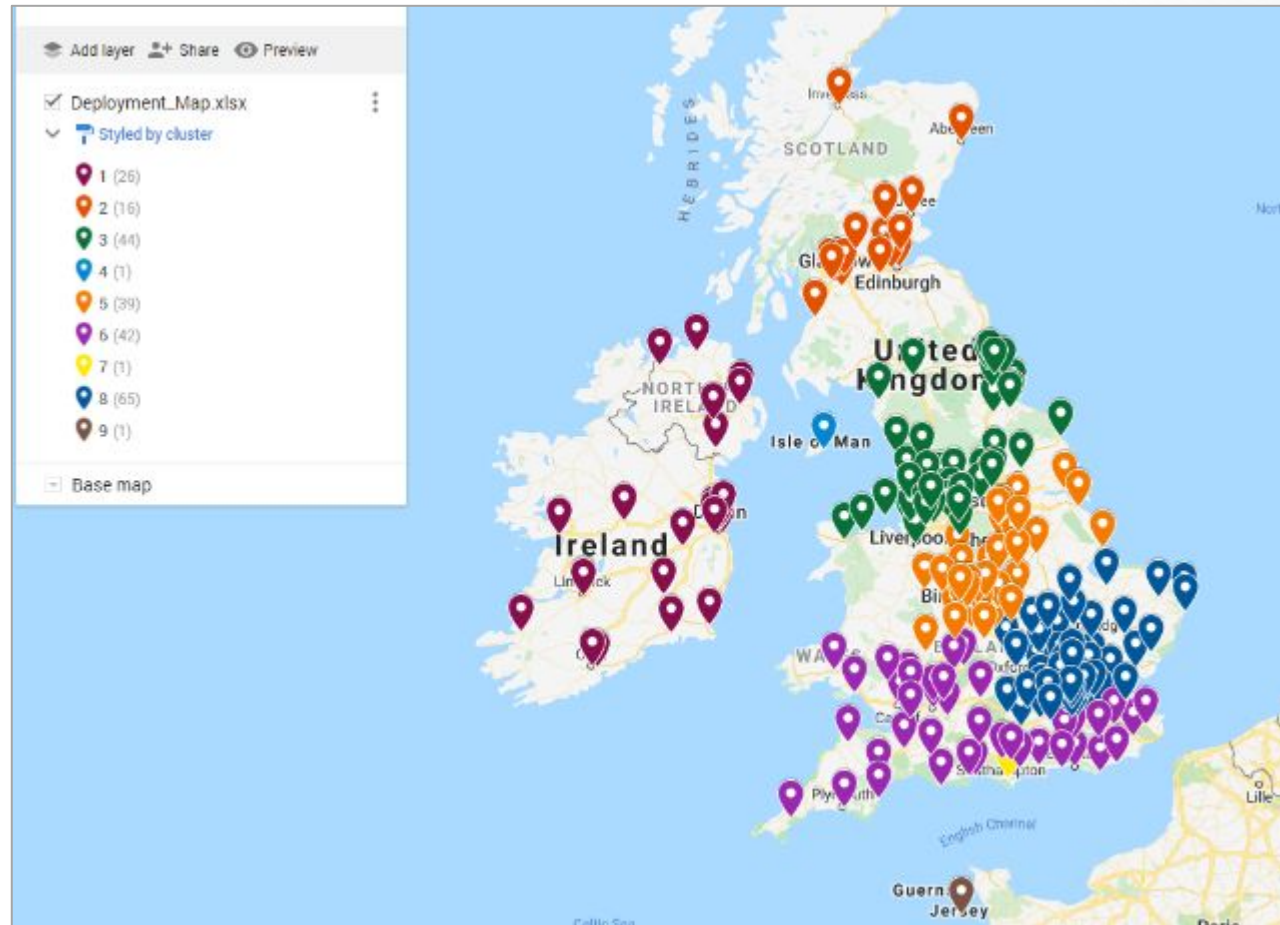
Deployment Process



- Manage installation progress using [Installation Tracker](#) with bi-weekly update
- Scope of work and timeframe included in Gantt chart
- Data validation to be done within 3 days after each installation
- Deployment executed concurrently in different countries

Cluster Planning for Installation

- Installation will be grouped into clusters based on geographical location.
- Multiple installation teams to carry out the installation concurrently.



[Sample Deployment Map](#)

Pre-Installation Preparation

- Carry out pre-installation planning using FootfallCam checklists
 - **Site survey form** – For store details preparation to determine the number of counters needed for each store and the store condition.
 - **Store details and IT checklist** – IT details preparation to prepare engineer for on-site configuration.

