Advanced occupancy sensing for **Shopper Marketing**

New technology to *measure engagement*

➔ Brand activations
➔ Shop-in-shop
➔ Visual merchandising

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"Half the money I spend on advertising is wasted… the trouble is, I don't know which half…"

This is especially true in the **physical realm**, with brands flying blind on *impression & engagement* measurement.

Despite the significant investment in **visual merchandising**, both brands & retailers lack the tools to accurately measure campaign **effectiveness & ROI**. Physical trading environments present challenges for those seeking shopper engagement metrics - **privacy, cost, & deployability** - leaving marketers to rely on unstructured sales data or anecdotal evidence to understand **what worked & what didn't**. The result is no quality data to enhance subsequent campaign strategies & marketing spend.

➔   *Which retailers delivered the most impressions?*

➔   *Which design & format did shoppers find most engaging?*

➔   *What can be applied to maximise future campaigns?*
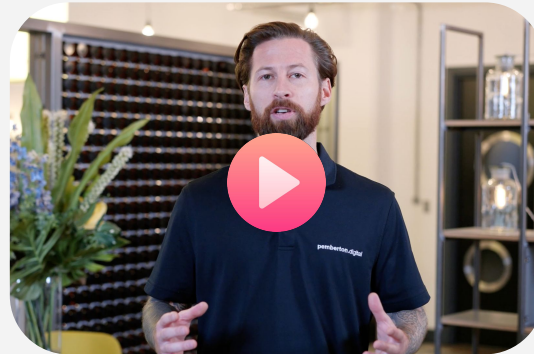
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Not all campaigns **perform equally.**

Sales data is one of the few metrics available to gauge effectiveness; however, this is easily skewed, nor does it **tell the "why"** in tracking attribution. For sampling & out-of-store brand activations, measurement is even harder.

By simply measuring how many people passed (impressions), dwell time & proximity (engagement), we can gain new insights into relative performance to better understand why a piece of shopper marketing worked, or didn't, to then iterate & improve.

pemberton.digital's solution **removes the guesswork**, linking actual impressions to any rise or fall in item or category performance.

➡ ***Installation Performance***

➡ ***Retailer Attribution***

➡ ***Location (geographical & store)***

➡ ***Out-of-store Performance***

Sensor Demo

Hear from Andrew, our Commercial Director, showing our mmWave sensor in action.

Watch Here

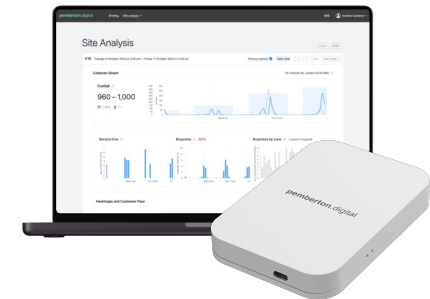**pemberton.**digital

Be *in-store* with **pemberton.**digital…

New sensing technology to measure the *reach & impact* of in-store installations.

pemberton.digital is leveraging the latest in mmWave radar to measure *shopper impressions & engagement* around visual merchandising, brand activations, & shop-in-shop installations. Integrating seamlessly into displays or signage, the device gathers occupancy data in a **discreet, 100% private & retail-friendly** manner.

The **sensor-to-dashboard solution** gives unprecedented visibility & allows brands & retailers to measure, iterate, & optimise in-store marketing efforts by **retailer selection, creative & installation design** - bringing data to an otherwise opaque process.

Real insights to ensure *more impactful campaigns & marketing spend.*

➔   **Impression & Performance Insights**

➔   **Identify Best Partners & Design**

➔   **Optimise Spend & ROI**

➔   **Real Data Ownership**

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Lightweight, **100% private** & easy to deploy

The *retail-friendly* solution for in-store measurement.

pemberton.digital's proprietary sensors use **mmWave radar** to measure shopper **presence, directionality, & dwell time** in targeted areas of up to **1,000 sqft**. For reference, mmWave is similar to the human-spotting technology used in automotive applications, giving highly accurate human-spatial data.

Being **lens-less**, **pemberton.**digital's solution is *100% private & GDPR-compliant*.

The device integrates into a display, sensing directly through materials such as foamex. **Pre-configuration & on-board 5G**, ensures seamless connectivity to the cloud analytics platform.

➔   Total footfall within observed area (**Impressions**)

➔   Dwell-time & proximity (**Engagement**)

➔   Flow & heat mapping (**Spatial Insights**)

➔   Subject velocity change (**Visual Interest**)

➔   Traffic time-mapping

Limits of observed area

Shoppers

Merchandise

Display material
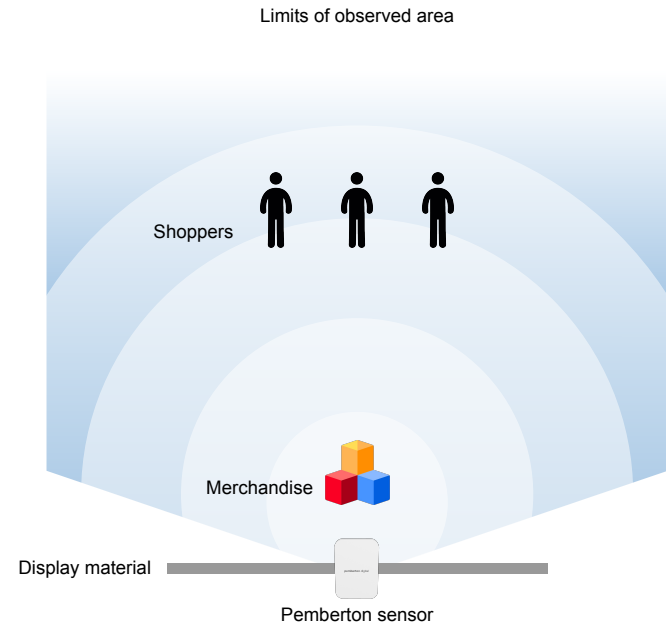
Pemberton sensor

Transforming Occupancy Data

CF.10 - Customer Flow
Smart Occupancy Sensor

Designed for both fit-&-forget installations & temporary deployments, the **CF.**10 is **pemberton.**digital's flagship sensor. Capable of monitoring up to 20 targets across 1,000 sqft, the **CF.**10 ships pre-configured & reports wirelessly via LoRa, 5G or Wi-Fi, ensuring low-touch for any user.

- 60 GHz mmWave radar module
- Custom processing & communication PCB
- Independent LoRa, 5G Wifi connectivity
- Powered via USB-C or PoE
- Dimensions: 117 x 82 x 16 mm, 108 grams
- 100% anonymous detection (zero PPI)
- Mounted via adhesive, magnetic, or fastening hardware

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Cloud Analytics Platform

The Cloud Analytics Platform serves as the interface between occupancy data & performance insights. Arranged by campaign & enriched with metadata, users can perform cross-site analysis in real time. The platform supports data exports via REST API, CSV, & integrates seamlessly with Power BI for enhanced reporting & analysis.

CSV   **REST API**   **Power BI**

Concept *vision board*

Branded display monitoring

- Sensor integrated into display
- Impression & engagement metrics
- Cross-site analysis
- A-B testing of display design
- Defined floor space, 100-500 sq ft / device

Shop-in-shop & brand activations

- Integrated or ceiling mounted sensor
- Impression & engagement metrics
- Dwelling mapping for product interest analysis
- A-B testing of features & layout
- Defined floor space, up to 800 sq ft / device

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Concept *vision board*

Left: Branded shelf space & floor graphic (display mounted)
Centre: Shop-in-shop traffic & product analysis (ceiling mounted)
Right: In-store sampling (installation mounted)

Concept *vision board*

Brand activations, Experiential & Sampling

- Integrated or ceiling mounted sensors
- Impression & engagement metrics
- A-B testing of features & layout
- Measure reach & impact
- Inform design ROI & further marketing spend

Concept *vision board*

Free-standing, brand blocks & shelf-end displays

- Display integrated sensors
- Impression & engagement metrics
- Quantify traffic & dwell
- Bring data to retailer & creative selection

about **pemberton.**digital

pemberton.digital is a venture-backed retail technology business based in East London.

Led by Patrick Coleman (former Cisco leader) & Andrew Cameron (commercial development, investment), Pemberton supplies a range of occupancy sensing solutions for retail, hospitality, & asset management.

In a competitive field of established technologies, Pemberton is the first to market with **mmWave radar**, a recent innovation with unique "open field" capabilities. With a focus on **privacy, cost, & deployability**, our goal is to offer unrivalled visibility in any environment.

SFC

www.sfccapital.com

K10 Japanese, a London-based Itsu challenger brand using our QD.10 "Queue Density" models in all sites, measuring counter service performance to ensure peak demand is met.

Pets at Home is using Pemberton's XF.68 "External Flow" sensors for measuring customer volumes & flow. The customer roadmap includes queue management, customer pathways & zone analysis.

Epsom Social, a 7,000 sq ft multi-vendor food hall & entertainment venue using our CF.10 "Customer Flow" to time-map footfall, zone usage, & customer pathways, advising better format design & entertainment offering.

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Thank you

pemberton.digital welcomes all enquiries & discussion on potential applications.

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