

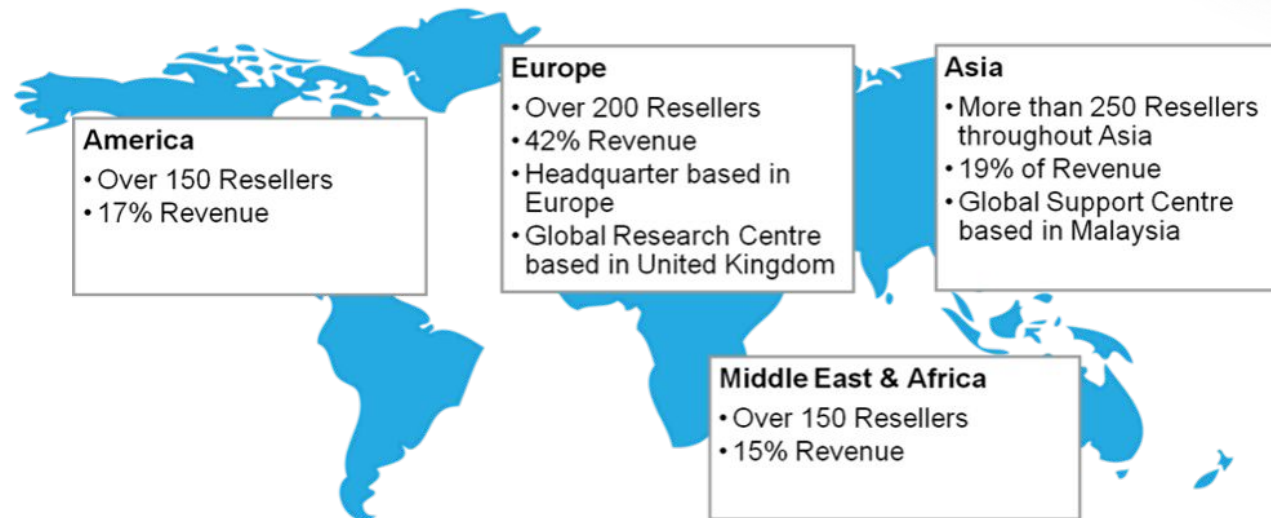
Covid-19 Live Occupancy Control System

Enforcing social distancing

About FootfallCam™

Global Leader in People Counting System

FootfallCam is the global leader in people counting solutions. 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**.



- FootfallCam is continuously reinvesting more than 24% revenue into research and development
- **In-house R&D team** dedicated to the development of both hardware and software of FootfallCam
- 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.
- Prior to the Covid-19 scenario, our research team predicted the demand for this solution ahead live occupancy we activated our R&D team to develop our Live Occupancy Control System

Topics

1. **Reopening the businesses** after the Covid-19 lockdown – What would you need to do?
2. FootfallCam SafeOccupancy™ – **Helps to limit the number of people in the premises**
3. How does it work?
4. What are the **key features** of this solution?
5. What are the **benefits** of this solution?

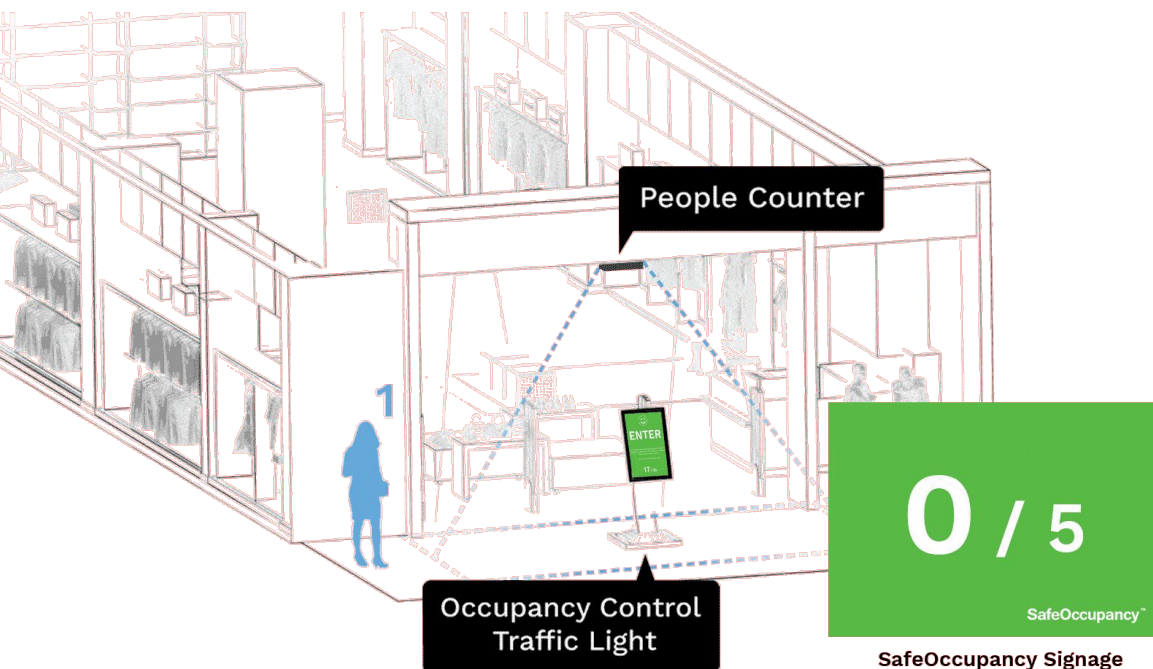
Why End Customer Needs SafeOccupancy™?

When the businesses re-open, they would have a set of preventive measures in place to:

- Comply **with government guidelines** – Social distancing and occupancy restriction
- Protecting **employees**
- Reassurance to **visitors**
- **Automated** – More cost effective than having a dedicated employee to do manual counting at every entrances
- **Long term benefits** of this solution
 - Some forward thinking supermarkets have started sharing live store occupancy data with customers via their website. This enables customers to pick a time to shop when it is quiet, increasing their trust in your business and improving their shopping experience.

Help Businesses to Comply with Social Distancing

- Governments have imposed a social distancing regulation to contain the spread of the coronavirus.
 - Most of the businesses are planning to **reopen** after the Covid-19 lockdown
 - Businesses need to find ways to **limit the number of people** in the premises
- Many businesses resort to assigning security guards to control the customer traffic at their entrances
 - **Manual counting** – costly, inaccurate and provide no evidence for compliance


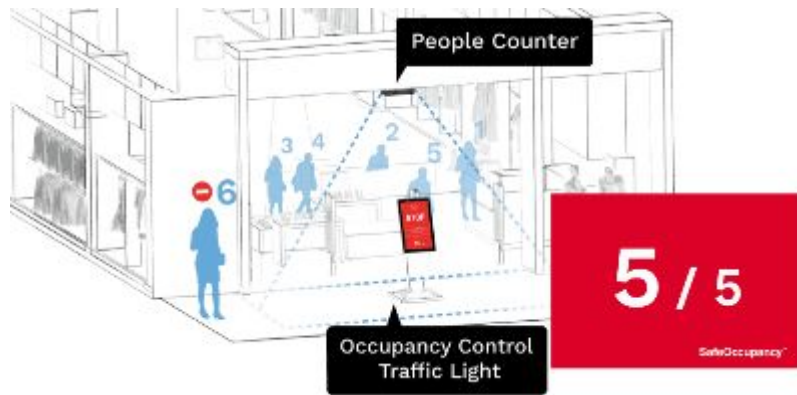


FootfallCam SafeOccupancy™ helps to limit the maximum number of people within the confined premises

