



Convert Footfall **into operation insight**

Vindacon
by WINNER TECHNOLOGY

Physical Stores, Improving Accurate Traffic Conversion

Store management requires comparable customer flow data

Physical stores, including those in shopping centers and along the street, serve consumers directly by providing goods and services, and convert customer flow into actual revenue.

The value conversion of customer flow is completed in the store. In order to capture traffic and realize its value, store managers need to have insight into traffic patterns, understand traffic composition, and carry out in-depth analysis of the hidden user demands behind the traffic data.

When managing multiple stores at the same time, business operators need to build a comparable data indicator system to accurately measure the operational performance of different stores. Due to differences in the specific environments faced by offline stores, simple traffic scale data may not reflect the overall business situation. For example:

- **Influence of environmental differences.** Multiple stores under the same brand may differ significantly in terms of store structure and external environment. For example, street-facing stores attract a precise customer base, while pass-through stores connecting the inside and outside of the shopping center have a large number of passing customers. In this case, it would be unfair to simply compare the scale of the customer flow between the two stores and calculate the conversion rate based on it. Operators need to purify the customer flow data to obtain the valid customer flow.
- **Consideration of business characteristics.** For example, some businesses need to identify the real demand of families, couples, and other groups of customers. For instance, the customer flow of toy stores and car sales stores can be counted by families, and that of wedding and jewelry stores can be counted by couples, avoiding simply assessing the conversion rate by the scale of the customer flow.
- **Insights into customer behaviors.** Stores with larger areas and a wide range of products also need to distribute traffic between different areas or shelves like shopping centers. Such stores can optimize their product display, service configuration and other operational details by analyzing customer movement paths, long-term stay areas, and interactive behavior data in the store, in order to improve conversion efficiency.

Offline Business, Ushering in the Era of Refined Operation

Why is it necessary to carry out refined operation of offline traffic?

The core of offline business operation lies in attracting surrounding customers to enter physical premises for consumption. Restricted by physical space, the business premises can only accommodate a limited amount of customer flow at the same time, and cannot bear explosive traffic growth like online business. Moreover, the commercial market in many regions has entered the era of stock competition (rapid change of consumers' shopping habits, and increasingly fierce competition among brands), leading to a significant slowdown in overall customer volume growth. Against this backdrop, offline business must cherish every customer like a treasure, and take necessary actions, such as precisely reaching the target customer groups, optimizing the conversion of the store, enhancing the consumer experience, etc., in order to create greater commercial value with limited customer flow. The only way to continuously improve business performance is to serve each group of visiting customers well.

How can we truly tap into the deep value of traffic? The key lies in building a complete closed loop of traffic operation:

- Accurately grasp the pattern of customer flow, and establish a data-driven traffic observation system;
- Deeply analyze the driving factors of traffic fluctuations in conjunction with environmental variables and operational behaviors such as promotional activities, etc.;
- Dynamically optimize the operational strategies based on data insights, and improve the efficiency layer by layer from attraction to conversion.

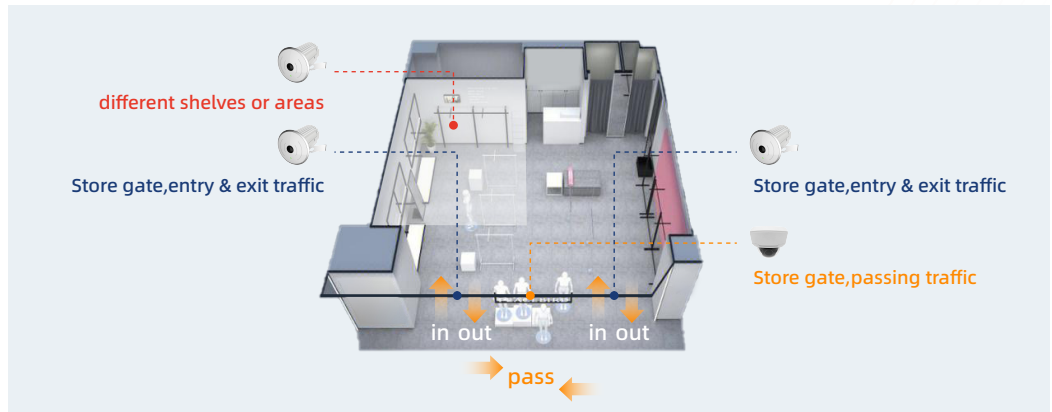
In this complete chain from monitoring to analysis and then to optimization, data are always the basis for decision-making. Only by establishing an accurate data collection and analysis system can every business action be targeted and ultimately maximize the value of traffic.

