



THE Science OF Instant Products

Exploring the technology, philosophy and partnerships behind \$1 billion in U.S. instant product growth last year

Scientific Games has always taken

inspiration from the greatest pioneers in science – like Albert Einstein, one of the most influential scientists in history, who combined observation and measurement to create theories that offered new ways to see the real world.

While the perfect balance of science and art can take one on a lifelong journey, success is rarely achieved without years of research, commitment to excellence, trial and error – and an unbridled passion for curiosity and innovation. After more than 30 years of success with its multi-faceted, technology-driven Cooperative Services Program (CSP) for instant product management, Scientific Games continues to refine the program and drive record growth in instant game retail sales. CSP is in play in 20 lottery jurisdictions globally. In 2015, the company and CSP partners in the U.S. together created \$1 billion dollars in instant product growth.

U.S. lotteries using Scientific Games' CSP solution, increased instant game sales by a collective \$1 billion (U.S.) from FY2014 to FY2015, with the South Carolina Education Lottery topping the growth with a 16.5 percent increase in instant game sales. Top CSP performers, with instant sales growth ranging from 4.1 percent to 14.3 percent, are the Arkansas Scholarship Lottery, Delaware Lottery, Florida Lottery, Georgia Lottery, Illinois Lottery, Maine State Lottery, Pennsylvania Lottery and Tennessee Education Lottery.

"It's a beautiful experience when the company providing the lottery's instant product management

services is also the primary instant game provider. And that's the distinction," says Jim Kennedy, Group Chief Executive, Lottery for Scientific Games. "When we're providing consumer insights, game design and manufacturing – in addition to product distribution – it is a proven formula for success that we call full category management. We've worked very hard with our lottery partners and retailers to refine the science behind CSP and it is driving growth like no other program in the industry."

Kennedy shared that the year-on-year net profit growth in dollars driven by CSP services from 2014 to 2015 is far beyond contributions to draw game growth in the same lottery markets.

"The only source of knowledge is experience."

-Albert Einstein

Scientific Games developed CSP services in the mid-1980s, continually improving the analytics and technology that support the program over the course of three decades. The foundation of the program is based on the company's 15 Determinants of Demand created by Jim O'Brien, Vice President of Strategic Marketing, Lottery for Scientific Games, a 35-year industry veteran whose inventive formulas and methodologies helped grow instant games to the \$80.5 billion (U.S.) global consumer product category it is today. O'Brien's work began in the 1980s at the Massachusetts Lottery – perennially ranked number one in the world for instant game per capita sales. The industry's International Hall of Famer's strategies are used in major marketplaces across the U.S., Europe and Asia.



With instant game per capita sales for all U.S. lotteries using Scientific Games CSP services outpacing the industry by 40 percent in 2015, the program's operating scale accounts for approximately one-third of total U.S. retail sales. Based on real results achieved for customers, it is currently the most successful and effective category management program in the industry.

"Strive not to be a success, but rather to be of value."

-Albert Einstein

"What we have learned from decades of experience managing instant products all over the world is that our operational approach has a clear correlation with success. That correlation comes from the expertise of our people, it comes from the philosophy we follow of managing the product with a full category viewpoint," says Keith Cash,

Vice President, Global CSP Solutions for Scientific Games. "It also comes from refined technology, and most importantly from the partnership environment that's created in this business model. These elements have proven repeatedly that they lead to results for our CSP partners. For most lotteries, CSP impacts instant game net profits."

The science behind CSP has grown from the company's research and development of 15 Determinants of Demand, which are grounded in the four basic principles of marketing: Product, Price, Place and Promotion. The product determinants are payout, prize structure including the top or jackpot prize, number of games in the market, size of games, introduction cycles, product ingredients, and high-impact product positioning. The price determinant is price point planning. The place determinants are retailer density, retailer mix, payment

terms and commissions, quality of systems, and retailer incentives. The promotion determinants are advertising and promotions (point-of-sale) and the sales force.

Does CSP apply to lotteries of every size and maturity? “Although it began 30 years ago as a solution for a large U.S. lottery, today CSP drives performance for lotteries of any size and any level of maturity because the services are customized by Scientific Games for the individual lottery’s specific needs and markets based on the 15 Determinants of Demand,” says Cash. “From day-to-day operations, to overseeing the entire process of product development, manufacturing and distribution, CSP can be as robust as the lottery requires.”

Cash explains that because the 15 Determinants of Demand are unique to each market, they inform a highly customized solution for each lottery that is designed to create higher levels of effectiveness, and ultimately to increase retail sales and profitability in the instant product category.