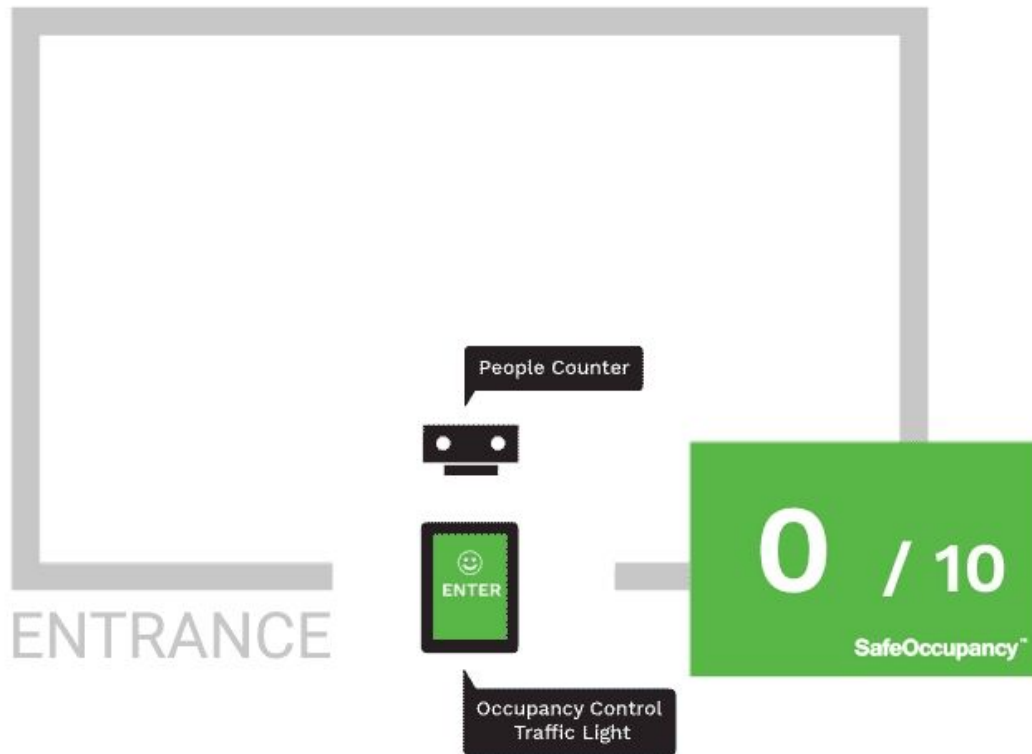
- **Automated** – Cost effective and reduces personnel deployment with automated traffic control
- **Accurate** – Scientifically driven with proven accuracy
- **Accountable** – Live dashboard and management reports provide evidence and actionable plan

Manual Counting vs Automated Counting

Measuring the occupancy is a must-have in accordance to the social distancing guidelines imposed by governments.

	Manual Counting	Automated Counting
People Counter		
System Setup	Setup cost for personnel deployment: USD 5 – 20 per hour (depending on country)	FootfallCam SafeOccupancy™
Accuracy	50 - 75% accuracy It requires non-stop manual counting from first hour to last hour	95 - 98% accuracy
Customer's Perception	Non-systematic control, subject to human judgement	Scientifically proven, data driven control
Verifiable	Not verifiable	Verifiable with video proof (Accuracy Audit Report)
Long Term Benefits	No long term benefits	Can be reused for people counting system, live occupancy tracker on your website for visitors to find the best time to visit

How Does it Work?



Install People Counter at entrances and exits

- **Above 95% accuracy** with 3D stereoscopic video technology
- **Wide coverage** of entrance with dual fisheye lens
- **Long durability** with high quality industry steel case

Quick and Easy Installation

- **One cable installation** with PoE cable
- **Plug and play** without any IT networking knowledge needed
- Complimentary **installation support**
- **Auto Tuning**

SafeOccupancy™ in 4 Simple Steps

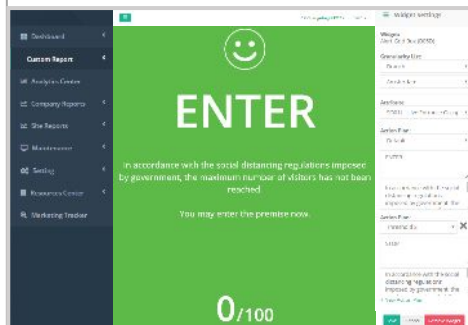
Step 1



Install

Our FootfallCam
SafeOccupancy™ System
in your store

Step 2



Configure

the maximum number of
people allowed from
dashboard

Step 3



Display

the occupancy level to your
customer in real-time

Step 4



Receive Alerts

when the occupancy limit is
breached

SafeOccupancy™ System Overview

Showcase

Live Occupancy Monitoring System Counting

 **FootfallCam™**



Occupancy Control Signa



Live Occupancy Monitor



Watch how it works: https://www.youtube.com/watch?v=wVO_RszdNBI

FootfallCam SafeOccupancy™

- **People Counter** – Count real-time occupancy in your building
- **Occupancy Control Traffic Light** – Automated display at your entrance to control incoming traffic
- **FootfallCam Analytics Manager v8™** – Live Dashboard, Staff Alerts, Management Reports

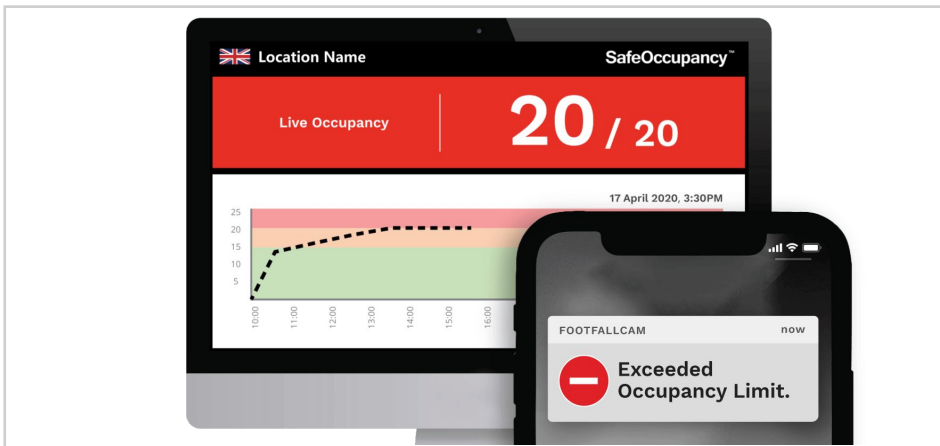
SafeOccupancy™ System Components



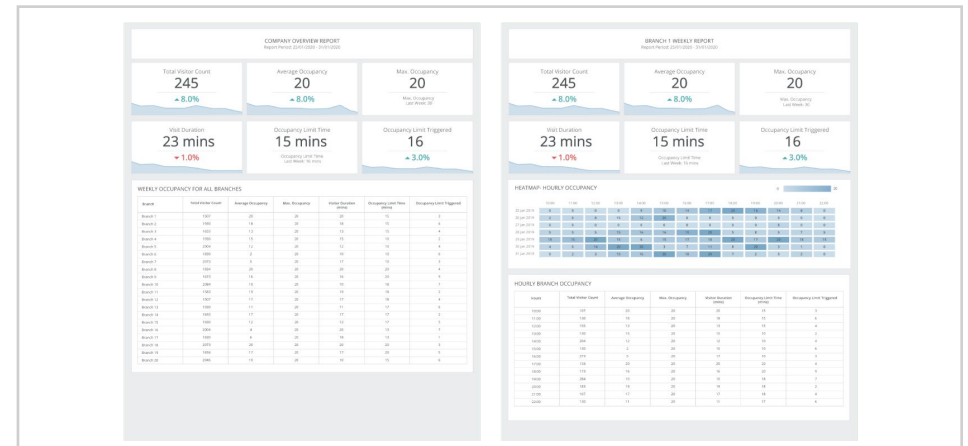
FootfallCam people counter for accurate counting