Vindacon's Products and Solutions

Vindacon's customer flow data collection solutions for shopping centers and stores are specifically designed for offline physical premises, which can accurately capture multi-dimensional consumer behavior data including changes in customer flow, dwell time, and movement trajectory through sensors. Vindacon not only provides basic customer flow statistics, but also customizes and derives more commercially valuable business indicators based on the characteristics of different businesses. In addition, it also builds the health indicator system exclusive to the operators themselves through cross-analysis of multi-dimensional data. Based on these data insights, stores can scientifically optimize space planning, adjust business strategies, and match the optimal resources, realizing the transformation and upgrading from "traffic operation" to "retention operation", and creating maximum value with every bit of offline traffic.

The hidden needs of customer behaviors can be captured based on the collection of accurate customer flow data

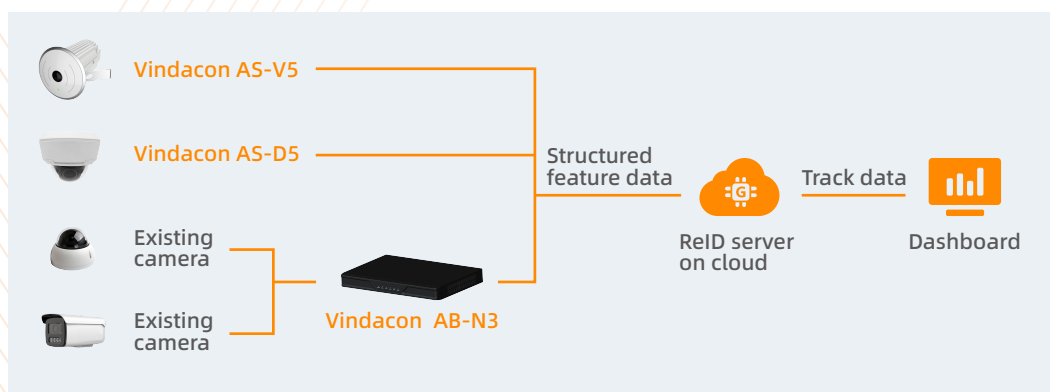
Vindacon installs sensors at store entrances and exits, as well as inside the store to achieve "physical tracking" for customer behavior data collection, supporting store management teams to obtain accurate customer behavior data, as well as decision optimization.



Store operators can choose to collect data on customer flow passing through the store, customer flow entering the store, and customer flow in the store as needed.

