

LVM Optimization Guide

Effective Methods & Analytic Tools
to Drive Lottery Growth at Retail



Overview

Lottery Vending Machines (LVMs) are a proven sales channel for lotteries. Data analysis by Brightstar Lottery on the top 20 U.S. retailers selling lottery consistently shows that retail locations with lottery vending have net sales 30-40% greater than retail locations without. There is a substantial opportunity in many jurisdictions to expand the LVM network.

LVM optimization helps retailers sell lottery, helps players access the games they enjoy, and helps lotteries make more of the investments they've made in equipment. The following pages offer a guide to the methods and analytics tools available for use by lotteries and retailers to optimize lottery self-service networks.

How Optimizing LVMs Makes It Easier for People to Play

- Improve player convenience.
- Connect with new players.
- Ensure that the products players find most interesting are available.
- All of which help to sustainably drive sales.

Self-service is important to lottery retailers, relevant to players, and holds significant untapped opportunity for lotteries.

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Game Portfolio Optimization

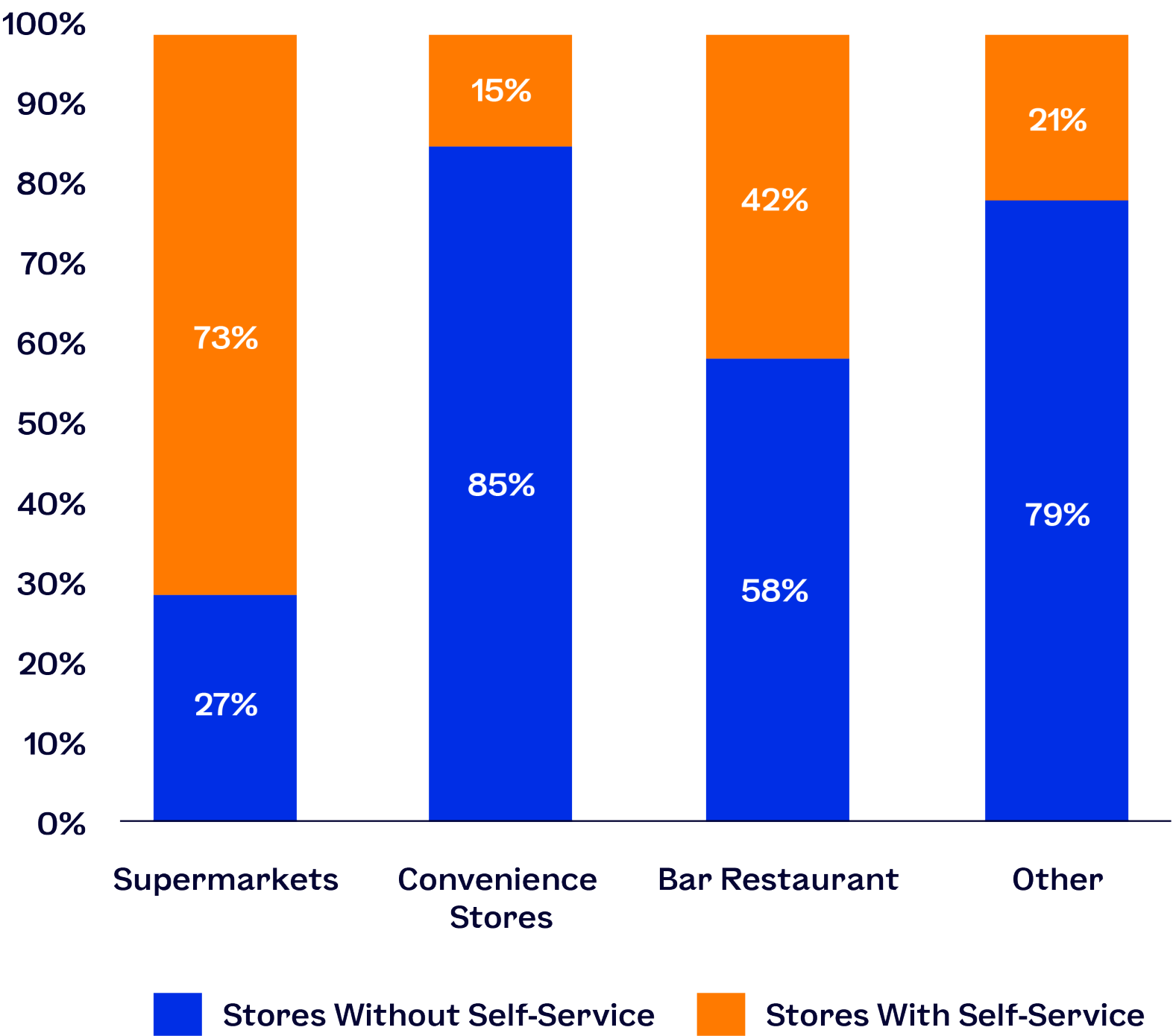
Jurisdictions with fully optimized LVM networks provide roughly one vending machine per 1,000 inhabitants, with a ratio of vending to retail points of sale of about 70%.

While the optimal target will vary by state — based, in part, on the trade-style mix — a view across the U.S. lottery market by retailer type reveals the extent of the untapped opportunity to add vending (see blue on the graph).

Importantly, the mix of instant games stocked is critical to making the most of self-service equipment. Additional points of sale can only perform best when they offer the games players want to buy.

Brightstar teams support lottery customers by first working to help lotteries **optimize the portfolio and product mix** before a lottery adds or moves self-service machines.

US Self-Service Penetration by Channel



Based on RMI data for connected machines, through June 15, 2024

Space-to-Sales Analysis

Space-to-sales analysis of instant games by price point helps lotteries maintain a balanced offering and make available more of the products players find appealing.

