

Introduction

SandStar has empowered Lotus's Zone Mall, one of Thailand's most well-known retail complexes, to transform its operations from experience-driven to data-driven through the deployment of an advanced Al Customer Flow Analysis System.

This upgrade has enabled precise insights into customer behavior, significantly improving marketing accuracy and shopper experience — with average sales across the mall's stores increasing by 7%.



Customer

Lotus's Zone Mall is a flagship retail complex under Lotus's, a leading Thai retail brand, hosting over 400 stores located in prime areas across Thailand's key cities and communities. As a regional shopping hub, it integrates diverse formats — supermarkets, dining, fashion, home & living, and entertainment — aiming to provide a one-stop shopping and leisure destination for local residents and customers.

Challenge

In Thailand's highly competitive retail market, Lotus's Zone Mall wanted deeper insight into its customers in order to optimize operations and maintain its leadership position. However, traditional methods — manual observation and basic POS data — fell short in answering critical questions:

- Large foot traffic but what is its composition? Are visitors mostly young professionals or families? What's the gender ratio?
- Where do customers go after entering? Which zones are hot spots, and which are cold spots?
- How can we deliver personalized experiences to different customer segments?

Without effective tools for consumer insight, operational decisions relied mostly on historical sales data and rough footfall counts, lacking fine-grained understanding of customer profiles and behavior. Marketing was broad-based "casting a wide net," while store layout adjustments depended on subjective judgment, making results hard to measure.

SandStar Al Store — Customer Flow Analysis System



The Shida Al Store uses in-store cameras to automatically analyze foot traffic and customer profiles



In July 2025, SandStar partnered with Lotus's Zone Mall to deploy the SandStar Al Store Customer Flow Analysis Solution.

Powered by Dynamic Computer Vision and Agentic AI, the system leverages existing in-store cameras without additional installation. More importantly, thanks to its strong AI generalization ability, it requires no precise adjustments for camera angles or distances, achieving an average accuracy rate of 99.2%. The solution delivers four core capabilities:



Accurate Footfall Tracking: Real-time counting of store entries and precise analysis of traffic peaks and troughs.

- Customer Path Mapping: Clear visualization of in-store movement trajectories, revealing popular routes and neglected areas.
- Group Identification: Al recognizes whether visitors are singles, couples, or families, providing insight into social shopping patterns.
- Customer Attribute Analysis: Contactless recognition of age and gender for detailed customer profiling.