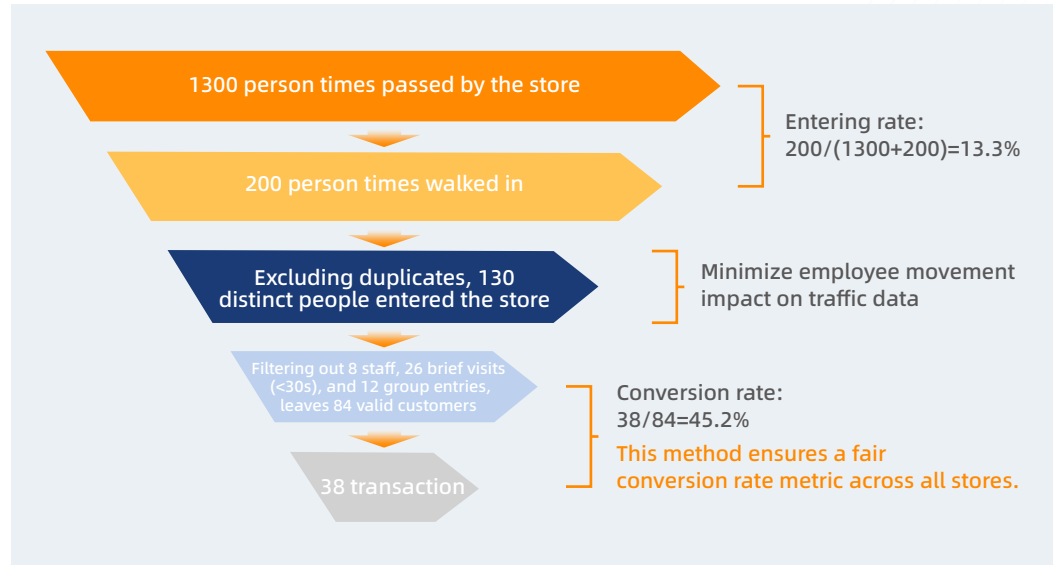
Granularity	Key indicators
Passing through the store	Scale of customer flow passing through the store
Entering the store	<ul style="list-style-type: none"> Scale of customer flow entering the store and attributes of the customer group; the rate of in-store visits can be calculated combined with the data of customer flow passing through the store. Dwell time of the customer in the store. Based on this, valid customers can be screened.
In the store	Scale of customer flow in different areas/shelves, trajectory of customers in different areas/shelves, and distribution of customer flow in different areas/shelves.

In addition to using Vindacon's sensors, users can also connect their existing video cameras to Vindacon's AI Edge Box to unify multiple sources of data into the management platform, which effectively reduces the overall implementation and deployment costs of the store.



Store customer flow data assists in refined operation

The store customer flow system provides multi-level store performance data for store management, conducts step-by-step analysis, and identifies business problems, providing guidance for operational optimization.



Traffic Funnel Diagram

Compared to some customer flow systems that can only obtain basic data on the scale of customer flow passing through and entering the store, Vindacon's solution supports the acquisition of multi-dimensional data and the derivation of a variety of business indicators based on it. For example:

- **Purification of valid customer flow.** Through employee identification and short-term stay customer filtering, Vindacon provides valid customer flow data based on scale of customer flow, which can be used as a unified evaluation standard across stores.
- **Insights into group behaviors.** In terms of certain business needs, Vindacon can also intelligently recognize peer customers, such as families, couples, etc., and aggregate individual data into potential consumption units to more accurately reflect demand.
- **Dwell time application.** It is necessary to continuously monitor fluctuations in dwell time of customers in the store. Extended dwell time = Good store service and product mix = More sales opportunities.

Shopping Center, Tapping into the Value of Traffic

Shopping centers focus on the overall operational effect

As managers of large commercial spaces, shopping centers provide "platform-based" business premises where merchants provide goods and services to satisfy consumers' shopping and experiential needs.

In this scenario, shopping centers directly serve merchants, and in addition to providing business premises, earn rental income through core services such as traffic distribution and marketing support, etc. Meanwhile, shopping centers also indirectly serve consumers by enhancing the consumption experience through spatial planning, environmental creation, and other services. Ultimately, shopping centers will benefit from the overall improvement in business performance.