This analysis compares the percentage of sales that come from each price point to the percentage of bins allocated to that price point. The goal is to ensure that valuable bin space is being allocated to the price points that will drive the best returns to the Lottery, while also addressing consumer demand.

Beyond missed opportunities, being out of alignment creates extra work and potential problems at retail. For example, if multiple bins full of \$X games are selling very slowly, it means players have lost excitement for them. And if very few bins are dedicated to a price point that's selling rapidly, retailers repeatedly need to go in and refill them, which creates many more opportunities for out of stocks to occur.

When bins are more correctly allocated to each price point, it also makes things easier on a lottery's inside sales team, on their sales force, and on their retailers. And all of this makes the experience better for players.

Brightstar's Sales Development team reviews space-to-sales analysis with lottery customers to confirm what product mix will help players find games they want and produce returns to a state's beneficiaries. And while some lotteries do this strategic analysis on their own, many like to review it with Brightstar analysts, who can help identify relevant leading practices or pinpoint what has worked well in other jurisdictions and bring those successes forward.



Minimizing Out of Stocks

In addition to determining the right game mix for LVMs, another important piece of the puzzle is ensuring that LVM bins remain properly stocked to avoid player disappointment and, over time, potential disengagement. Keeping all LVM bins full directly correlates with optimal sales by providing game choices to players.

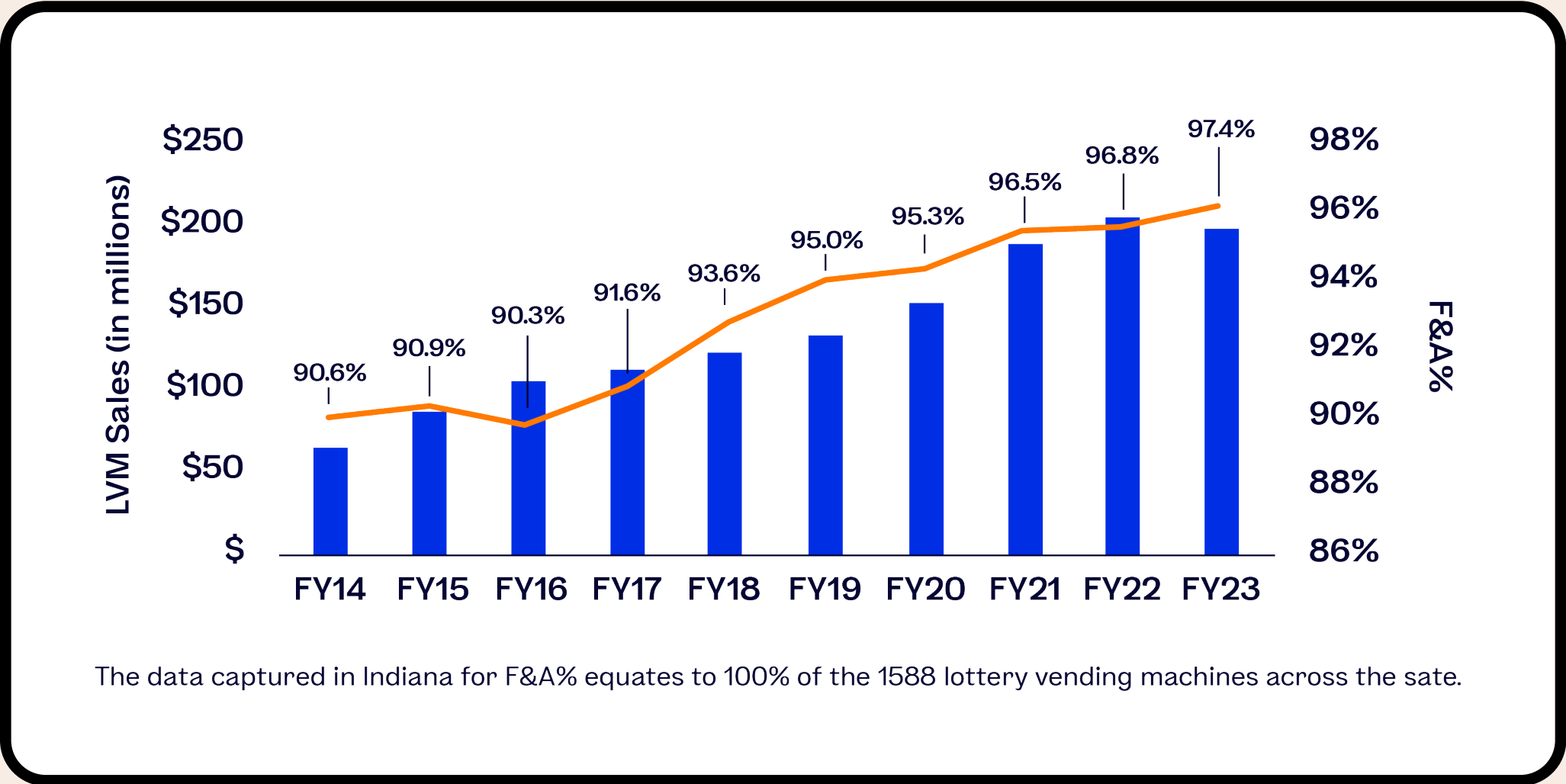
- Out-of-Stock percentage (OOS%) is a metric calculated based on the percentage of bins in LVMs that have run out of tickets.
- By tracking OOS%, lotteries can create plans for specific LVMs and limit lost sales due to empty bins.
- Although some of the metrics utilized by different jurisdictions vary, the results are clear: Keeping the OOS% low has a direct, positive impact on sales.