Store Details			Store Contact Information		Entrance 1				Entrance 2						
Store Name	Store num	Type (Street, Mall)	Full Address	Entrance width (metre)	Ceiling Height (metres) (refer to guide)	Camera Lens (degree)	Per Camera Covers	Camera requir	Remarks	Entrance width (metre)	Ceiling Height (metres) (refer to guide)	Camera Lens (degree)	Per Camera Covers	Camera requir	Remarks
ABC	112			3.5	3	800	3.732805	1		3	3	800	3.732805	1	
Marble Arch	M695	Street		6.8	3.3	100	4	2	Plaster Ceiling	5.2	3.3	100	4	2	Plaster Ceiling
Bury	M694	Street (Open mall)		1	3	100	3.7328046	1	Plaster Ceiling						
1MONT KIARA	M693	Mall		3.4	2.8	100	3.317805	2	Plaster Ceiling						
KIP MALL KOTA WAPISAN	M556	Mall		4.8	2.8	100	3.317805	2	Plaster Ceiling	3.7	2.8	100	3.3178	2	Plaster Ceiling
JALAN CECAWI	M696	Street		1	3	100	3.7328046	1	Plaster Ceiling						
SS15 COURTYARD	M2002	Mall		4.3	2.8	100	3.317805	2	Plaster Ceiling	5.2	2.8	100	3.3178	2	Plaster Ceiling
OLIVE HILL	M698	Street		1	2.8	100	3.317805	1	Plaster Ceiling						
PETRONAS SEKSYEN 13	M699	Street		1.8	3	100	3.7328046	1	Plaster Ceiling						
AEON SHAH ALAM	M2003	Mall		5.2	2.8	100	3.317805	2	Plaster Ceiling	5.2	3.8	100	4	2	Plaster Ceiling
JERANTUT	M2008	Street		1	3	100	3.7328046	1	Plaster Ceiling	1	3	100	3.732805	1	Plaster Ceiling
JALAN BERSERAH	M193	Street		1	2.7	100	3.1093685	1	Plaster Ceiling						
JALAN AIR PUTH	M2005	Street		1	2.8	100	3.317805	1	Plaster Ceiling						
EMPIRE SUBANG 2	M2006	Mall		5.8	3.4	100	4	2	Plaster Ceiling						

[Store Details and IT Checklist](#)

Appendix A: Site Survey Form

Please note that all fields marked with an asterisk (*) are required.

Site Details	
Site Name*	
Site Code*	
Site Address*	
Person In-Charge*	
Contact Number*	
Installation Date Time*	Monday to Friday (8am – 6pm) or others

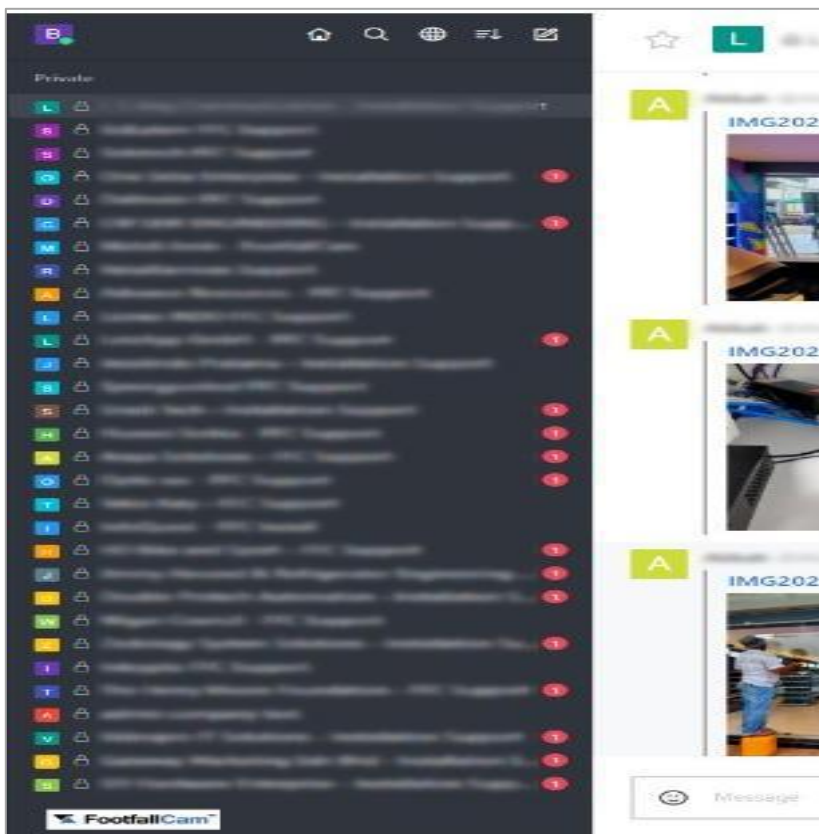
Counter Proposed Location	
Ceiling Height (metre)*	
Ceiling Composition*	Type of ceiling (plastered ceiling, glass ceiling or synthetic drop tile) and colour.
Door Width (metre)*	
Floor Slope*	
Head-end Distance (metre)*	Distance from the back-office counter cabinet with router and miscapan to the counter head.
Remarks	
Sketch of Counter Position	