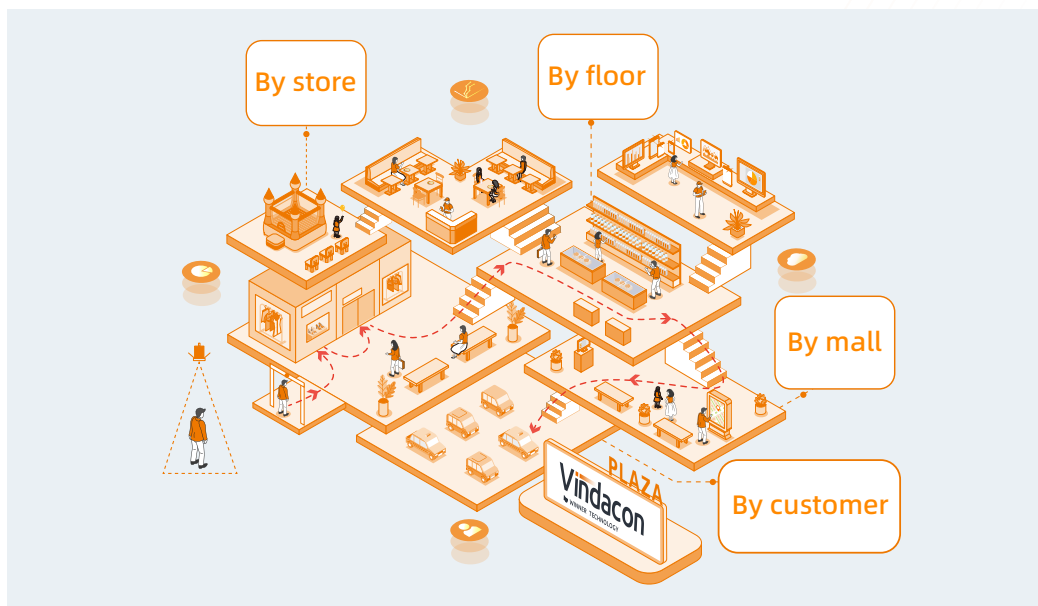


To achieve efficient operation of this business logic, shopping centers must establish a scientific traffic operation system.

- Optimize the merchant and business mix and make marketing innovations to increase the traffic base;
- Improve traffic distribution through merchant location adjustments, advertising information guidance, and other means;
- Monitor associated consumption rate, store conversion efficiency and other indicators to continuously improve overall traffic conversion capability.

Build a full-chain customer flow data collection system for shopping centers

Just as internet products track user behavior paths through page tagging, Vindacon has also built a complete "physical tagging" system for shopping centers. Sensors are installed at different nodes such as entrances and exits, passages, floors, zones and stores, etc., forming a multi-level data collection matrix, which makes the traffic operation of shopping centers accurate and operable at the Internet level.

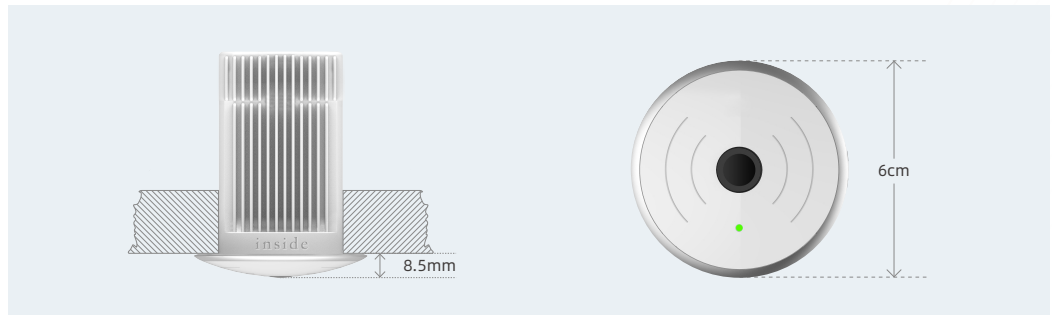


Taking a typical shopping center as an example, the operator can choose data at different granularities such as the entire shopping center, floors, stores, etc. as needed.

