

Case Study: Store Design and Aisle Flow

How a convenience retailer leveraged Behavior Explorations™ to optimize key destination zones in their stores to increase shopper exposure and drive impulse purchases

At a Glance

Prior to rolling out a national new store design model, a convenience store chain sought to evaluate the performance of existing store layouts. The Client sought to identify winning design elements to bring forward in a new store layout that would effectively stop destination shoppers in their tracks and inspire incremental impulse snack purchases.

Key Facts

VideoMining is a market research company that specializes in shopper behavior insights. We fuse proprietary AI technology and behavioral science expertise to give you access to the big picture and deep shopper insights traditionally hidden within the four walls of brick-and-mortar retail.

20,000

Micro-moments tracked and decoded per trip

1.6 Billion

Store trips captured annually

Background

The average convenience store has only 2,500 square feet sales area to work with, and operators are constantly searching for ways to increase productivity and profitability of available space. A Client sought to understand how specific destination shoppers, such as fountain beverage and foodservice, engaged with total store format, and how store design could be tweaked to increase exposure to secondary impulse categories, such as salty snacks, and effectively build destination shopper baskets.

Solutions

VideoMining installed its proprietary AI sensors into the ceiling tracks of select stores to discreetly observe shopper behavior and store conditions every 1/10 of a second. Our patented data decoding system utilized advanced computer vision and AI technology to create a data-fied blueprint of the store environment and real in-store conditions. We analyzed shopper behavior data alongside store environment and POS data, effectively linking the in-store experience, shopper actions, and their collective impact on overall store performance.

VideoMining's behavioral science experts connected the dots between store design elements and shopper behavior to identify must-haves of the new store flow that were proven to increase exposure and conversion rates of secondary impulse categories.

Benefits of VideoMining's Approach

See the Big Picture

- 1 Every piece of stimuli has an impact on behavior, and with VideoMining's technology, you get visibility to every minute micro-moment that matters.

Shopper Segmentation and Trip Mission Analytics

- 2 VideoMining's robust machine learning tools tracked destination shoppers from the moment they entered the forecourt to the moment they exited the store - analyzing detailed basket, demographic, and behavioral trends.

Traffic Flow and Path to Purchase Insights

- 3 By examining every step of the shopper journey at scale across tens of thousands of trips, VideoMining provided detailed path to purchase insights indicating the most common route(s) taken by destination shoppers, and the secondary exposure/engagement rates to impulse-led categories along the way.

C-Store Design and Aisle Flow: a Behavior Exploration by VideoMining

A leading national convenience store chain, looking to fuel its competitive advantage and implement a data-driven approach to future store designs, partnered with VideoMining to build a deeper understanding of how their store design and aisle layouts directly impact shopper behavior.

With a national average cost of \$652,955 per store redesign, the Client knew they needed to adopt an evidence-based approach to future design decisions. The Client sought to increase sales per sq. foot and, among other things, drive incremental impulse snack purchases off of refreshment trips.

The Client collaborated with VideoMining to establish a guiding list of questions that would shape the study, including:

- How does every element of the store design impact behavior?
- How does signage - copy, placement, and offer - impact shopper engagement and impulse purchases?
- How does layout of our aisles impact shopper impulsivity and incremental add-on units sold?
- How do destination shoppers generally get to/from the zone? What do they pass on the way, and what do they engage with?
- What is the benchmark for exposure, engagement, and conversion rates of secondary categories along the shopper path?
- What trip flow and sequences lead to basket growth? Which category partners stand out?
- What is standing in the way of shoppers making incremental impulse purchases?



The VideoMining Approach

VideoMining's proprietary AI sensors were discreetly installed in select store locations. The sensors captured every piece of the store environment - from aisle placement, to shelf flow, to OOS and merchandising. The sensors also tracked each individual shopper from the moment they entered the forecourt to the moment they exited the store, creating an end-to-end narrative for each shopper journey. This narrative covered the totality of the shopper experience, including where they walked, what they encountered, what they looked at, what they picked up/read the label of, what they purchased, and so on.