A successful method for boosting self-service sales by addressing empty LVM bins was implemented in recent years by Brightstar Indiana, responsible for Hoosier Lottery marketing and sales support. The approach measures success through the Full and Available percentage (F&A%) metric. Whereas 0% is ideal for OOS, 100% is the target for F&A. To achieve this in Indiana, Brightstar implemented a series of strategic initiatives:

- Integrating self-service revenue as a fundamental pillar across the organization, while also incentivizing the sales team and retailers based on F&A% performance.
- Leveraging a Brightstar terminal tool that alerted retailers when LVMs had OOS bins.
- Prioritizing field-service support for LVM repairs and developing, on their clerk-operated lottery terminals, advanced reporting tools for better insights. Leveraging network connectivity, it obtained near-real-time data on machine performance and enhanced LVM features to provide retailers with actionable inventory information.

- Targeting high-volume retail locations for support.
- Collaborating closely with sales reps and analytics teams to optimize LVM placement and maximize capital investment.

The efforts collectively resulted in significant improvements in self-service sales and operational efficiency for the Hoosier Lottery and Brightstar Indiana.



Results

Since the Brightstar Indiana team began tracking self-service data in FY14, total self-service scratch-offs sales have tripled, jumping from \$74m to \$222m in FY23, with self-service growing on a consistent basis every year. In FY16, self-service machines had an F&A% of 90.6%, which equated to more than \$10m in potential sales lost to empty bins. From FY16 to FY23, the average yearly Full and Available percentage has risen to a record 97.4%.

Offering Cashless Payment Options

Cashless payment options, where permitted, provide consumers with the convenience they expect, making them another important aspect of optimization.

A cash usage survey in September 2024 conducted by Brightstar with more than 2,000 adults residing in the U.S. found that 45% of consumers in the study carry less than \$20 cash when shopping and 28% of the total sample carry no cash at all — a lost opportunity for any sale where cashless is not an option.

But the benefits of cashless go beyond consumer payment choice. LVM cashless functionality also allows a lottery salesforce to obtain more data that they can use to make better business decisions related to product offerings, promotional opportunities, and more.

Brightstar’s Connected Play solution, which allows a player to pay for their lottery purchases with their lottery eWallet, supports cashless payment with the additional benefit of also associating a player’s unique identity with LVM transactions.

For national chain accounts, cashless functionality is important from a relationship standpoint, because it shows a retailer that the Lottery is committed to making lottery purchases easier for their customers. Beyond optimizing convenience for players who shop with the retailer, it helps to bridge the gap in some jurisdictions that don’t offer a vending-only model as another way to sell lottery.

Lotteries that offer a cashless option on their LVMs are likely to capture more impromptu sales, as new or occasional players who want to try a game could be limited by not having cash on hand and pass by the opportunity.

After analyzing hundreds of millions of LVM purchases across numerous jurisdictions that offer cashless payment, Brightstar has seen that cashless transactions average as much as 70% higher than cash-only transactions. With cashless transactions now accounting for approximately 10% of the total transactions for LVMs, cashless adoption drives roughly 7% overall sales growth from LVMs. As more consumers become aware of the ability to make cashless purchases, we expect LVM sales growth to meet or exceed 10%.



● Implementation of cashless LVMs will look different in each jurisdiction.

Full Deployment of LVM Inventory

A lottery vending machine only adds value when it’s out in the field and effectively placed. The key to unlocking this potential lies in leveraging data-driven insights to optimize placement. Brightstar supports jurisdictions with advanced data analysis to identify high-performing locations for LVMs and implement strategies that amplify their impact.

By participating in Retail Market Insights™ (see following page), lotteries can gain actionable ideas and options for LVM placement, including exploring the advantages of deploying dual vending machines. These machines can double exposure and cater to diverse player preferences within a single location, offering strategic benefits for increased engagement and sales.

Insights from Our Data-Driven Approach

Incremental Gains in the Right Locations: Our analysis has shown measurable increases in performance when LVMs are strategically placed based on local data.

Dynamic Placement Optimization: Using performance metrics, we’ve successfully identified opportunities where sales are stronger at the counter, allowing underperforming LVMs to be redeployed to more impactful locations.

By aligning LVM deployment with precise analytics and continuous monitoring, jurisdictions can maximize impact while creating a seamless player experience.

For additional insights or to explore pilot programs demonstrating these strategies in action, reach out to our team. Together, we’ll bring forward innovative ideas for measurable results.