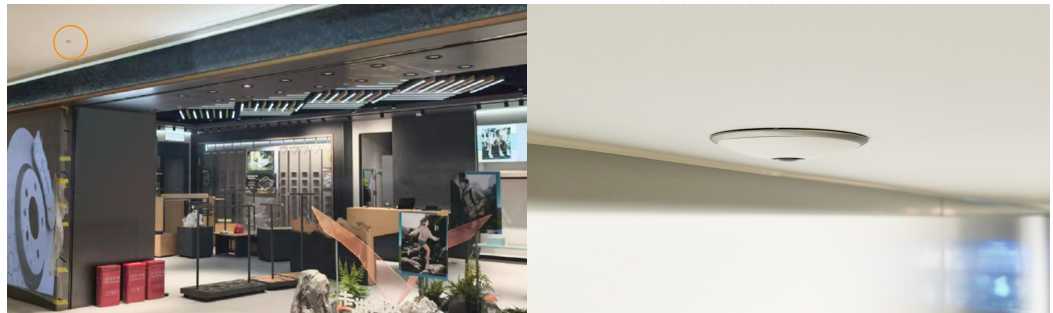
Granularity	Key indicators
Entire shopping center	Overall scale of customer flow, and overall dwell time of customers
Floor	Scale of customer flow on floors, dwell time of customers on each floor, movement paths of customers across different floors, rate of stair climbing,
Store	Scale of customer flow passing through the store, scale of customer flow entering the store, dwell time of customers in the store, number of stores visited and trajectory of customers visiting the store, as well as correlation of customer flow between different stores.

Depending on the structure of the shopping center, data can also be collected from the locations such as atrium and multi-business event areas, storefront windows, and external commercial streets, etc.

Vindacon's sensors are compact and aesthetically designed, and can be embedded in the ceiling, so that customers will not have a strong sense of being monitored when shopping.

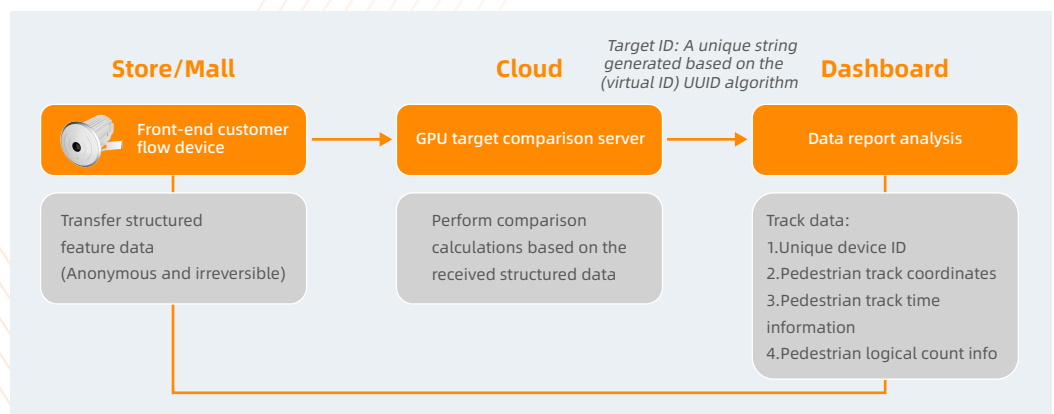


Vindacon AS-V5



Installation site

- Vertical mounting and high degree of standardization ensure the stability of data collection.
- The sensor comes with powerful AI computing power, and the raw image data will be deleted after offline processing on the end side, without storage.
- AI algorithms recognize human beings based on their non-sensitive apparent features (clothing, hairstyle, height, posture, etc.) and without involving biometric features such as faces, etc.



Mine the value of customer flow data of shopping centers

Through the above means, shopping center operators can track traffic changes in real time, and conduct an analysis in combination with specific business. For example:

Tracking of overall business performance

The focus is on fluctuations in the scale of customer flow, dwell time of customers in the shopping center, and the number of stores visited in the shopping center. If there is a decline in the scale of customer flow, a decrease in the dwell time of customers in the shopping center, and a reduction in the number of stores visited by customers over a period without obvious external factors, it often indicates a deep-seated operational problem: decline in the attractiveness of the main store, scattered customer flow due to the irrational traffic planning, or experience gap due to lack of new business formats. Vindacon help users locate these data anomalies and correlate them with external variables such as weather and promotions, etc., so that operations teams can quickly identify problems.