Customer-facing dashboard that show live occupancy

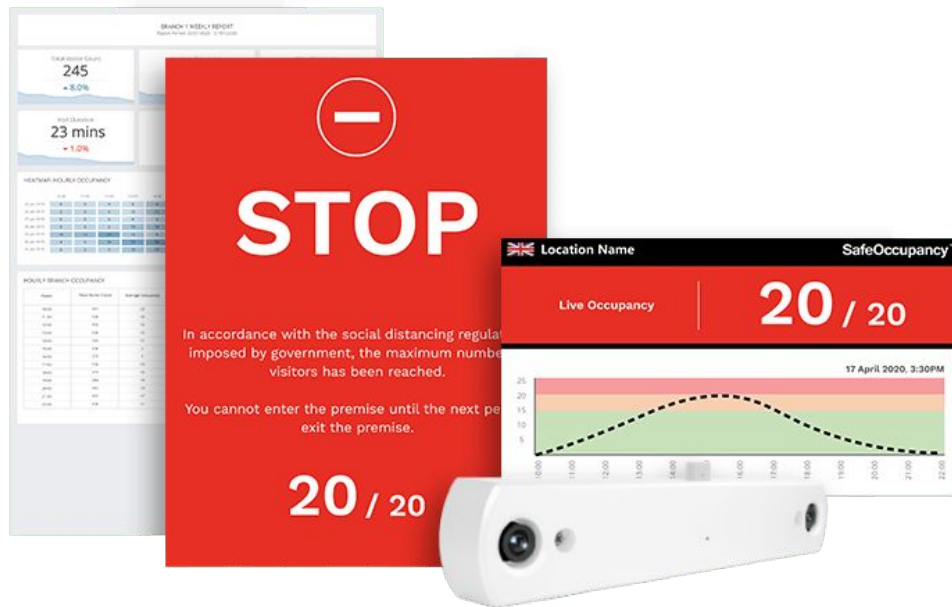


Employee-facing dashboard and **staff alert** notification system



Occupancy reports including customer behaviour and employee performance

SafeOccupancy™ System Package



- **All-in-one package:** Hardware comes with integrated software
- Hardware: **FootfallCam 3D Pro2™**
- Software: **FootfallCam Analytic Manager V8™**
 - Live Dashboard
 - Staff Alerts
 - Management Reports
- Quick and Easy Installation
- **Short delivery lead time:**
 - 1-100 units in 1-2 days
 - 100+ units in 3 days

**Installation services not provided by FootfallCam.*

Key Features of SafeOccupancy™



Real-time

Customer-facing and employee-facing displays that show the occupancy in real-time

Accurate

Above 95% accuracy of the customer occupancy within your store

Efficient

Assign employees to key store operation roles instead of customer counting roles

Convenient

Access web-based live occupancy display from any browser-enabled mobile device, tablet, or digital signage with a URL link

Timely

Alert staff members instantly using email and push notification when capacity thresholds are close to being reached

Scalable

Use the same technology to gather store performance data such as visitor count, outside traffic, and turn-in rate

Privacy friendly

Our counters are GDPR compliant and we don't store any identifiable information

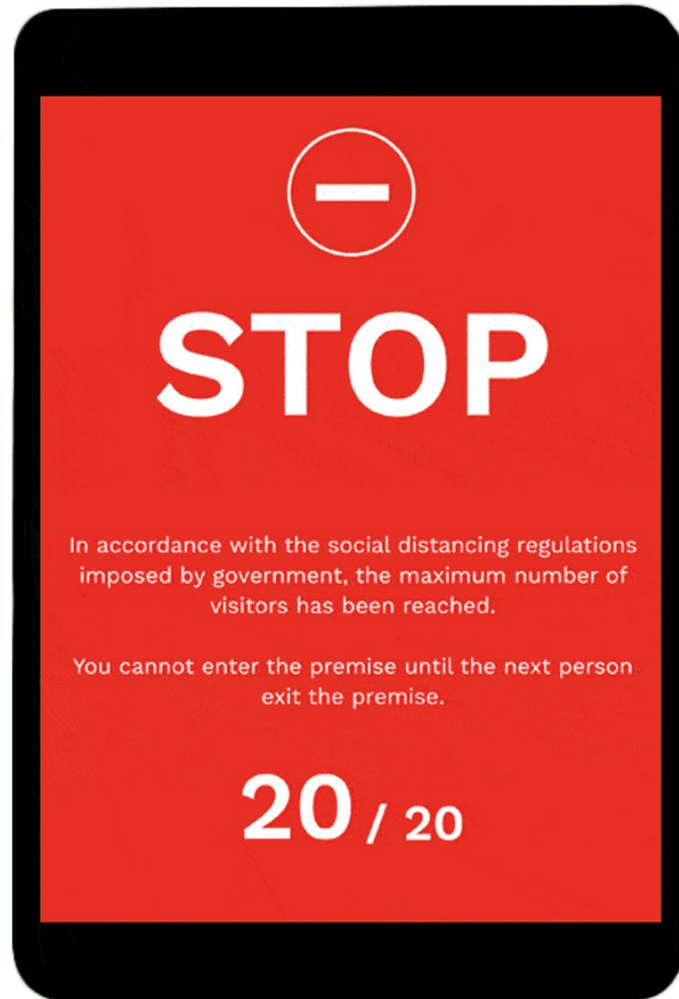
Proven

SafeOccupancy™ is based on our experience deploying people counting solutions for more than 10+ years in thousands of locations



Key Functions

#1: Occupancy Control Traffic-Light at Entrances



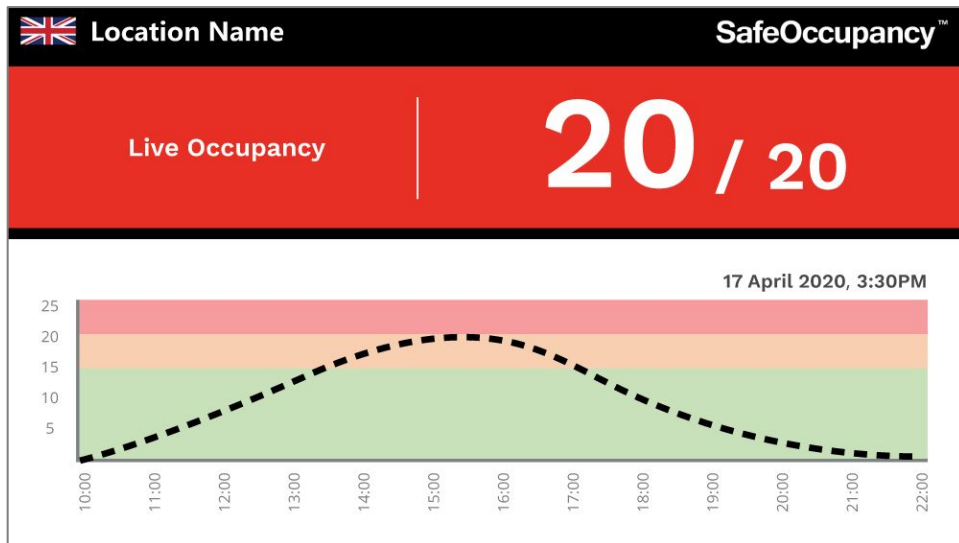
Real-time Display to indicate the occupancy level in your premises:

- **Green** (within the threshold)
- **Red** (exceeding the threshold)
 - With audio warning
- Real time data updates in every <1 second

Customer-facing Dashboard

- Inform your customer whether they can enter or they should wait via visual display at the entrance
- Occupancy count automatically updates as customer enters and exits

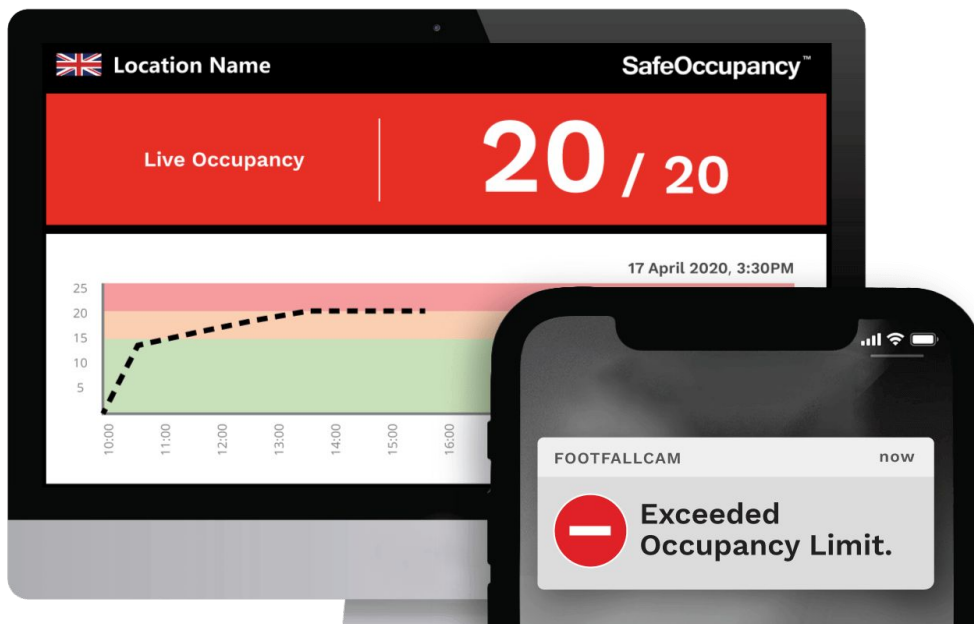
#2: Live Occupancy Dashboard in your Premise