The 15 Determinants of Demand have stood the scientific test of time for the world’s largest supplier of instant games, because they are rooted in the essential basic truths of the lottery business.

“Logic will get you from A to B.
Imagination will take you everywhere.”

-Albert Einstein

Over the years, as the 15 Determinants of Demand began to drive results for customers, Scientific Games invested further in technological innovation that created even greater efficiencies and growth in the instant product category for its CSP partners. Many of these technologies were patented as industry “firsts” and remain unique to Scientific Games. With the exception of MAP, a data system housed in the company’s global lottery business center in metro-Atlanta, the technologies are customized and deployed at each CSP customer’s site.

MAP

In an industry known for acronyms, MAP stands for Marketing Analysis Planning. It tracks how and why an instant game performs. The proprietary platform is a secure, interactive data system developed by Scientific Games to help make the best planning and marketing

decisions possible for a lottery’s instant game portfolio. Populated with data for more than 42,000 instant games, 33,000 ticket images and 2.1 million data points for weekly sales, MAP is much more than sales data.

With the click of a mouse, Scientific Games data analysts can quickly and easily determine how an instant game (or type of game) has performed based on performance data collected over time in other jurisdictions. MAP is unique because it links a game’s attributes and artwork to its sales performance. And since the information is updated on a regular basis, the data is always current. Attributes such as game theme, play style, features, payout and even color are captured for every game and this information is used in conjunction with sales performance data to design games with features that appeal most to a specific lottery’s player base.

SciTrak Ultra

The *SciTrak Ultra*™ technology is a supply chain solution for instant game management developed by Scientific Games in the mid-1990s and advanced with improvements over two decades to its current state. The SciTrak Ultra system enables the company to securely manage instant game inventory, with more accuracy and efficiency than other supply chain solutions. Most importantly, it allows lotteries to be much more responsive to retail sales volume and player demand.

Today, SciTrak Ultra includes a powerful predictive ordering system, *OrderCast*™, and an automated sorting system, *OrderSorter*™. All of these technologies integrate with retail sales functionality, called Tel-Sell or inside sales, to help the lottery manage instant products.

“Everything should be made as simple as possible, but not simpler.”

-Albert Einstein

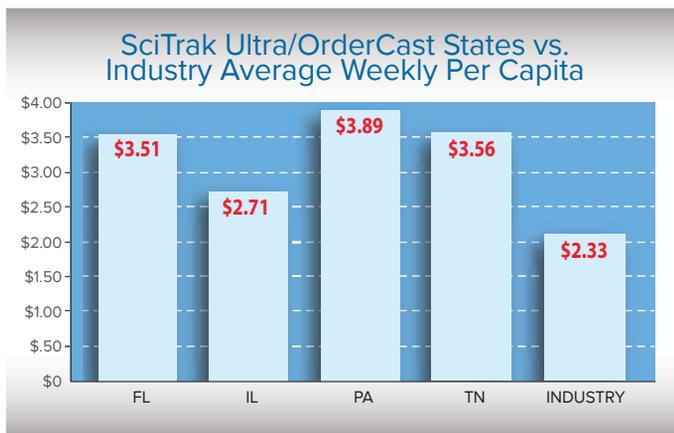
OrderCast

A key component for optimizing the product mix and inventory levels at retail, OrderCast is a predictive ordering system informed by the Company’s MAP analytics. First developed in 2007, it combines traditional inventory estimation methods with economic and mathematical prediction models. OrderCast actually “learns” over time, getting smarter and smarter with every set of data

collected. The system continually adjusts recommendations based on the data it receives, and then communicates revised recommendations to the lotteries inside sales team.

The bottom line benefits of efficient ordering is there is no guesswork involved in this very important aspect of managing instant products. OrderCast supports the lottery's retail network by answering questions such as:

- How many and which games should each retailer offer?
- Which games are selling well – and where?
- Which retailers are missing sales opportunities?
- When will a retailer run out of a game?
- When should a retailer switch out games?
- How much inventory should each retailer receive for a new game launch?



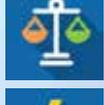
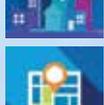
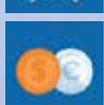
Using nearly 100 variables, OrderCast tailors date-driven adaptable orders. The system predicts the ideal product mix and inventory levels required for a specified sales period for each individual retailer in the lottery's network to help ensure optimal sales at each location. The forecasted sales then integrate with operational considerations, such as pack sizes, order cycles and "safety stock" to generate a final recommended order for each game. The internal sales team can review the order and customize further based on their communication with the retailer before the order is finalized and shipped.