Counter Proposed Location [Optional]	
Ceiling Height (metre)*	
Ceiling Composition*	Type of ceiling (plastered ceiling, glass ceiling or synthetic drop tile) and colour.
Door Width (metre)*	
Floor Slope*	
Head-end Distance (metre)*	Distance from the back-office counter cabinet with router and miscapan to the counter head.
Remarks	
Sketch of Counter Position	

[Site Survey Form](#)

Installation Support

- In-house 24/7 FootfallCam [Support Portal](#) to communicate with engineers using
 - [FootfallCam Installation Mobile App](#) - to allow our experts to support on-site engineer during the installation
 - [Delivery note](#) - for the store manager to confirm that they are satisfied with the installation before the engineer leaves

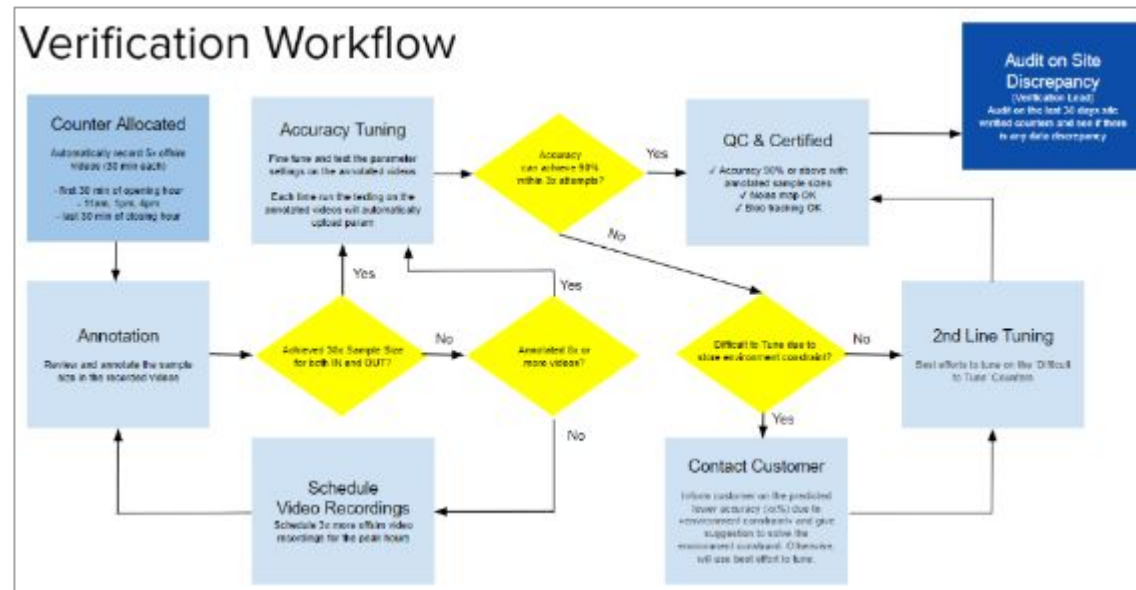


Support Chat Apps

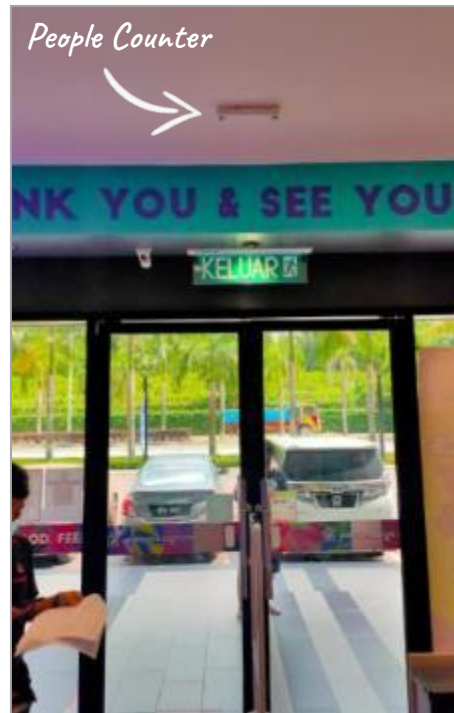
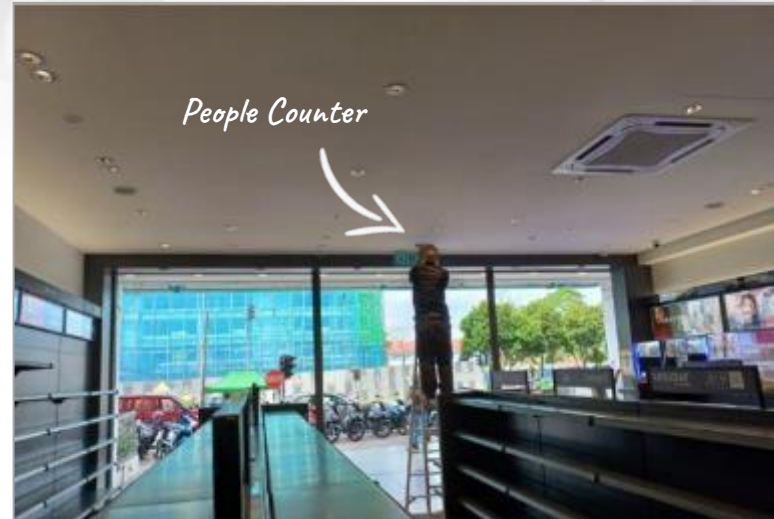
Delivery Note

Tuning and Verification

- Tuning and verification will take **2 to 3 days** after allocation of counter.
- After allocation of counters, verification team will **schedule video recordings** to get **enough sample size** for tuning.
- Verification team will start tuning after the recorded videos are **successfully uploaded** into our server.
- FootfallCam verification expert will watch those recorded videos and **manually count** on all the traffic in the videos.
- **Counting zone** and **counting lines** will be drawn according to the store's environment.
- **Fine tune** by choosing the most appropriate counting algorithm for that environment.
- **Uploading** this counting algorithm parameters to the counters.