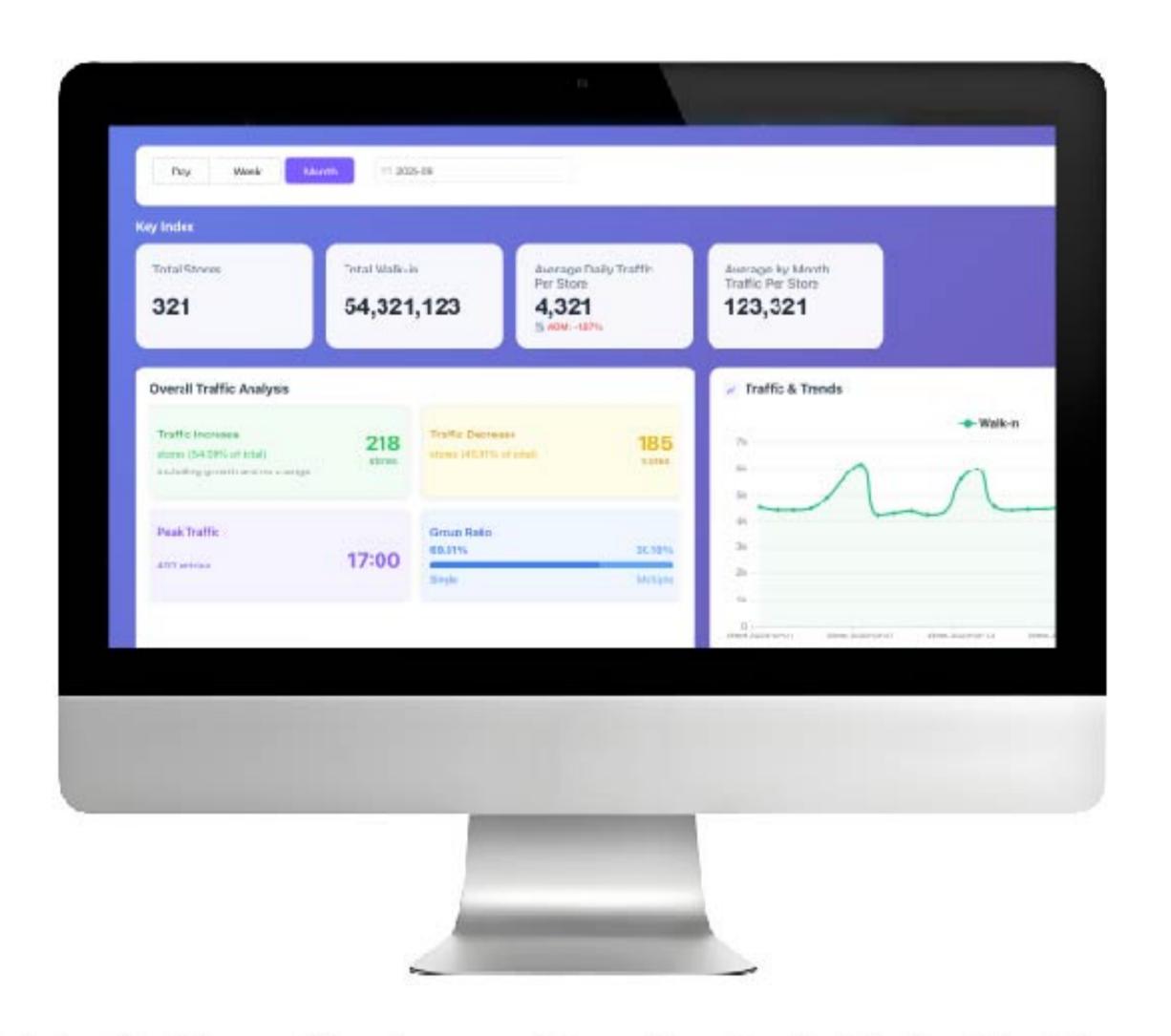


The Shida Al Store uses in-store cameras to automatically analyze customer flow and label customer attributes

Data is captured from cameras at entrances and key zones and displayed in a centralized dashboard. Management can view traffic patterns via geographic distribution maps and clear charts, monitoring each store's activity at a glance.



A list of the location and equipment status of the Shida Al Store



Visida Al Store Customer Flow Analysis Data Dashboard

Core Insights & Achievements

With SandStar Al Store's intelligence, Lotus's Zone Mall gained unprecedented insights along with actionable recommendations:

Precise Age-Gender Based Operations

- Insight: Weekday evenings saw a significant rise in young professional female visitors;
 weekends were dominated by middle-aged family groups.
- Action: ailored strategies evening beauty & fashion discounts for young women, weekend kids' play zones and family meal packages. Marketing shifted from "broadcast to everyone" to "speak to specific groups," boosting participation and conversion.
- Result: Conversion rate from entry to purchase increased by 8%.

Group-Type Driven Promotions

- Insight: Some stores had family groups making up over 60% of visitors.
- Action: These stores launched "second item half-price" family packs and parent-child DIY
 activities. Stores with a higher proportion of single customers introduced express checkout
 lanes and special single-meal deals. Promotional resources were allocated far more
 efficiently.
- Result: Average transaction value at these stores increased by 12%.

Layout & Path Optimization

- Insight: Movement analysis revealed clear hot and cold zones with limited flow between them.
- Action: Linked product displays ("cross-merchandising") encouraged customers to discover more items, while layout adjustments ensured smoother navigation through all zones.
- Result: Average in-store dwell time rose by 28%.

Customer Value Summary

Through partnership with SandStar, Lotus's Zone Mall achieved:

From vague guesswork to precise insight:

Using detailed data to truly understand customers.

From one-size-fits-all to personalized service:

Delivering differentiated marketing and experiences based on segment characteristics.

From static operation to dynamic optimization:

Continuously adjusting layouts and strategies in real time to maximize every square meter's commercial value.

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With ongoing data monitoring and agile optimization, Lotus's Zone Mall is poised to further enhance customer experience and store performance, securing its place as a retail leader in Thailand. We look forward to collaborating with more partners to unlock the future of data-driven retail.