VideoMining's AI data decoding platform connected the dots across tens of thousands of trips, overlaying demographic and POS data to build a comprehensive understanding of the destination zone shopper, and how they interact with key elements of store design

The Discovery:

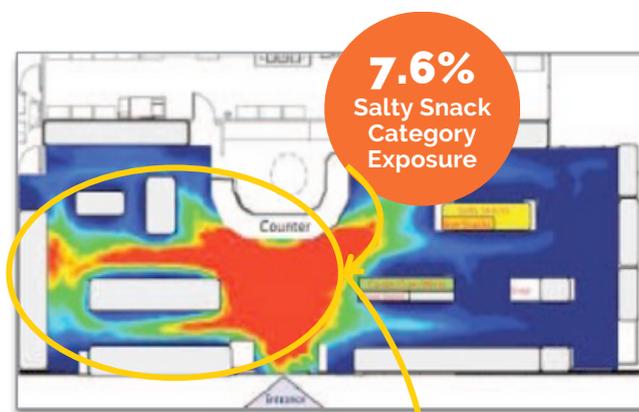
Store Layout Prevented Destination Shoppers from Having Exposure to Impulse Categories

For each destination zone, the Client received a detailed **Trip Sequence Analysis**. This helped contextualize basket data, and identify the distinction between planned/mission-driven basket units and **impulse-driven basket additions**.

The store layout for Store A held all primary destination categories in a single store quadrant, effectively **driving destination shoppers away** from categories with high cross-purchase/impulse purchase affinities.

With the destination categories all situated on one side of the store, the routes taken by most shoppers did not even provide them with the opportunity to be exposed to, or influenced by, additional impulse-heavy categories, such as salty snacks.

With behavioral evidence in hand, the Client worked with VideoMining to design a more balanced store layout that would ensure traffic flowed relatively evenly across the center aisles through a series of low-risk testing and learning. The store layout that was hypothesized to be best-in-class from initial learnings was tested in select Behavior Lab Stores™, with rapid insight delivery to ensure tweaks could be implemented to further optimize the design in record time.



Concentrated traffic flow from the front end to the zone oversaturated with destination zones, like foodservice, coffee, and fountain soda.



More balanced traffic flow throughout the store as destination zones are appropriately spaced out. Resulting total store traffic shows more aisle engagement and exposure, especially with strategically placed impulse aisles.

Key Questions, Answered.

Store Layout and Journey Mapping

- ✓ All layouts are not created equal. By segmenting shoppers by Trip Mission, the Client was able to distinctly identify and quantify every step of the in-store journey for each destination group (foodservice, fountain beverage, etc.) shoppers.
- ✓ Testing store layouts based on must-win shopper journeys, the Client identified best practices that improved **productivity per sq. ft by +300%**.

Initial Exposure is Required to Boost Incremental Impulse Sales

- ✓ When it comes to building store formats that reduce friction and seamlessly deliver your core shoppers from point A to point B, there is a fine line between boosting customer experience and loyalty, and diminishing the opportunity for **incremental basket building and impulse category health**.
- ✓ The new store design **increased category exposure by 4x** for impulse snack categories, with basket and unit growth following accordingly.
- ✓ The best practices derived from this research project influenced future store designs, building curated and intentional experiences that had carefully planned out shopper journeys. By testing and learning prior to a new nation-wide design rollout, meaningful tweaks were made that boosted store productivity and **prevented costly future redesigns**.
- ✓ Cross-purchase affinities and shopper behavioral data helped identify the optimal **placement of secondary displays, cross-merchandising, and aisle flows** to boost impulse purchases from top destination shoppers.



VideoMining pioneers behavioral insights for winning in-store through proprietary Behavior Sensing Technology™ and AI-Powered Data Decoding Systems. We own and operate a nationwide Behavior Panel™ in partnership with leading chain retailers to provide ongoing fact-based industry and shopper trends, along with a network of Behavior Labs™ for accelerating innovation through "testing and learning" in real stores with real shopper input.

Contact Us :



Phone Number
814-867-8977



Email Address
solutions@videomining.com



Office Address
2120 Old Gatesburg Road, Suite D
State College, PA 16803



[VideoMining.com](https://www.VideoMining.com)