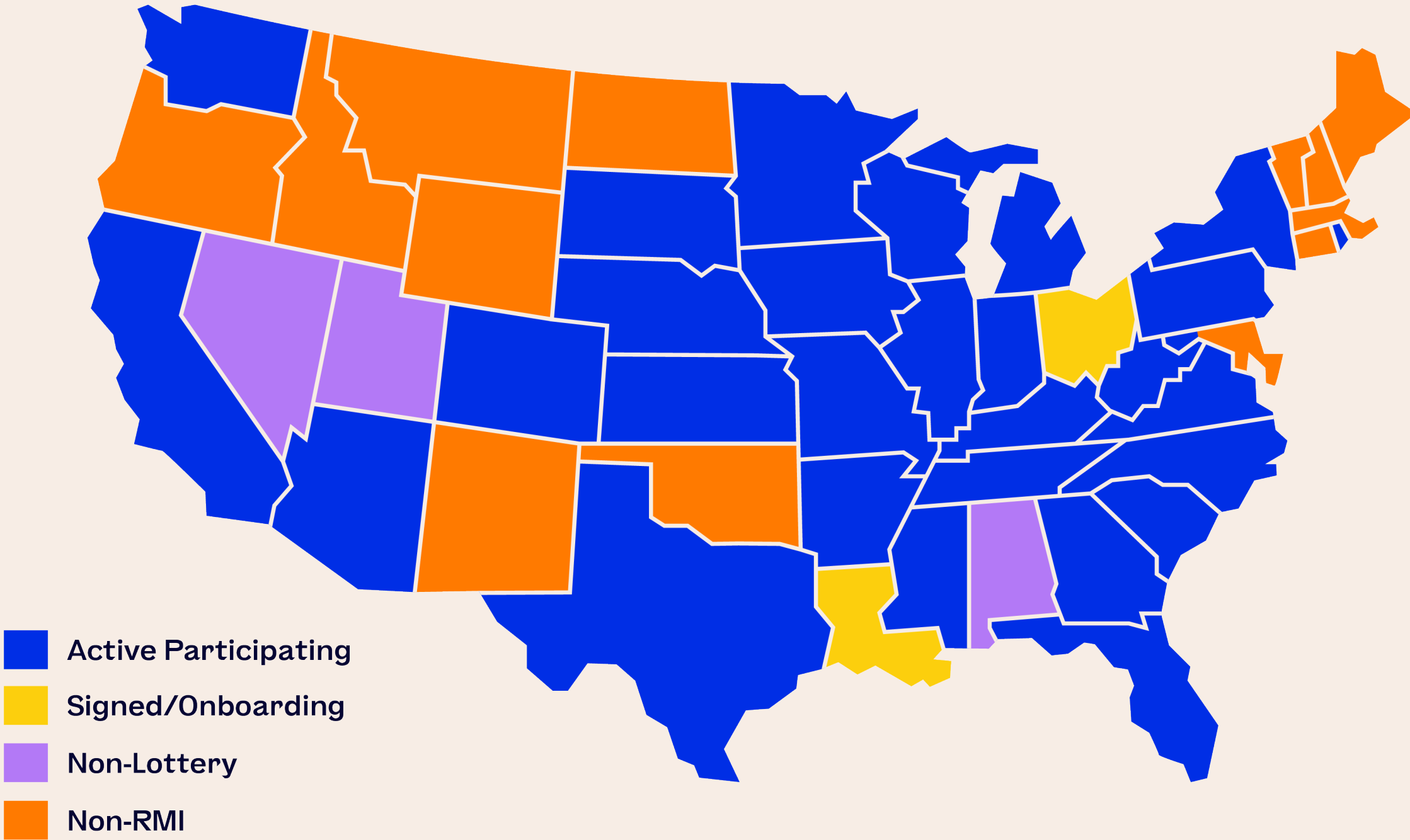
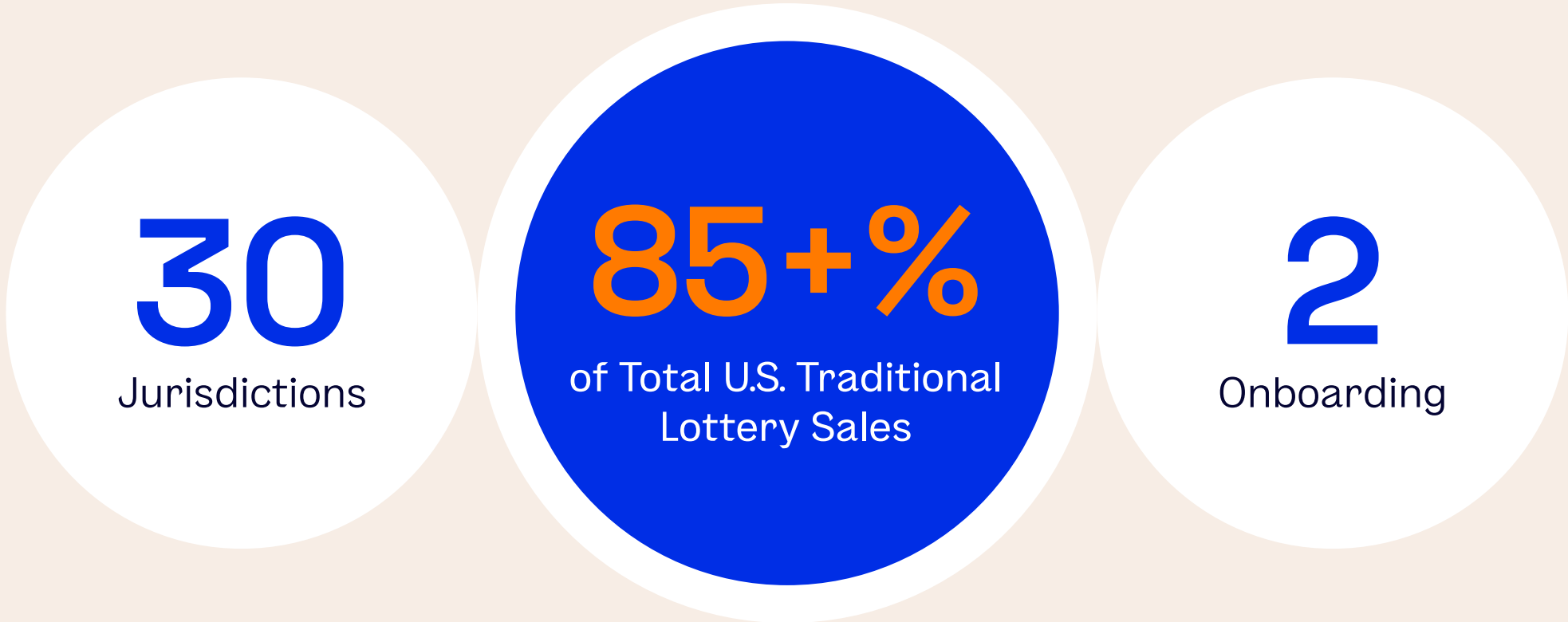
Retail Market Insights™

A tool that can support lotteries in assessing the opportunities for deploying LVMs is Brightstar’s Retail Market Insights™ (RMI) database, available at no cost to all U.S. lotteries that choose to participate.