Employee-facing Dashboard

- **Complete overview** on the occupancy level of premises from staff dashboard
- URL is easily accessible from
 - Mobile device
 - Tablet
 - Computer
- **Reallocate staff** from counting roles to important store operations and customer service tasks

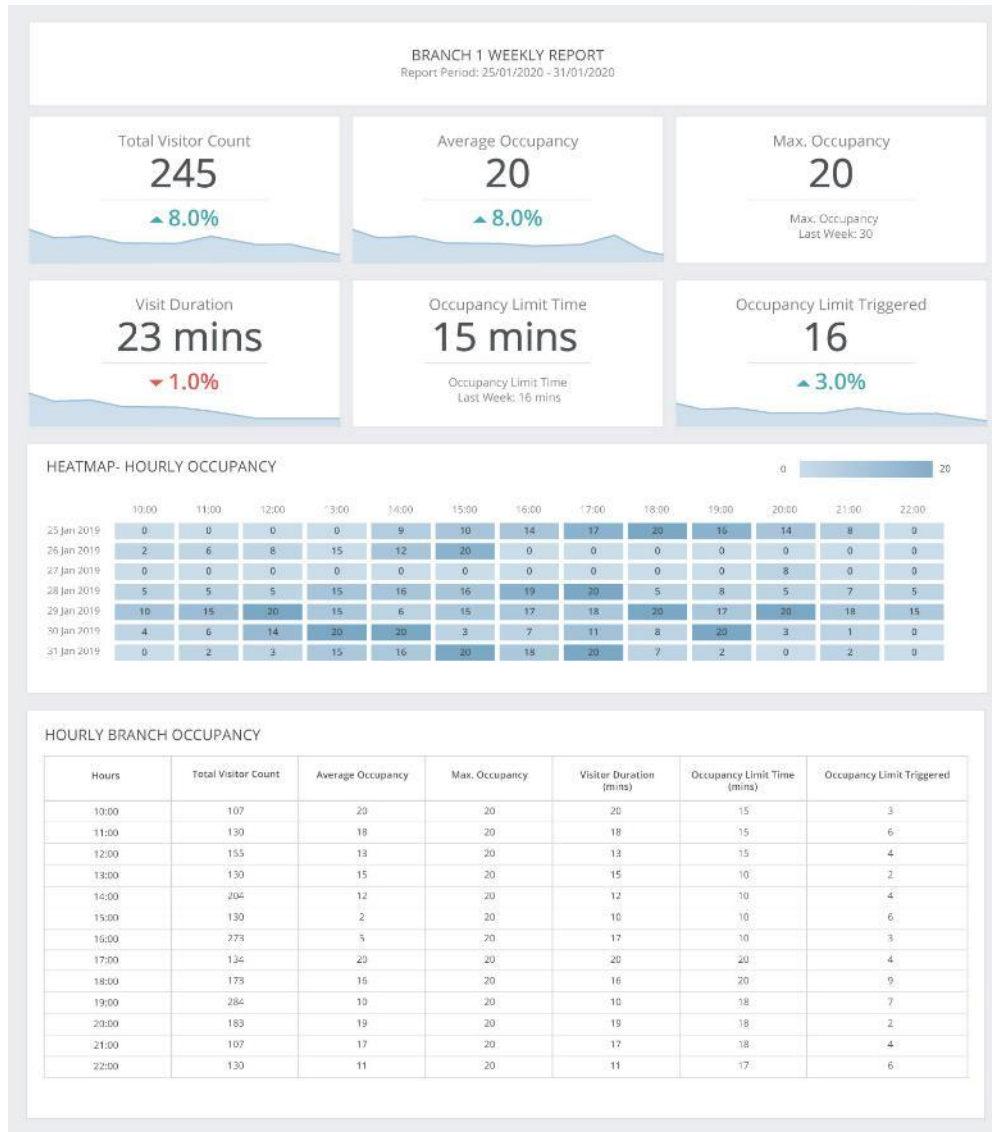
#3: Alert Staff on Site Occupancy Levels



Instant staff notification when occupancy limit is breached

- Staff members will be notified immediately so that they can **take timely action**
- Maintain business operation with an **ease of mind** for the management
- **Protect the health and safety** of the customers and the employees
- Available via:
 - App Notification
 - Telegram
 - Email

#4: Occupancy Reports for Management



Keep track of store occupancy level:

- Ensure that each store is operating in compliance with social distancing guidelines
- Clear insight into the occupancy trend based on historical data
- Assign more staff on duty during high occupancy periods

Overview of the occupancy limit

- Monitor the staff's performance based on how long the occupancy limit is breached
- Keep an eye on the number of times the occupancy limit is triggered
- Managements can view the occupancy reports on site-level and company-level

#5: Live Occupancy Tracker for Your Website



Display real-time occupancy of the store on retailer's website

- Helps customers to **pre-plan** their journey – Allows customers to check on the website before leaving home to see when will be **the better time to visit**
- Proactive approach to **influence customer traffic** by staggering their visiting time
- Better **manage customer's expectation** on queue time and thereby improving customer's experience
- Assist retailers in social distancing compliance

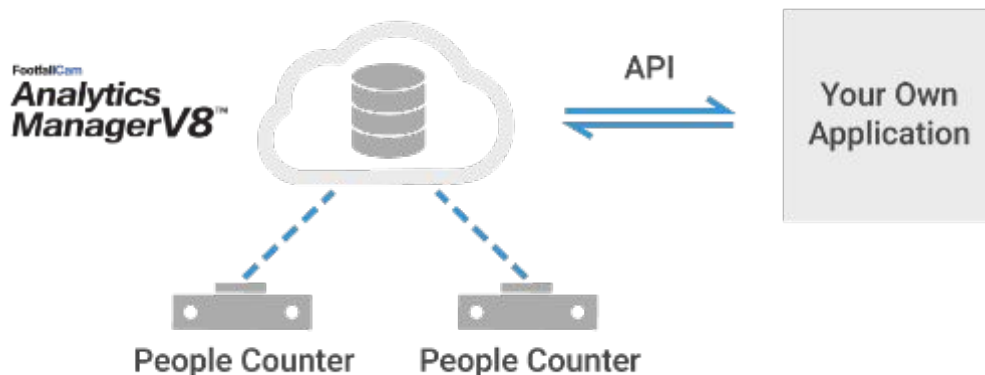
#6: API: Integrate with your Applications

Option 1: API directly from the counter



The XML-based interface allows people counting data to be integrated into third-party software platform via API or data push features. The people counting system combined with the customer's own data to give valuable insights such as performance KPIs & etc.