OrderSorter

The other key component of SciTrak Ultra is OrderSorter, a technology developed in 2007 to take the instant game packing and distribution process to the next level. The highly automated technology is similar to technology



15 Determinants of Demand

-  PAYOUT
-  PRIZE STRUCTURE
-  PRODUCT INGREDIENTS
-  PRICE POINT PLANNING
-  HIGH IMPACT PRODUCT POSITIONING (CALLOUTS)
-  NUMBER OF GAMES IN MARKET
-  SIZE OF GAMES
-  INTRODUCTION CYCLES
-  RETAILER DENSITY
-  RETAIL MIX
-  RETAILER INCENTIVE
-  QUALITY OF SYSTEMS
-  PAYMENT TERMS
-  SELLING FORCE
-  ADVERTISING AND PROMOTIONS

used in major global consumer packaging operations. With scanners that read ticket pack barcodes, it adds another level of security and increases the accuracy in packing orders. Data transfers between SciTrak Ultra and the lottery's system for shipment auditing and approval. An order can be tracked at any point in the packaging process, and the lottery is therefore much less reliant on human interaction or error in their instant game distribution operations.

OrderSorter significantly impacts our delivery speed, efficiency and effectiveness: allocations are packed faster, higher volumes of orders are sent to retailers faster, and games can be launched in market faster and more efficiently than ever before.

"The time required to pick and pack orders is greatly reduced with OrderSorter, it is currently the most efficient and accurate instant ticket processing system in the industry," said Cash. "The biggest benefits of this technology are the efficiencies created, which allow the lottery to be much more responsive to retailer needs and player demand.

"Once we accept our limits, we go beyond them."

-Albert Einstein

Pennsylvania Lottery

Working with Scientific Games, the Pennsylvania Lottery has developed an instant game portfolio that has helped it to achieve over \$1 billion in profits in each of the last three fiscal years. Ranked third in the world for instant per capita sales with more than \$2.5 billion in instant game sales FY2014, the Lottery has focused on growing its retail network to more than 9,000 retailers. With 60 new instant game launches annually, there are 45-55 games on sale at any given time. Top-sellers with Pennsylvania players are money-themed and key number match games at the \$5, \$10, \$20 and \$30 price points. Extended play games like bingo, crosswords and *Gold Rush*®, a key number match game, are also popular as are licensed branded games.

In 1997, following a competitive bid process, the Lottery partnered with Scientific Games, its primary instant game provider, to develop a full instant category management solution for what they believed to be an underperforming instant product line with sales of just over \$409 million. With the introduction of CSP's comprehensive approach to



instant game planning, a complete warehousing and distribution solution, and a dynamic Tel-Sell group to interact directly with its retailer network via weekly phone contacts, the Pennsylvania Lottery experienced explosive instant product growth.

Over the next 10 years, the Lottery's instant sales grew nearly 400 percent to just over \$1.6 billion. In 2007, the Pennsylvania Lottery made the decision to continue its partnership with Scientific Games and challenged the company to build a solution for future growth up to \$2 billion and beyond. Scientific Games deployed – for the very first time – its newly developed OrderCast predictive analytics tool and fully integrated it into the existing SciTrak Ultra system. The Pennsylvania Tel-Sell team now had the game mix insights to help grow profits – not just sales – for the Pennsylvania Lottery and its retailers. Since the addition of OrderCast to SciTrak Ultra in 2007, Pennsylvania Lottery sales have grown to more than \$2.5 billion – achieving nearly \$1 billion in growth in just eight years.

"The Pennsylvania Lottery's full-category management approach with Scientific Games launched tremendous momentum for sales growth in the early phases of our partnership," says Cash. "The addition of OrderCast catapulted that growth far beyond all of our expectations to establish the Lottery as a worldwide leader in instant game per capita sales."

"Creativity is intelligence having fun."

-Albert Einstein

Florida Lottery

The Florida Lottery is perennially one of the highest performing lotteries in the world since former director Rebecca Hargrove's groundbreaking approach to

marketing when it launched in the late 1980s. The Lottery is ranked in the Top 10 lotteries worldwide for instant game per capita sales with more than \$3.5 billion in instant game sales FY2014. With the industry observing its now proven methods for many years, the Lottery has 13,000 retailers throughout the Sunshine State. Up to 70 games are usually generally in market, with approximately 36 new games introduced each year. Fifty-six percent of instant sales are at the \$10 price point and above, with the \$20 Gold Rush game, a money-themed key number match game, one of Florida players' favorites. Bingo and crossword games are constants in the product mix and other favorites are licensed branded games.