With data on both Brightstar and non-Brightstar states, and more than 176,000 U.S. retailers, RMI gives lottery and retailer decision makers the tools to analyze lottery performance trends within and across jurisdictions. For example, RMI data can be used to compare retailer and geographic attributes that impact performance, to identify consumer trends, and to optimize existing lottery locations.

A dedicated staff of Brightstar analysts and other specialists support users with a range of tactical and strategic applications, including LVM optimization.

All RMI-partner lotteries have access to state-specific and multi-jurisdictional data, as well as a set of monthly consolidated reports.



Brightstar’s Internal Analytics Tool

Brightstar has developed a cloud-based, advanced analytics platform, which brings together cross-jurisdictional, cross-functional data sources to help Brightstar analysts find correlations and insights that can be used to drive enhancements and efficiencies, both for Brightstar and its customer lotteries.

Applied to self-service optimization, the tool allows analysts to query data from multiple jurisdictions and interrogate it readily in various ways.

For example, after identifying all the locations that might be candidates for an LVM, Brightstar analysts can assess the various attributes of these locations, such as trade style, urbanicity, sales volume, and more. These attributes can then be compared against the 150,000+ existing locations with RMI data to identify a prioritized list of locations that would benefit most from the placement of an incremental vending machine.

Several lotteries are doing a similar analysis on their own, but one of the advantages Brightstar analysts can provide is a much larger sample size to find commonalities. And, because the retail chains cross jurisdictions, analysts are able to leverage cross-jurisdictional RMI data to provide a more holistic assessment of a chain’s performance. This in turn increases a lottery’s confidence about what they are seeing or plan to do in their own state.

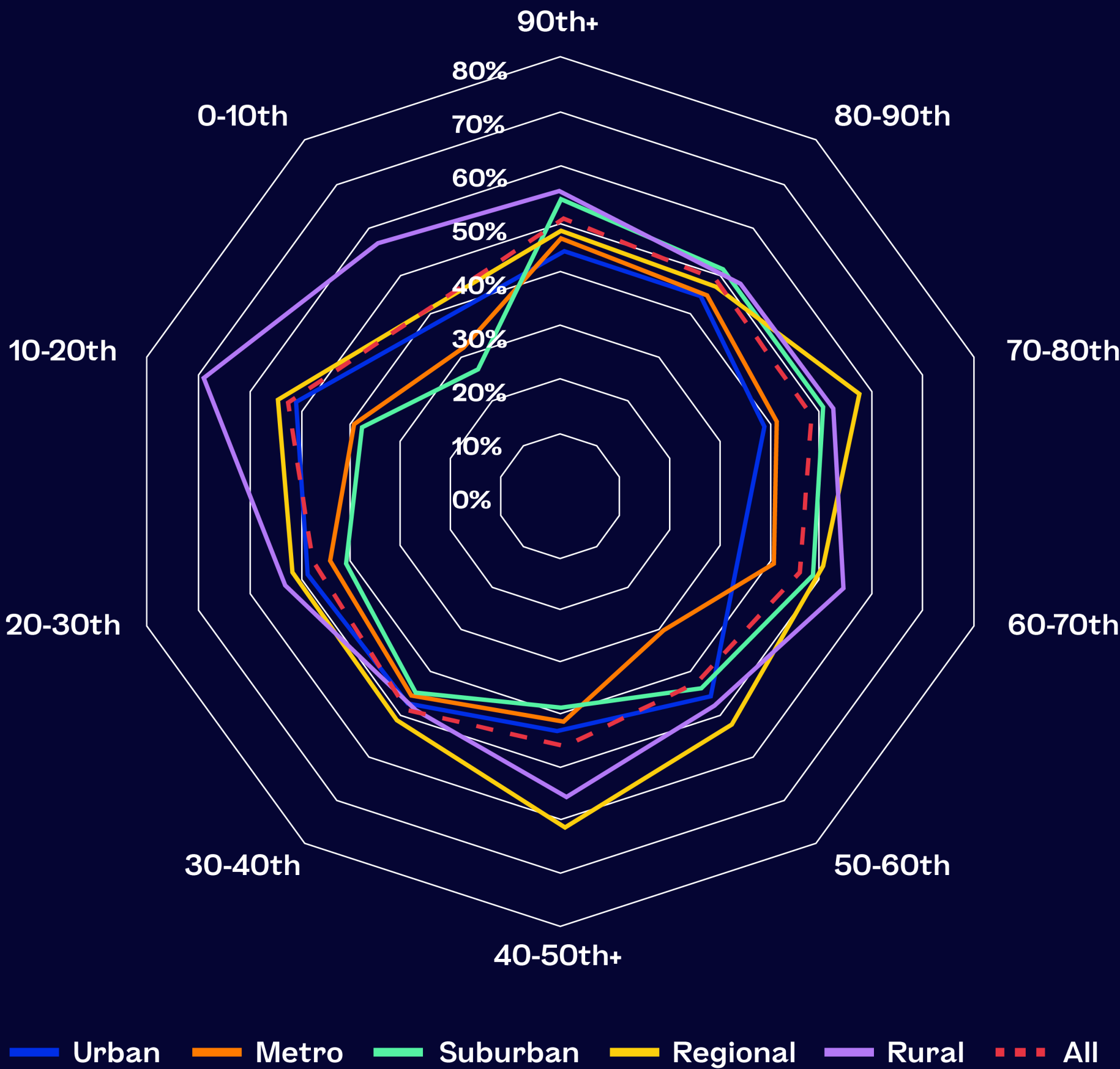
The analysis also enables national retailers to have more meaningful conversations with their partner lotteries, armed with the tools, data, and logic to support specific recommendations.