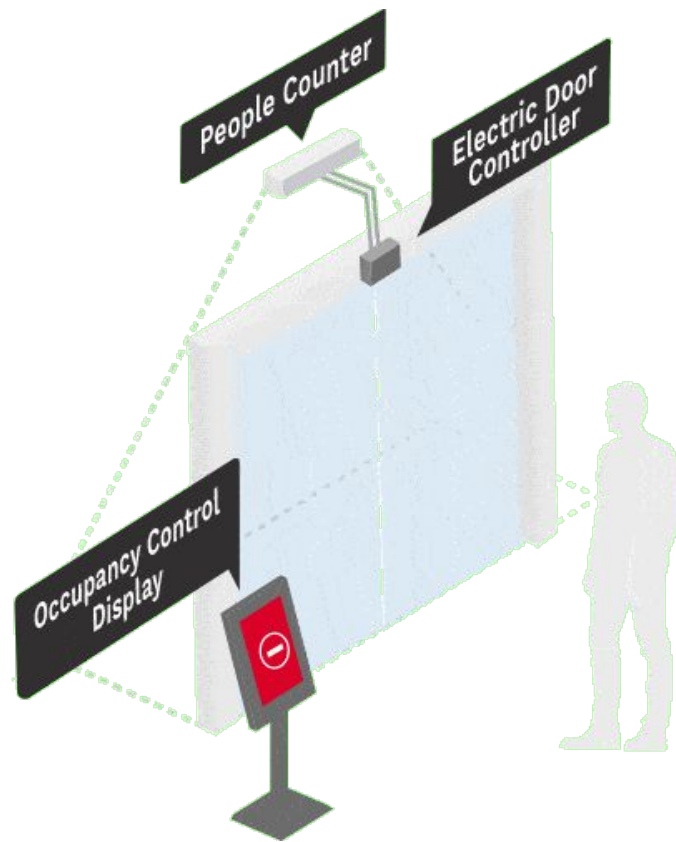
Option 2: API through the server



- Allow you to **integrate your data** with other source
- **Real-time** data retrieval
- Data in aggregated or raw format
- The data will be packed into a convenient JSON/XML data
- Other Methods available through the API:
 - FTP
 - Automated E-Mail
 - Manual
 - FTP

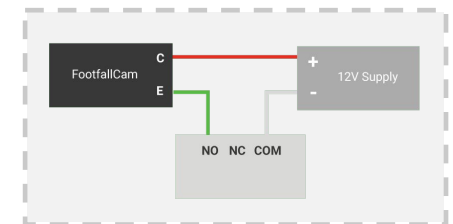
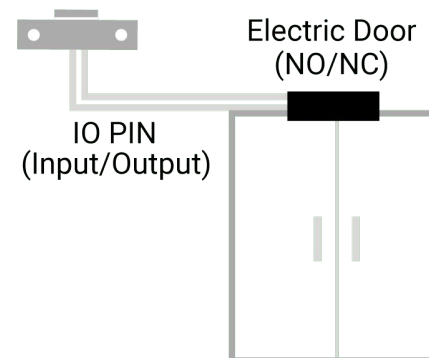
#7 Automatically Close Doors when Occupancy is Breached

To control the number of people in the store, [FootfallCam 3D Pro2™](#) can be integrated with [electric doors](#) via [GPIO](#) to automatically close the door when occupancy limit is breached.



[Watch how it works](#)

- [Automated electric door control](#) based on the pre-configured threshold
- Using IO pins to control the NO/NC port of electric doors
- [Manual adjustment](#) of occupancy data (Failsafe measure to control doors)



Using IO PIN to Control Electric Doors.

#8: Additional Use Cases After Covid-19

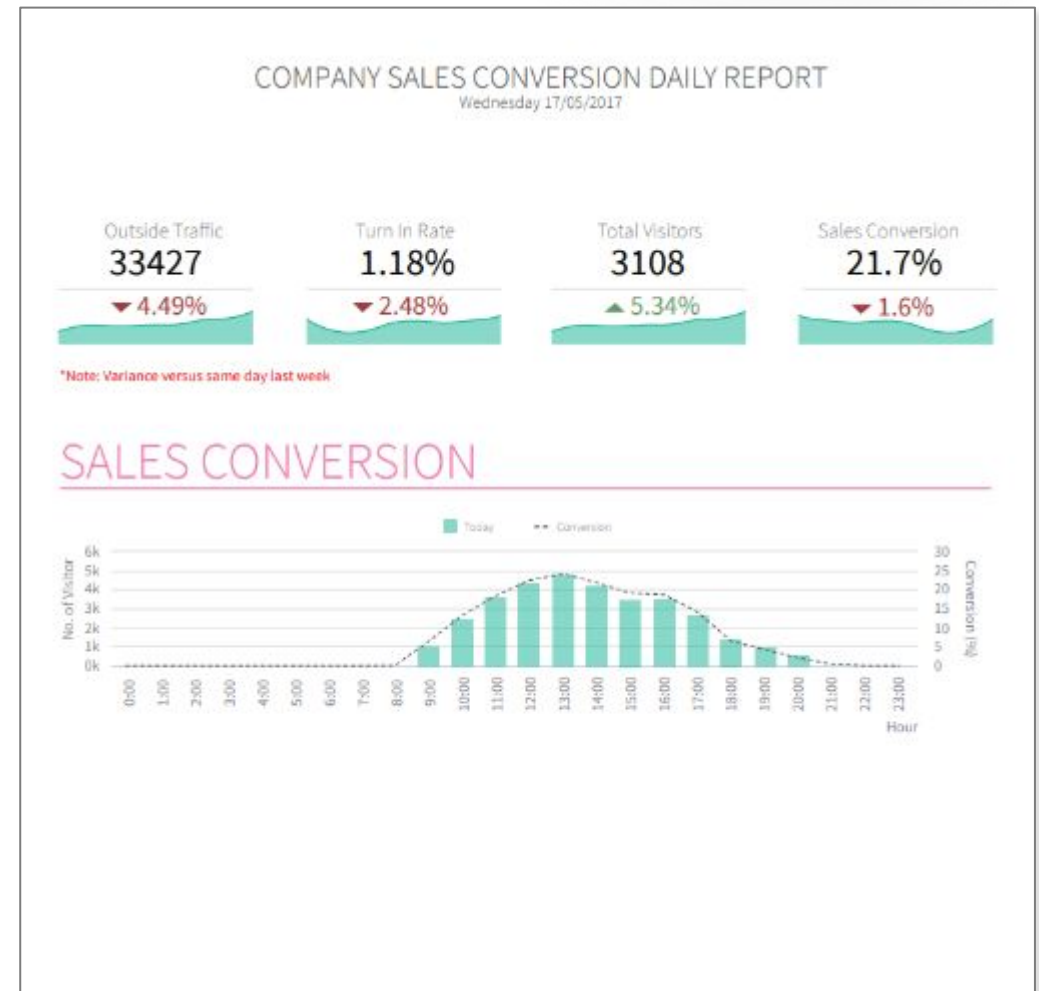
Additional Metrics

Apart from occupancy monitoring, the FootfallCam system also measures the following metrics:

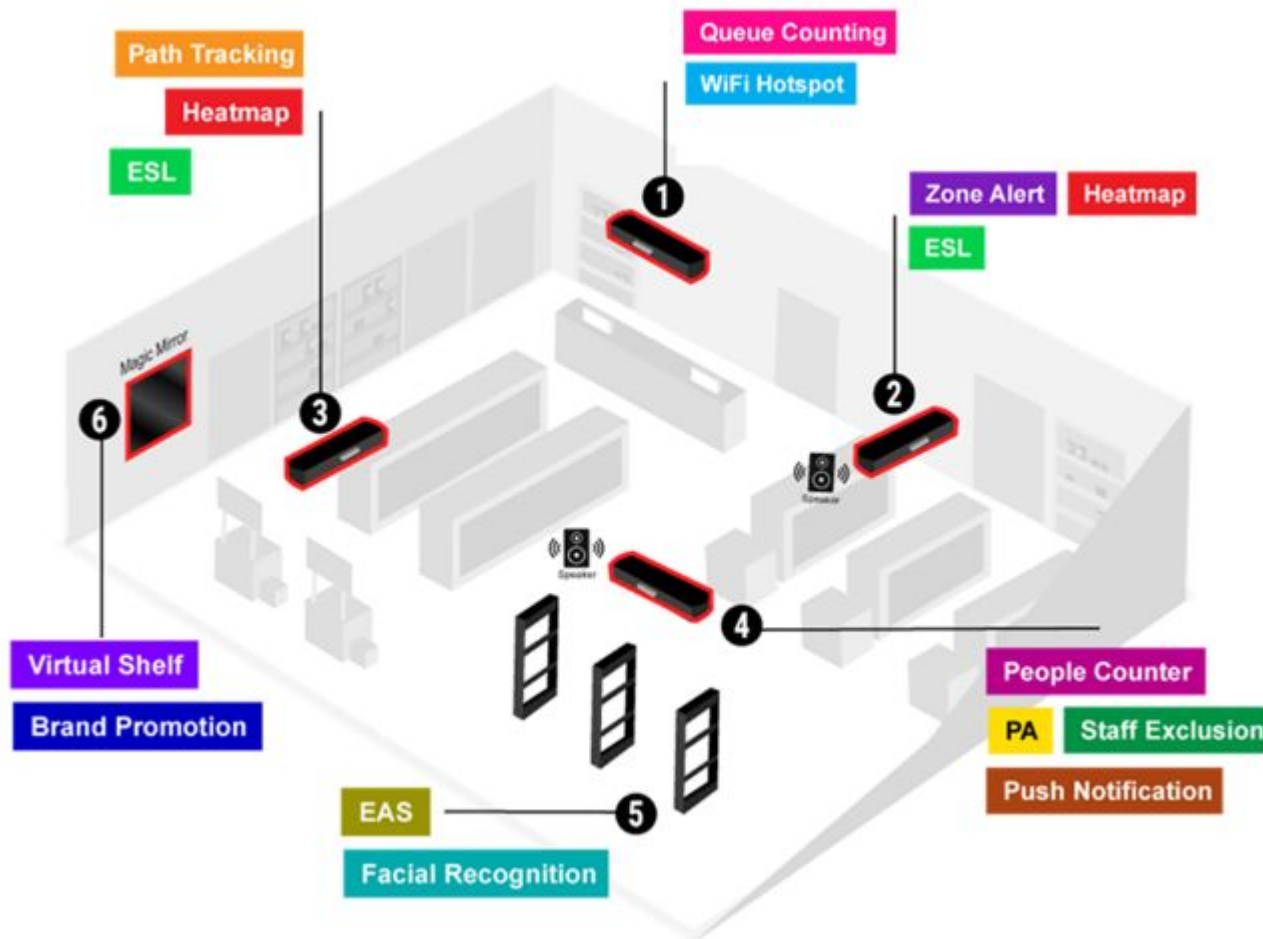
- Visitor Count
- Outside Traffic
- Turn-In Rate
- Visit Duration
- Returning Customer
- Sales Conversion

Use Cases by Industries

- **Retailers:** Footfall counting is key data to calculate **sales conversion rate** – use as a KPI to monitor store performances.
- **Supermarkets:** Apart from footfall counting at the entrance, it can be double up for **queue counting**, **heat map** and **zone tracking**.
- **Hospitals & Office buildings:** Provides data for **smart building control** and **facility utilisation analysis**.



#9: Extend the System with other IoT Functions



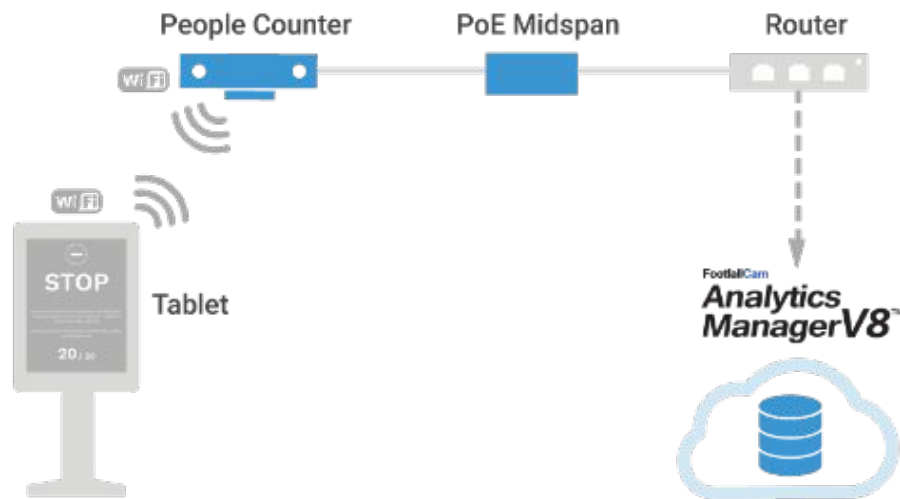
Smart Retail Solutions

- People Counter
- Queue Counting
- Heatmap
- ESL
- SKU Conversion
- Multiple Counter in-store path tracking
- PA System Functionality
- Wi-Fi hotspot
- Staff Exclusion Tags
- Push Notification
- EAS with demographic profiling
- Magic Mirror Mini



Product Variants: Display Screen Options

Option #1: SafeOccupancy™ with Tablet



What's Included?

1. FootfallCam 3D Pro2™ / FootfallCam 3D MAX™
2. SafeOccupancy™ app with live dashboard display

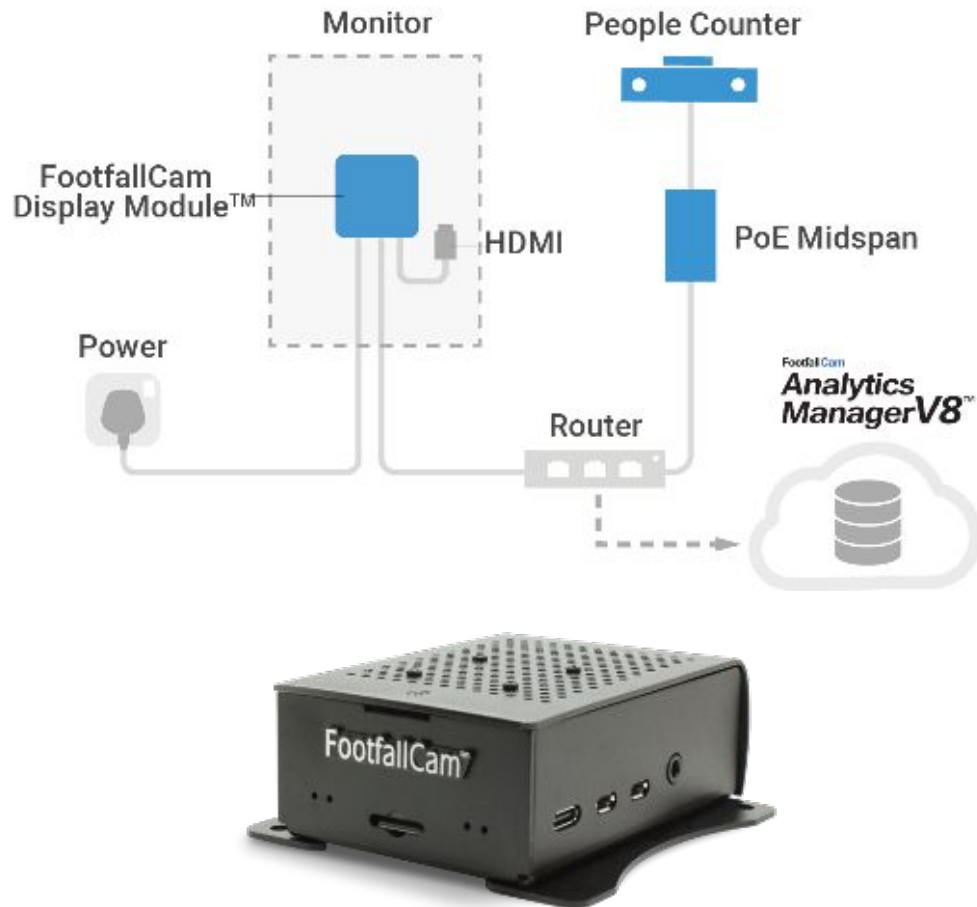
Not Included

- Android Tablet with stand at every entrances

Equipment Used

- **Easy to setup** using any Android tablet with SafeOccupancy™ app
- The app will be communicating with the counter directly via the **counter's Wi-Fi**
- **Automated update** when customers enter and exit
- Less than 1 second delay when updating the data
- **Real-time** display of occupancy tracking
- The counter will act as a proxy

Option #2: SafeOccupancy™ with Display Module



What's Included?