On-Site Installation



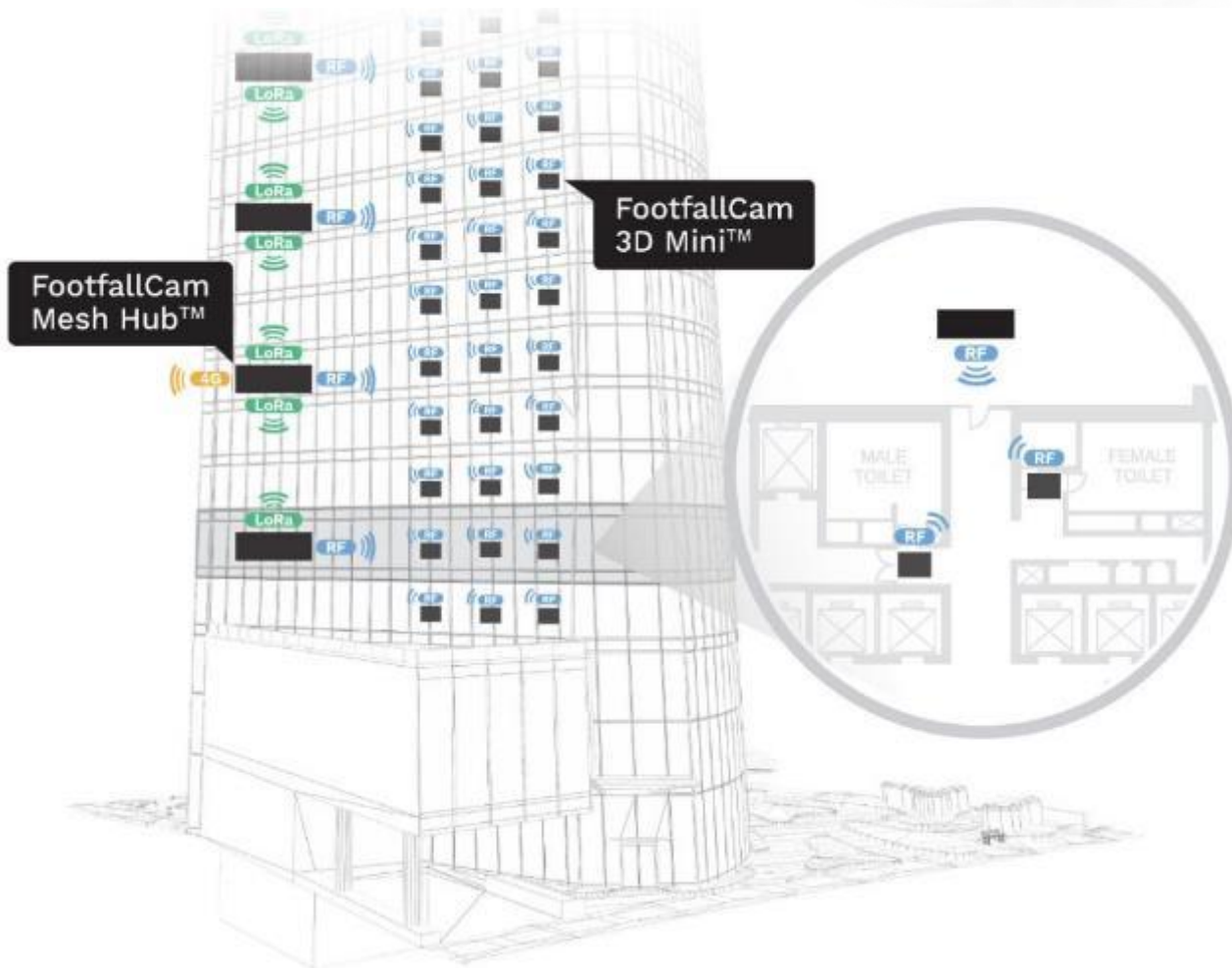
Retail Store Installation



Case Studies

Case Study #1: High-Rise Office Tower, Malaysia

A high rise building in Malaysia is looking for a cost effective option to optimise their washroom cleaning operations with minimal infrastructure cost.



Managing 1,000+ Washroom Cleaning Operations

- Large scale deployment to cover all toilets in a smart building
- All devices are connected **wirelessly** using LoRa protocol and radio frequency (RF)
- **Saves cost** and hassle on cabling

Case Study #2: High-End Shopping Mall, Hong Kong

A premium shopping mall in Hong Kong is looking for a smart washroom solution as part of their initiative to provide a premium shopping experience to their shoppers, to ensure a happy and satisfactory shopping experience.



People-Centric Upgrade Initiative

- Implemented smart washroom solution to **improve** the customer's shopping experience
- Integrated with visitor signage to show **washroom occupancy**