Specialized staff under the direction of Paul Riley, Brightstar Vice President Retail Innovation and Partnerships, provide support to select the stores and perform up-front analysis and post-install analysis as needed.

● With more data – and a new, advanced analytics technology platform to analyze lottery vending machine metrics – come new insights to maximize performance.

C-Store expected sales from adding a vending machine — by urbanicity and sales decile

A sample dashboard illustrates one type of analysis that Brightstar’s internal analytics tool can produce, enabling Brightstar analysts to readily find commonalities or differences in LVM performance and assess how various factors impact expected sales growth.



Price Point Index

Brightstar’s Price Point Index (PPI) can be thought of as a “report card” on how LVMs are stocked by price point. It aims to provide a national price-point average that lotteries and retailers can use for benchmarking.

Within a given jurisdiction, Brightstar analysts produce a “snapshot” of the price points stocked in each bin on Brightstar self-service equipment at a given moment in time — based on data sourced directly from the site — to calculate the average price point per bin (empty bins are excluded).

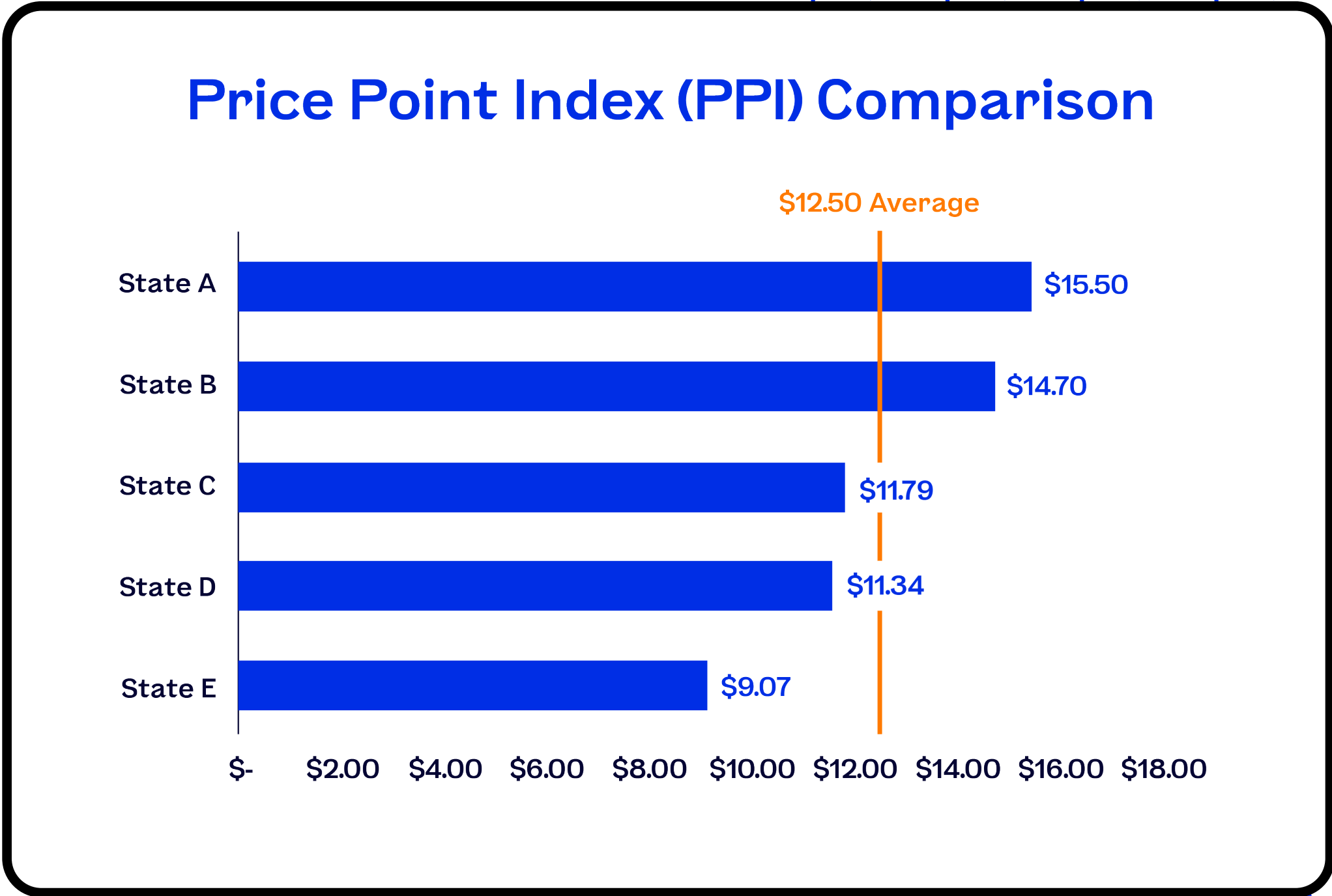
This calculation differs from space-to-sales, which typically looks at what percentage of sales are coming from the corresponding percentage of facings.

Because different jurisdictions can have different price points in their LVM game mix, the tool can filter to include only the relevant price points for the jurisdiction being analyzed. In addition, the PPI can be calculated for different bin capacity LVMs to “normalize” the index and provide more actionable data.

The Price Point Index has the potential to identify variations within top chains or trade styles, which can be used to address underperformance and refocus on optimized planograms. For example, in two jurisdictions with similar price point offerings and similar LVMs, the jurisdiction with the higher PPI will be outperforming its peer — which can trigger analysis as to why.

- Brightstar’s Price Point Index serves as another way to look at the optimization picture, and it can complement space-to-sales analysis. The Index can also be useful when a lottery doesn’t have all the data needed for typical space-to-sales analysis.

In the example of Brightstar’s new Price Point Index shown at right, States A and B are performing above the \$12.50 average found among five peer states.



Market Basket Analysis

Brightstar’s Market Basket Analysis tool uses session purchase data from individual LVMs to analyze which games are purchased together at a machine.

This session data, processed through Brightstar’s internal analytics tool, enables a wide array of data queries, and when fed into Brightstar’s newly developed Market Basket Analysis dashboard (see figure), it allows users such as lottery instant product managers and sales reps to easily see what games are purchased with other games within the same session at a given LVM – as well as sales by price point, by quantity, by retailer, and more.

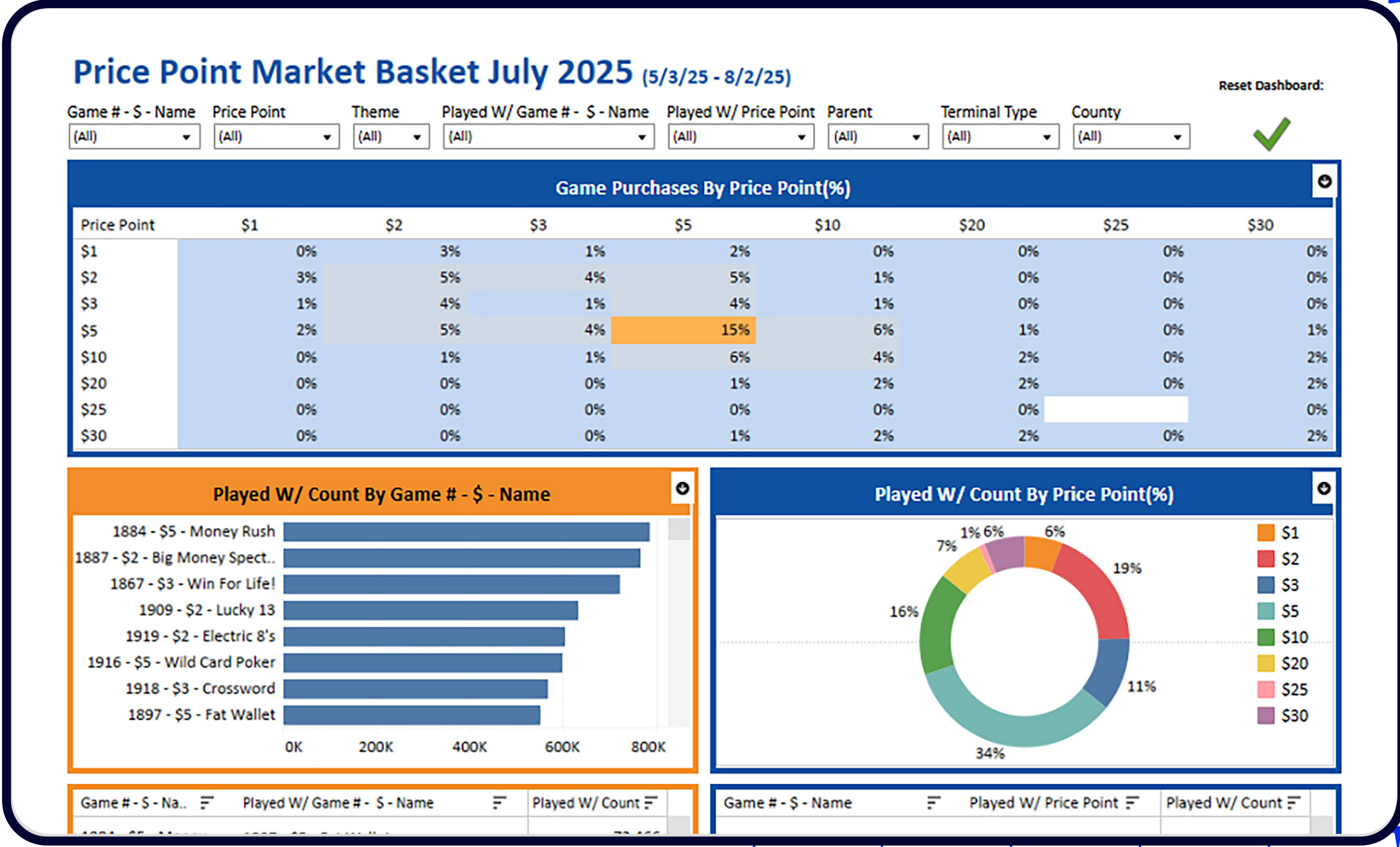
The dashboard allows users to look at individual games and determine which is most popular; to look at all the different games that are bought with a particular price point; or to look at the data by theme or by specific family of games, leading to all-new insights on player behavior and preferences.

To offer a hypothetical example: A month’s Market Basket data might reveal that \$5 games are most often bought with other \$5 games across the LVMs in a jurisdiction; and that when one especially popular \$5 game was purchased, 54% of the time the player bought another \$5 game. The dashboard also reveals those other game titles.

The user can query what other price points are bought with a particular game and price point, and more. There is an option to filter results by specific terminal types as well.

By understanding these types of purchase patterns, a jurisdiction can identify cross-promotional opportunities: For instance, if patterns indicate that consumers purchase additional draw products with \$5 scratch, a lottery can run a promo that offers a specific draw game product with the purchase of a \$5 scratch ticket. Brightstar is also looking to leverage these correlations between purchases to support the ability to generate next-best offer (NBO) recommendations on LVMs right at the point of purchase.

This unique Market Basket Analysis tool is available to U.S. sites with connected Brightstar machines.



Daily Out-of-Stock Reports

Data on LVM performance has long been available to lottery back-office employees, but it's the employees at individual retailer locations who can best take immediate action to ensure the LVMs are full and available. The newest process to address out of stocks (OOS) leverages Brightstar's ability to deliver real-time data from the company's self-service equipment.

Brightstar's automated Daily Out-of-Stock Report captures the number of out-of-stock bins at each national retailer's location within a participating state. The report is designed in such a way that national retailers can share the OOS information immediately with managers at the individual store locations, enabling each location to take action and address any out of stocks.

The Report is already being used by 23 national and local retail chains in one U.S. state, covering about 88% of the LVMs in the state. The daily report is fully automated, so that each morning an email is automatically distributed to each participating chain showing detailed, real-time out-of-stock information for each location, as well as trends over time.

Retailer No.	Retailer Name	Store No.	Terminal No.	Address	City	No. Bins OOS	In Stock %
915002	XYZ GROCERY #91	91	9150029	Retailer Address	Greensboro	8	71%
915036	XYZ GROCERY #104	104	9150369	Retailer Address	Morrisville	6	79%
915067	XYZ GROCERY #178	178	9150679	Retailer Address	Salisbury	6	79%
915129	XYZ GROCERY #353	353	9151299	Retailer Address	Wake Forest	6	79%
915143	XYZ GROCERY #395	395	9151439	Retailer Address	Wake Forest	6	79%
915031	XYZ GROCERY #90	90	9150319	Retailer Address	Raleigh	5	82%
915049	XYZ GROCERY #138	138	9150499	Retailer Address	Cary	5	82%
915084	XYZ GROCERY #223	223	9150849	Retailer Address	Chapel Hill	5	82%
915131	XYZ GROCERY #212	212	9151319	Retailer Address	Carthage	5	82%
915161	XYZ GROCERY #003	3	9151619	Retailer Address	Charlotte	5	82%
915003	XYZ GROCERY #158	158	9150038	Retailer Address	Wilmington	4	86%
915015	XYZ GROCERY #37	37	9150159	Retailer Address	Winston Salem	4	86%
915046	XYZ GROCERY #129	129	9150469	Retailer Address	Indian Trail	4	86%
915066	XYZ GROCERY #175	175	9150669	Retailer Address	Kill Devil Hills	4	86%
915075	XYZ GROCERY #202	202	9150759	Retailer Address	Concord	4	86%
915101	XYZ GROCERY #274	274	9151019	Retailer Address	Mooreville	4	86%
915108	XYZ GROCERY #306	306	9151089	Retailer Address	Greensboro	4	86%
915125	XYZ GROCERY #422	422	9151259	Retailer Address	Raleigh	4	86%
915126	XYZ GROCERY #441	441	9151269	Retailer Address	Wilmington	4	86%
915135	XYZ GROCERY #472	472	9151359	Retailer Address	Charlotte	4	86%
915153	XYZ GROCERY #92	92	9151539	Retailer Address	Harrisburg	4	86%
915010	XYZ GROCERY #26	26	9150109	Retailer Address	Raleigh	3	89%
915012	XYZ GROCERY #29	29	9150129	Retailer Address	Aberdeen	3	89%
915027	XYZ GROCERY #68	68	9150279	Retailer Address	Concord	3	89%
915062	XYZ GROCERY #171	171	9150629	Retailer Address	Charlotte	3	89%
915065	XYZ GROCERY #174	174	9150659	Retailer Address	Charlotte	3	89%
915079	XYZ GROCERY #210	210	9150799	Retailer Address	Wilmington	3	89%
915119	XYZ GROCERY #345	345	9151199	Retailer Address	Burlington	3	89%
915134	XYZ GROCERY #471	471	9151349	Retailer Address	Davidson	3	89%
915138	XYZ GROCERY #393	393	9151389	Retailer Address	Fayetteville	3	89%
915544	XYZ GROCERY #366	366	9155449	Retailer Address	Charlotte	3	89%
915005	XYZ GROCERY #257	257	9150059	Retailer Address	Cary	2	93%
915007	XYZ GROCERY #11	11	9150079	Retailer Address	Charlotte	2	93%
915009	XYZ GROCERY #25	25	9150099	Retailer Address	Fayetteville	2	93%
915026	XYZ GROCERY #66	66	9150269	Retailer Address	Charlotte	2	93%
915044	XYZ GROCERY #122	122	9150449	Retailer Address	Charlotte	2	93%
915045	XYZ GROCERY #127	127	9150459	Retailer Address	Winston Salem	2	93%
915077	XYZ GROCERY #208	208	9150779	Retailer Address	Charlotte	2	93%

Brightstar's Daily Out-of-Stock National Report informs each participating chain retailer of the number of bins out of stock at their individual retail sites each weekday morning, so they can quickly be addressed. In the anonymized example shown here, Brightstar added the right-hand column displaying the in-stock percentage to emphasize the retailer's positive goal of being 97% or higher in-stock.

- When it comes to out of stocks, immediacy counts. With the Report drawing on the remaining machine inventory, it's a real-time snapshot – retailers can see the true out-of-stock status of the machines, share that information, and take action.

Start Maximizing LVM Performance Today

Lotteries can adopt the solutions in this guide right now to increase player convenience and ensure the most interesting products are available – ultimately driving engagement and play.

In addition to the tools and approaches covered here, Brightstar’s specialized teams can also support customers with in-store placement, retailer and sales force training, promotional strategies, and post-execution monitoring.

Let us show you how Brightstar can help you derive more business value from lottery self-service networks.



● To get started, contact your Brightstar general manager.



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