1. FootfallCam 3D Pro2™ / FootfallCam 3D MAX™
2. FootfallCam Display Module™
3. SafeOccupancy™ app with live dashboard display

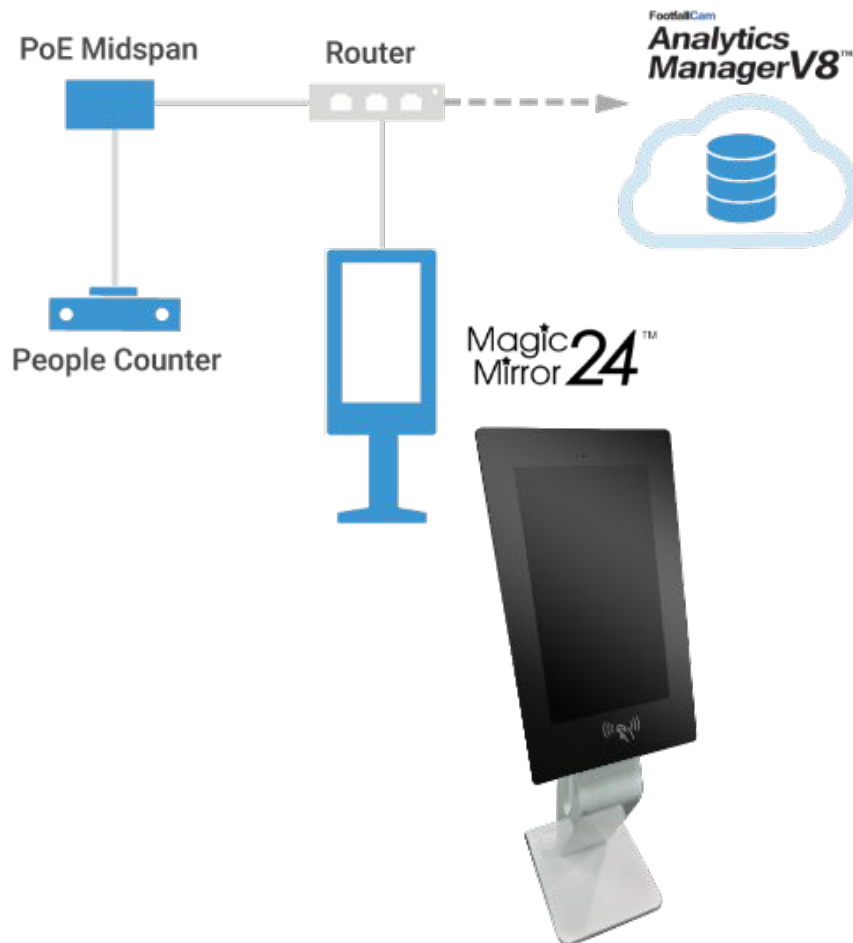
Not Included

- Any display monitor with HDMI connection

Equipment Used

- **Economical** solution suitable for any customer
- **Reuse existing digital monitor** with HDMI
- Portable and lightweight
- **Automated update** when customers enter and exit
- Less than 1 second delay when updating the data
- **Real-time** display of occupancy tracking

Option #3: SafeOccupancy™ with Magic Mirror



What's Included?

1. FootfallCam 3D Pro2™ / FootfallCam 3D MAX™
2. Magic Mirror24™
3. SafeOccupancy™ app with live dashboard display

Equipment Used

- **Plug-and-play**; No additional hardware required
- Optimal sizing for live display of occupancy tracking
- The display panel will be connected to the counter and the PC via intranet
- Can be **re-purpose as digital signage** for product promotion
- **Automated update** when customers enter and exit
- Less than 1 second delay when updating the data
- **Real-time** display of occupancy tracking



Enterprise Class Software

FootfallCam Analytic Manager V8™



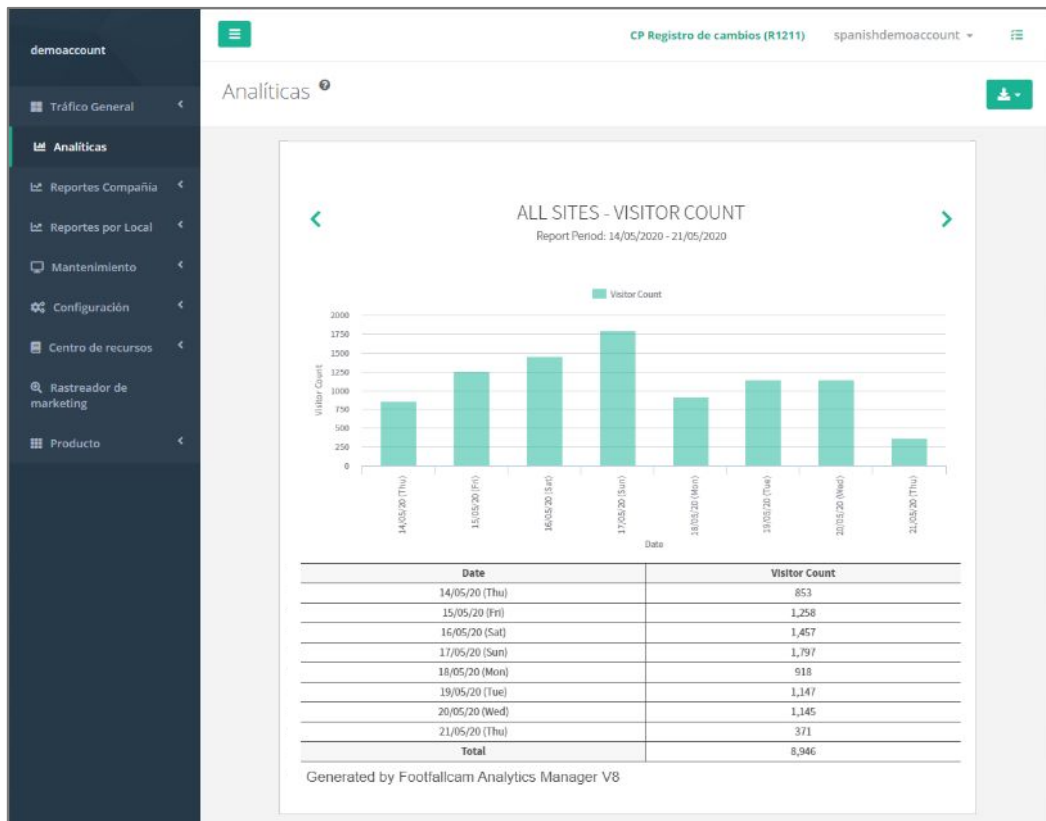
Functions:

- 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

#1: Enterprise Class Software



Multi-language Interface

Different languages available such as:

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

#2: Video Proof

SAMPLE MALL ACCURACY CERTIFICATE

Counter Name : Counter 1
Branch : Branch 1
Verified Date : 21/08/2018
Verified by : sengsiong

	In	Out
Manual Observation	119 (in)	138 (out)
System Count	116 (in)	135 (out)
Different	3	3
Accuracy	97.48 %	97.83 %

Summary

Following the concern from the sample mall regarding the accuracy of the footfall counter, we have performed a verification study. The system has achieved an overall accuracy of 97.48% with a sample size of 119 persons coming in; accuracy of 97.83% with a sample size of 138 persons going out. Therefore, we are happy to assure that the count figures are accurate.

Video Logs



Date & Time : 20.08.2018
17:00:00 - 17:30:00
Manual Observation : 45 (in) : 50 (out)
System Count : 45 (in) : 50 (out)
Different : 0 : 0



Date & Time : 20.08.2018
18:00:00 - 18:30:00
Manual Observation : 41 (in) : 47 (out)
System Count : 40 (in) : 46 (out)
Different : 1 : 1

Ensure 95% and above data accuracy

- Automated reports give the valid data and overview of their facility (e.g. visitor movement and peak time).
- They will schedule video recordings to collect a sample size of 20 and above
- After that, they will configure the counter to ensure that it is able to detect the visitors in the video recording
- Once it is completed, the team will generate an Accuracy Certificate which will showcase the counter accuracy and summarize their finding.