Effectiveness evaluation of marketing event

- Evaluation of the entire event (such as holidays, store celebrations, etc.). It is necessary to pay attention to the overall indicators of the event, such as the overall customer flow scale, the dwell time of customers in the event, and the number of stores visited, etc. In addition, it also needs to pay attention to the growth rate of customer flow, and whether the growth of customer flow dilutes the visit rate of the store.
- Evaluation of targeted business activities (e.g., women's themed promotions). It needs to see whether there is a significant increase in customer flow in the stores related to the business and whether these customers attracted by promotions have other cross-business consumption behaviors.
- Evaluation of single-location activity (such as store promotions, pop-up events of atrium or multi-business areas). It needs to pay attention to the consumption radiation range of the customer flow attracted by a single location, and evaluate the synergistic effect of customer flow growth on the consumption of surrounding stores.

Optimize and evaluate investment promotion and adjustment strategies

The following investment strategies for enhancing the overall value of the mall can be developed based on the understanding of the scale of customer flow passing through the store, scale of customer flow entering the store, and conversion, etc.:

- Adjustment of the store location. For example, identifying stores with highly overlapping customer groups. Operators can choose to arrange these stores in one area for convenience of consumers, or deliberately spread these stores out to lengthen the shopping path of consumers, creating more opportunities for impulsive consumption. How to implement this specifically is a matter of corporate strategy, but it requires data as the basis for decision-making.
- Evaluation of investment promotion effect. For example, monitoring the customer path of a store, calculating the proportion of customers who use the store as their first destination, and evaluating the store's ability to gather customers based on its location. Based on the tracking of the shopping path of customers after leaving the store and the conversion of consumption, the value of the traffic brought by the store can be evaluated, providing data for investment negotiation and rent pricing.

The Future of Business, Data Empowerment under the Support of AI

In addition to customer flow analysis services, Vindacon has built an AI application ecosystem centered on physical business needs by using machine vision and big data technology.

- Remote store inspection system. AI cameras are installed to achieve real-time monitoring of store operations, display compliance, service standards, security risks, cashier loss prevention, etc. The system can automatically capture exceptions and generates reports, reducing human supervision costs and improving work efficiency.
- Mall wayfinding service. Various display terminals in shopping malls can be integrated for advertising information distribution and customer service, guiding traffic distribution.

Vindacon is exploring more application scenarios, such as service standard detection and bag-carrying rate identification, etc. (To be supplemented by the technical team)

Vindacon has always focuses on physical business, and aims to facilitate the digital transformation of physical business through continuous technology iteration and scenario application.

About Vindacon

Vindacon is a solution aimed at customer flow data analysis under Winner Technology Co., Inc. (Stock Code: 300609.SZ), designed for shopping mall operators and retailers worldwide. Founded in 2004, Winner Technology is a leading China A-share listed company specializing in AI + big data application solutions.

Winner Technology is highly competitive in Computer Vision algorithms, big data modeling and analysis, AI product development, project delivery, as well as data security and compliance. It has provided high-quality digital solutions for over 2,700 shopping malls and more than 170,000 retail stores across over 1,000 brands.

Based on Computer Vision technology and advanced AI sensors, Vindacon enables shopping malls and brick-and-mortar stores to precisely collect multi-dimensional customer behavior data. Its data collection solution, which uses edge computing + cloud recognition mode and offers flexible collection methods with different data granularities, not only ensures data collection accuracy, but also protects customer privacy and data security to the greatest extent. Combined with Vindacon's data analysis system, it empowers users to collect and leverage data in a precise, comprehensive, secure, and compliant manner.

Vindacon is a reliable partner for your digital operations.

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