- FootfallCam worked with their contractors for installation support

Case Study #3: Insurance Company, Switzerland



Demand-Based Facility Management

- Previously used a fixed washroom cleaning schedule
- Unable to maintain washroom without over-cleaning or under-cleaning
- Improved operation efficiency by cleaning based on the usage and demand

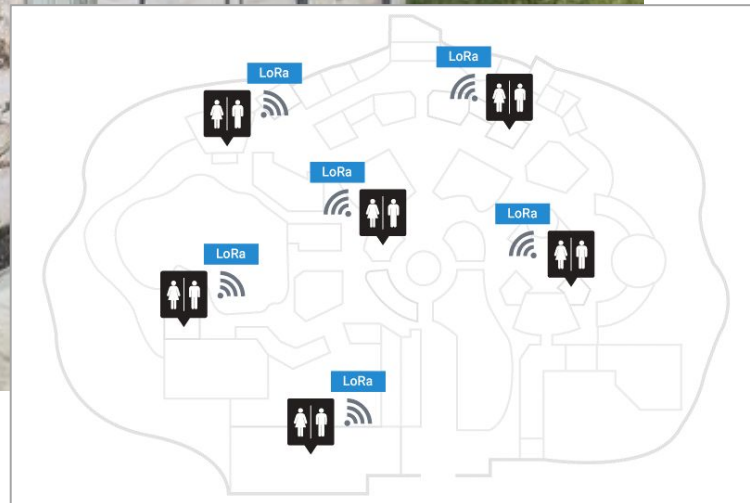
Case Study #4: Bank in the United Kingdom



Covid-19 Back-to-Office Initiative

- Needed to ensure compliance with social distancing for the employee's health and safety
- Track occupancy level in toilets using FootfallCam 3D Mini
- Installed a tablet to display occupancy numbers

Case Study #5: Public Zoo, United Kingdom



Outdoor Washrooms Connected via LoRa

- Wireless connection using LoRa to minimize the cabling works needed
- Enable managements to optimize cleaning schedule based on demand
- Use predictive analysis to anticipate when cleaning is required

Contact Us

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