



## Indoor Positioning Analytics For Retail Properties

Understand the Customer  
Experience in ways  
never before possible



# Location is Everything

## Mall Owners & Retail Property Managers

### Location, location, location.

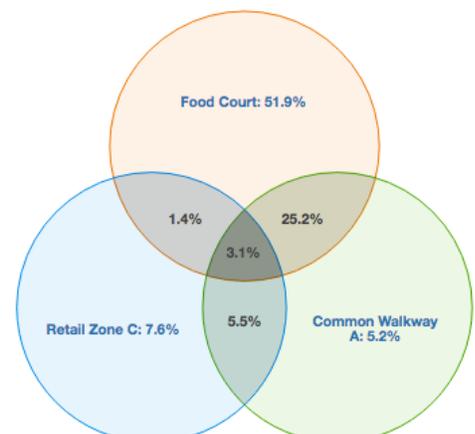
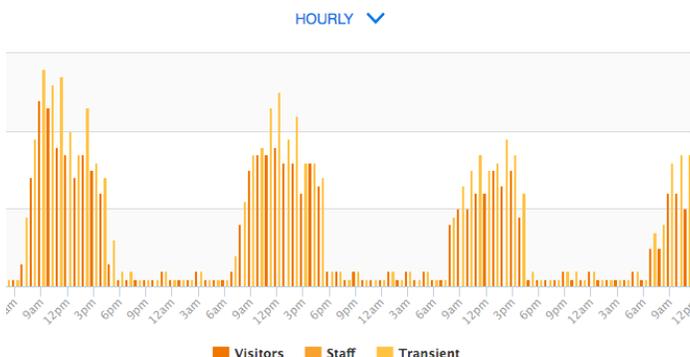
Location dictates so much of what matters in the world of retail. Retail properties seek to maximize revenue through leasing return, visitor spend, managed operations, commercialization, and marketing events. To date, no solution has allowed retail stakeholders to harness the full potential of locationing services to track effectiveness. Before now, mall owners and retail property managers have been left in the dark when it comes to tracking and gathering information on visitor location, time spent, loyalty and journey.

Increasing the number of visitors, extending time spent in a given location, and understanding the visitor's journey are key levers for growing revenue. A handful of available solutions claim the ability to maximize lease occupancy and generate the highest rate per square foot, but limitations on their technology skew accuracy and cap revenue potential. It is time to give mall properties the same breadth of technological advantage currently afforded to those in the e-commerce space by knowing the who, what, when, and where of shoppers.

### The Problem

## Getting accurate visitor metrics is *very* difficult

- **Customer movement.** Leveraging the commercial marketing package, operators receive a description of footfall, dwell time and category spend. Customer spend data is dependent on declaration, which may be limited to only certain categories or a percentage of all sales. Retail Managers look to optimize rates through managed operations, such as parking or through advertising space, and marketing events can attract hordes of customers, but tracking movement and spend is rather limited.
- **Dwell time and other insights.** Mall operators use a variety of methods to get their visitor metrics today. Industry statistics are provided via Cushman & Wakefield information, but this is not defensible nor actual. Counters that use video or infrared to count visitors can't determine new or returning visitors, measure dwell time, or provide insights into a visitor's journey. Many mall operators utilize surveys that cover a small fraction of the visitors, and often don't even account for actual shoppers.
- **Sampling via W-Fi.** Wi-Fi-only solutions provide a platform for data gathering, but miss anyone that does not have Wi-Fi enabled on their device and cannot determine visitor journey. At best, these systems measure only a fraction of visitors and rely on statistical assumptions and "scaling" of numbers to come to conclusions — which (again) are not particularly accurate, and leave the property owners struggling to eek every penny out of every square foot of their mall.





## The Solution

# Inpixon Indoor Positioning Analytics for Retail Properties

Inpixon Indoor Positioning Analytics (IPA) for Retail Properties also uses the signals emitted by mobile devices to gather the information for its metrics. But unlike other systems, it is not limited to Wi-Fi (around 30% - 40% of devices) or Bluetooth (less than 10%). Rather it uses Wi-Fi, Bluetooth (full Bluetooth, not just BLE) and cellular (100% of cellular phones) to develop a much more complete and accurate picture of a mall's occupants. Furthermore, with Inpixon IPA's patented technology, property owners can, for the first time truly and definitely answer the "who, what, where, when and how" questions they've been trying to for nearly a century.