([Sample Accuracy Audit Report](#))

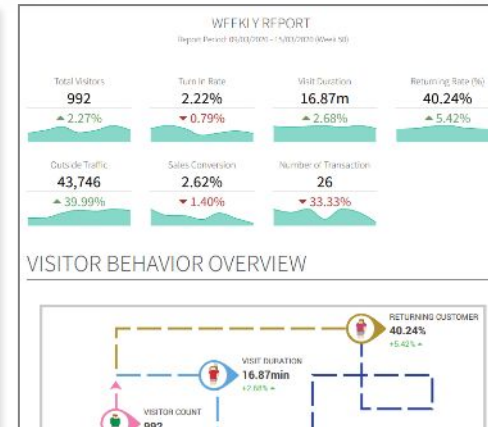
Reporting Suite



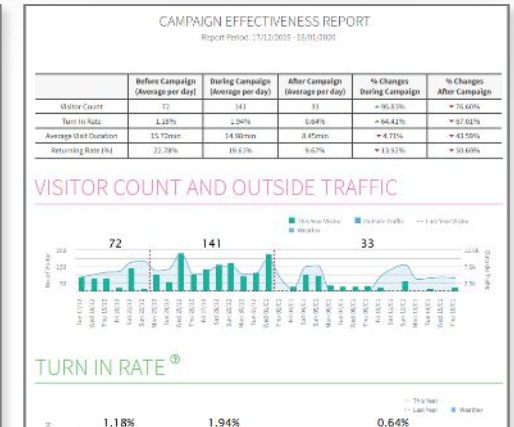
[Analytics Center](#)



[Company Weekly Report](#)



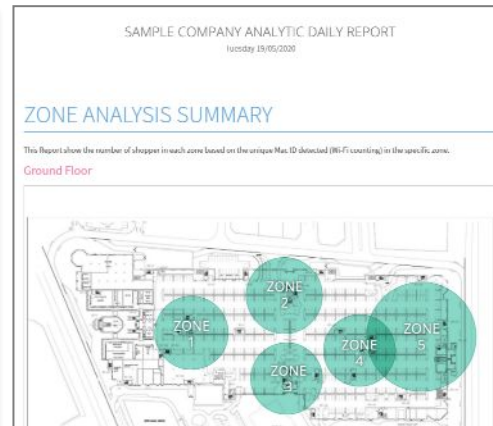
[Site Weekly Report](#)



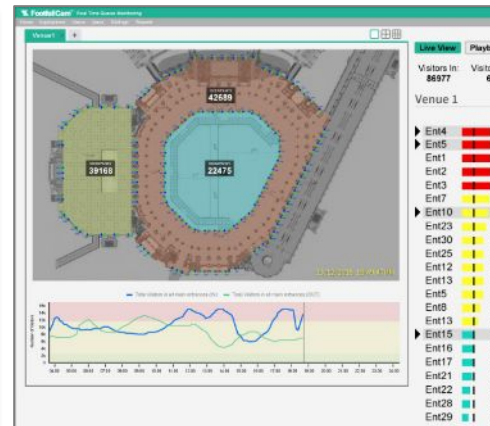
[Marketing Effectiveness](#)



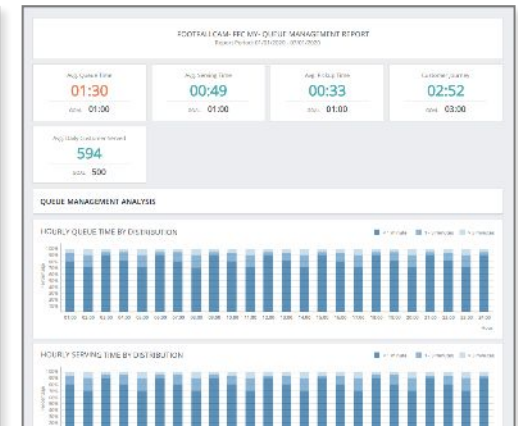
[Live Occupancy](#)



[Zone Analytics](#)



[Mecca Occupancy](#)



[Queue Counting](#)

Management Control

User Control

NAME	ADDRESS	EMAIL	CONTACT	STATUS
John Doe	123 Main St	john.doe@example.com	01234567890	Active
Jane Smith	456 Elm St	jane.smith@example.com	09876543210	Inactive
Bob Johnson	789 Oak St	bob.johnson@example.com	01234567890	Active

User Control

Branch Control

Branch Name	Address	Phone	Email	Status
Branch A	123 Main St	01234567890	brancha@example.com	Active
Branch B	456 Elm St	09876543210	branchb@example.com	Inactive
Branch C	789 Oak St	01234567890	branchc@example.com	Active

Branch Control

Email Scheduler

Event Name	Event Date	Event Time	Event Status
Event A	2023-10-01	10:00 AM	Active
Event B	2023-10-02	11:00 AM	Inactive
Event C	2023-10-03	12:00 PM	Active

Email Scheduler

Import/Export

Import/Export Type	Import/Export Date	Import/Export Status
Import	2023-10-01	Active
Export	2023-10-02	Inactive
Import	2023-10-03	Active

Import/Export

Health Check and Maintenance Tools

Data Integrity

Category	Item	Value	Status
Category A	Item A	100	Active
Category B	Item B	200	Inactive
Category C	Item C	300	Active

Data Integrity

Company Data Integrity

Category	Item	Value	Status
Category A	Item A	100	Active
Category B	Item B	200	Inactive
Category C	Item C	300	Active

Company Data Integrity

Issue Tracker

Issue ID	Issue Title	Issue Status
Issue A	Issue A Title	Active
Issue B	Issue B Title	Inactive
Issue C	Issue C Title	Active

Issue Tracker

Support Portal

Support ID	Support Title	Support Status
Support A	Support A Title	Active
Support B	Support B Title	Inactive
Support C	Support C Title	Active

Support Portal

Frequently Asked Questions

- 1. We have multiple entrances at our premises. Can this system deal with multiple doors? Will the display screens show the total occupancy of the area?**

Yes, definitely. To clarify, the occupancy data will be taken from the server, not from the counters. Hence, the total occupancy will be displayed.

- 2. How do we activate the feature to integrate the counters with the electronic door? Are additional accessories required?**

Please refer to the diagram below for the Automatic Electronic Feature. This requires a hardware modification of the counters and would only be made upon order.

- 3. I am planning to use our own tablet as the display screen. What is the recommended brand and version?**

We would recommend using Android Tablet Version 9 and above as your display screen.

- 4. Do you provide the stands/hardware to mount the tablets at the entrance?**

No, you will be able to source this easily from stores outside.

- 5. Where can I get the Live Occupancy App?**

You may setup the Application on your Android Tablet using our “FootfallCam Live Occupancy Application Setup Guide”. Then, please raise a support ticket through the Support Portal so the technical team can activate the feature on your dashboard. Please contact us for the Setup Guide.

UseFul Links

Item	Link
FootfallCam 3D MAX™ Datasheet	https://www.footfallcam.com/Content/data/documents/Download-Page/Spec-Sheet/FootfallCam-3D-Max-Datasheet.pdf
FootfallCam 3D Pro2™ Datasheet	http://footfallcam.com/Content/data/documents/Download-Page/Spec-Sheet/FootfallCam-3D-Pro-2-Datasheet.pdf
FootfallCam Analytics Manager V8™	https://www.footfallcam.com/Content/data/documents/Download-Page/Spec-Sheet/FootfallCam-Analytics-Manager-Datasheet.pdf
Magic Mirror 24™ Datasheet	https://www.magicmirror.me/Content/data/documents/Download-Page/Spec-Sheet/Magic-Mirror-24-Datasheet.pdf
FootfallCam API Document	https://www.footfallcam.com/Content/data/documents/Download-Page/FootfallCam-API-Documentation.pdf
SafeOccupancy™ – Live Occupancy Video	https://youtu.be/7PkbUWX9EyY

Q&A Session

You need further information or have a question?

Please visit:

www.footfallcam.com

Subscribe to FootfallCam YouTube channel for more marketing and training videos:

