



# RETAILGATE

PUTTING THE AI IN RETAIL

## BRINGING THE MAGIC OF E-COMMERCE TO THE BRICK & MORTAR

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Retailgate: Putting the AI in retail.



## As we now face the fourth industrial revolution, data has become the new coal that powers business decisions.

Whether you own a retail store, entertainment center, shopping complex, or operate an office building, warehouse, transportation hub, or casino-- understanding how customers behave is crucial in driving operational success & identifying marketing opportunities. Knowing what drives your customers through the door and what leads them to make a purchase can make a world of difference in growing your business.

Keeping track of customer visits allows you to study patterns over time and gather rich, actionable insights on how they behave. These data-driven insights allow you to make better decisions on how to better manage operations, drive more purchases, and increase profitability.

In this brief white paper, we look into how people counting brings value to brick & mortar retailers and venue operators beyond monitoring foot traffic-- how the data you get can help you make informed decisions and improve in-store customer experience. We will explore how automated counting techniques and artificial intelligence can help you gain competitive advantages over your competitors and increase your sales conversions, operational savings, and ultimately drive growth in your profitability.

# What is in-store behavior analytics?

In-store behavior analytics allows us to discover answers to important questions like "where do customers go as soon as they enter the store?", "how long do they stay in a certain area?", "how long does it take for them to purchase?", and "which areas show the highest levels of engagement?" through passive data collection and by looking into behavior patterns.

The primary benefit of having in-store consumer behavior analytics is being able to analyze the unobstructed behavior of people visiting the venue. By looking into these patterns, we gain a deeper understanding of what actually goes on inside a venue. This allows us to create better strategies and make decisions based on actual data.



## What kind of data is gathered?

In-store behavior analytics can be derived from something as simple as manual counting done by a junior staff, paid to stand and click each time a visitor enters or leaves a location. However, manual methods like this are prone to error and give limited insight on consumer behavior.

Fortunately, with advancements in today's technologies, there are now more sophisticated tools that take advantage of the latest developments in image processing, machine learning, and artificial intelligence. Through these, you can gather more accurate and reliable data on total volume of visits, customer traffic, and dwell time.



**Total Volume  
Of Visits**



**Customer Traffic  
Count**



**Customer Dwell  
Time**



**Conversion  
Rate**



**Occupancy  
Rate**



# How is the data collected?

In-store behavior analytics is the foundation for a range of high-tech solutions, including retail analytics, queue management, building management, and security applications. Currently, there are a range of technologies involved in people counting such as the use of infrared, thermal videos, bluetooth devices, and wifi tracking.



## Infrared Sensors

This technology uses an infrared beam to create an imperceptible tripwire across doorways. A count is registered each time a person moves through the region. Though low cost and easy to install, it only has 60-80% accuracy rate and it lacks directional measurement. It is also less accurate in outdoor environments because of the light dispersion.



## Thermal Cameras

Thermal videos are capable of detecting human body heat signatures, allowing more accurate tracking and provides high-resolution position data from people moving within its field of view. However, it involves high installation and maintenance costs. Accuracy is also highly susceptible to weather and local humidity conditions.



## iBeacon

A wireless technology that uses Bluetooth Low Energy, it provides location-based info on smartphone holders in a venue. It is useful for areas where GPS location may not be reliable such as in underground venues. Though highly accurate, application is limited to iPhone users (iOS 7 and up). Tracking also requires the Bluetooth to be turned on.



## Wifi location tracking

This method tracks WiFi-enabled devices through device detection. With the WiFi function on, the device regularly sends a probing signal that contains a unique identifier for each device. Once this signal comes within range of the installed hardware, counting and tracking can be done. Although connection to a WiFi network is not required, it still requires the WiFi function to be turned on and within range. Installation and maintenance may also be costly.

## Our Solution **EAGLEi**



We track In-store consumer behavior through the use of overhead cameras. Unlike other technologies, this involves low maintenance cost and provides accurate measurements and precise tracking without having to download an app or use the WiFi or Bluetooth functions.

Customers may still be tracked even if they don't possess a smartphone or a mobile device and it will still be accurate in indoor and outdoor environments. We also offer flexible deployment options, tailored to the need of each client.

# How can data and analytics help my business?

So, what do we do with the consumer behavior data? Is it relevant in increasing profit and speeding up your ROI?



76% of shopping decisions are made in-store\*



40% spend more when shopping experience is positive\*



43% of multi-channel shoppers are more likely to purchase in-store\*\*



10% of in-store shoppers are likely to purchase on impulse\*\*

This goes to show that while the e-commerce industry has been on the rise, in-store customer experience is still relevant to consumers.

From combined data on customer traffic, dwell, and journey, what emerges is a complete story of how visitors approach a venue, when and why they enter and exit, how long they stay, where their engagement is highest, and what they do while there.

In addition, conversion rates can be calculated for any desired time frame (hourly, daily, weekly, monthly, and so on). This information can be used to evaluate a broad range of influential factors such as staff-to-customer ratio, queue time, promotional campaigns, and much more-- all with the goal of optimizing the efficiency of a venue.

Perhaps most importantly, retailers can see exactly when and where a visitor is converted into a paying customer, and from observations, can infer which factors contributed to their purchase.

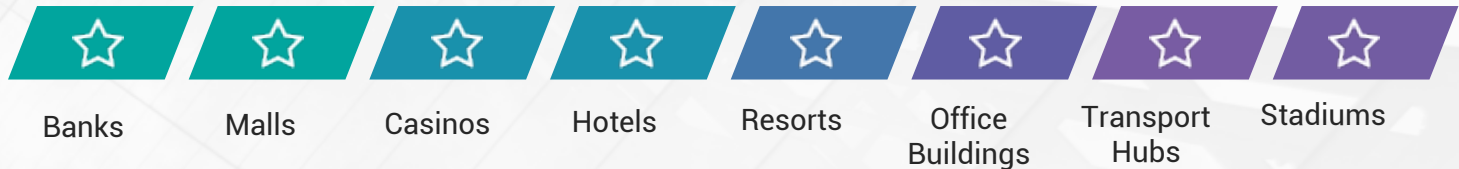
\* Nielsen Global

\*\* Pragma Consulting

# Who can use In-store Behavior Analytics?

Consumer Behavior Analytics are useful for a number of retailers and venue operators to determine not just foot traffic, but also area hotspots, marketing effectiveness, and store opportunities.

While commonly used by shopping malls and retailers, there are many other applications for using In-store Behavior Analytics. Any business or company wanting to better understand their visitor's or employee's behavior and create strategies based on actual data can benefit from using retail analytics.



## Putting the AI in Retail

In today's digital age, e-commerce has been on the rise with multiple online shopping platforms that is easily accessible to consumers. Businesses are adapting to the trend. What makes these different from brick-and-mortar stores is that, through websites and social media, consumer behavior can easily be tracked through website clicks, linger time, page views and interactions.

In the past, data collection methods for physical stores have been limited to customer count. Retailgate aims to empower the brick-and-mortar stores by providing retailers access to more information about customer traffic and dwell time. Studying these trends and patterns over time allows us to forecast demand, assess effectivity of marketing campaigns and in-store promotions, determine conversion ratios, optimize staffing, and so much more.

Our goal is to help brick & mortar stores flourish and be competitive with the rapidly evolving e-commerce industry.

Our mission is to bring the magic of e-commerce to the brick-and-mortar stores by empowering retailers with technology and data-driven insights.

## CONTACT US

Retailgate offers flexible packages, tailored to the needs of each client.

Contact us for a demo!

Email: [rtlayosa@retailgate.co](mailto:rtlayosa@retailgate.co)

Tel No. (02) 577 7815

Mobile No. +63 917 634 7149