## Inpixon IPA Offers

- Highly accurate visitor counts based on 90-99% sample sets taken 24 hours a day, 7 days a week. No duplicate counting of the same person, no miscounting of dogs, strollers, carts, and other non-people.
- Proven through sensitive top agency government deployments, Inpixon IPA has the ability to anonymously count and continuously measure individual behavior within an area even if their phone uses privacy techniques such as MAC address rotation
- Location and continuous monitoring of visitor journey within the property accurate within 3 meters (<10 feet)
- The ability to distinguish between customers, employees and transient visitors
- Real-time, continuous monitoring and DVR playback
- Accurate, in-depth reporting on difficult-to-obtain retail property KPIs such as dwell (how long), visitor journey (horizontal and vertical), storefront affinity (relationship between multiple stores), visit frequency (how often), and even views of things like display windows and in-mall advertising.
- The ability to create "hot zones" that can trigger alerts to employees, change an ad when someone passes a display, or even trigger app-based behaviors such as coupon delivery on a visitor's phone.
- The ability generate new insights based on multiple inputs such as phone activity, customer behavior, POS data, staffing data, etc. (e.g., "do iPhone owners spend more or less than Android owners?" "Does walking speed indicate a visitor's intent?" etc.)

## Inpixon IPA Benefits

- The most accurate visitor counts possible — 90—95% certainty.
- Continuous 24/7 monitoring and measuring throughout the entire property to give a complete view of mall operations (again, no "scaling" or in-filling gaps with made up data) by sub-hour, day, week, month, year etc.
- Understand "true" visitor journey throughout your property — which storefronts are most popular, which share the most visitors, what areas of the mall create bottlenecks or are left unused and more.
- True visitor location (where a person is), rather than proximity (how close a person is to a thing) that tells you how many people really saw a sign, or passed by a kiosk or display window rather than simply how many people were around it (but couldn't see it).
- Connect Inpixon IPA's zone-based triggers to 3rd party apps, digital display, staffing, security alerts, etc. to offer location-based services, product offers, open more check stands or offer customer assistance, employee staffing, security controls, etc.
- Add detailed visitor behavior in physical spaces to digital data such as point of sale info, social media "likes", app-based information, etc. to get a true 360-degree view of your property.



# Reporting with Inpixon Insight Technology

## Visitor Counts

### Total Number of Unique Visitors

This displays the number of unique visitors within the selected period (hour, day, week, month) within the selected zone, over the selected time range. A unique visitor is defined as a “single person who may or may not have been seen before within the selected period”, i.e. if the period is an hour, a single person may enter and leave a zone repeatedly within that hour but will only be counted once. This is based on the MAC address obtained via Wi-Fi.

### Maximum Number of Unique Visitors

This displays the peak number of visitors within the selected period, within the selected zone, over the selected time range. The peak number is the highest simultaneous count of visitors within a 15-minute interval.

### Visitors Never Seen Before

A never-seen-before visitor means that there is no previous record of that visitor within all recorded data.

### Frequency of Unique Visitors

How many times a unique visitor has been seen within the selected zone over the entire selected date range.

### Customers, Staff, & Transient

This is the same as visitor counts but is broken up into three time segments. If a visitor is seen for less than “X” minutes, then it is put into the transient bucket. If between “X” and “Y” then they are defined as a visitor or customer. If seen for longer than “Y” then they are put into the Staff bucket.

## Dwell Times

### Total Dwell Times

The total count of time of all visits to that zone for the period selected over the specified time range.

### Average Dwell Time

Same as Average Number of Visits but for dwell **time**.

### Dwell Time Distribution

The distribution of the dwell time of each visits. i.e. 3000 visits were 5 minutes or less.

## Retail Exposure

This metric is a relative metric that is calculated by multiplying visits by dwell time. It is a metric designed to measure total selling potential that is a function of both dwell time and total visits.

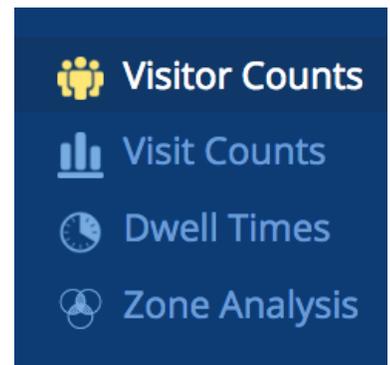
## Zonal Analysis

### Average Number of Zones Visited

The average number of zones a visitor has visited for the selected period over the selected time range.

### Unique Visitors Zone Analysis

A Venn diagram that shows how many visitors went to only “zone A”, went to both “zone A and zone B” or went to all three zones.



## Make Decisions with Actual Data

[www.inpixon.com/IPA](http://www.inpixon.com/IPA)