With SciTrak Ultra deployed at its Orlando operations in 1997, the Lottery embarked upon a CSP partnership with Scientific Games, who provided 95 percent of its instant games. Automated sorting was added in 2009 with OrderSorter and in 2011, predictive ordering with OrderCast.

"There have been so many advancements in technology since we began CSP services with Scientific Games, all making our vendor partnership relationship critical to success," says Tom Delacenserie, Secretary of the Florida Lottery. "I brought my consumer products background to Florida in 2000 and have always tried to market our games as consumer products. Our approach is total category management from concept to market including media support at launch, planned product assortment at store level, and inventory based on the retailer's rate of sale. The result has been a 79 percent growth on our instant game sales over the past five years."

Implementing the Florida Lottery's strategic marketing plan and the 15 Determinants of Demand have had a major impact over the years. In 2013, Scientific Games

worked with the Lottery to create a six-week game introduction cycle that would offer players bigger games and better prize structures."

"Together, we conducted a comprehensive analysis of our sales, game launches and schedules. The six-week launch schedule allows us to maximize inventory levels and sales at retail. It also gives us a longer lead time as we prepare for the next new game launch," says Delacenserie. "Six weeks allows us to educate our sales teams, retailers and players about the new game and create needed consumer awareness through the targeted use of point-of-sale materials. It's a results-driven strategy and another tool that we've used to drive our instant sales to the next level."

"The important thing is not to stop questioning. Curiosity has its own reason for existing."

-Albert Einstein

Tennessee Education Lottery —●

Also ranked among the Top 10 lotteries worldwide for instant game per capita sales, the Tennessee Education Lottery has grown instant games to a more than \$1.2 billion consumer product category in FY2015. With the expertise of President and CEO Rebecca Hargrove at the helm, the Lottery is one of the leaders in the U.S. for maximizing returns to its beneficiary: education in the state of Tennessee. The Lottery contracted with its exclusive instant game provider, Scientific Games, for CSP services at its inception in 2004.

The Lottery markets 40-50 instant games at a time, launching approximately 50 new games per year – four



every month including seasonal games on “Tennessee Tuesday,” the first Tuesday of the month. The *Jumbo Bucks™* family of games at seven of eight price points currently account for 60 percent of instant sales. Bingo and crossword are favorite extended play games in the state, as are games with licensed.

“We have experienced 12 consecutive years of growth in our instant product category, a compound annual growth rate double the industry average,” says Hargrove. “We have always approached our instants business with the mission to responsibly grow the product line and are always open to new product ideas. As part of this strategy, we hold regularly scheduled focus groups that allow us to stay in touch with our players on their preferences for new games, as well as our advertising, loyalty program and other offerings.”

The Tennessee Education Lottery attributes the success with instant products to the close partnership shared with Scientific Games and the collaboration on strategy, products and services that can increase profitability. Working with the Company’s SciTrak Ultra system, the Lottery’s Retailer Sales team places more than 300,000 retail orders per year, which are fulfilled by Scientific Games at an operational center just outside of Nashville.

“The measure of intelligence is the ability to change.”

-Albert Einstein

Maine State Lottery

One of the first lotteries in the U.S., the Maine State Lottery launched its first instant game with Scientific Games – starting with a 50-cent game – in 1974. Flash forward 40 years to 2014 when the Lottery, ranked in the

Top 15 lotteries in the world for instant game per capita sales, moved to a CSP partnership with its primary instant game provider, Scientific Games. The reason? To help manage inventory for its 1,245 retailers (including 27 chains) and create additional revenue-generating opportunities for the New England state’s General Fund.



It is important to the Lottery to have the right amount of games released in market at the right time so there is not a “game clog” during slower summer months. Generally, there are 32-39 games on sale at one time – a total of 40-45 throughout the year. Top sellers include multiplier games such as *10x The Money™*; Jumbo Bucks, a family of games across multiple price points; and Maine’s first \$25 game, *\$40,000,000 FORTUNE™*. Other popular games include extended play games such as Maine Crossword, which features iconic images from throughout the state, and licensed branded games.

“Looking through the dual lens of player motivation and retail economics, we worked closely with Scientific Games to conduct a thorough analysis of all of our games using their MAP database to compare the games to every instant game in the U.S. and more specifically, in the New England region,” says Tim Poulin, Deputy Director, Maine Bureau of Alcoholic Beverages and Lottery Operations.

Scientific Games created an all-inclusive package of CSP services for the Lottery including instant game design and manufacturing, marketing and an instant game management system featuring Tel-Sell (inside sales), warehousing and retail distribution.

“With the introduction of CSP, lotteries typically see a substantial increase in instant game sales the first year. Because the Maine State Lottery fully embraced all of the CSP components, and their retailers quickly adapted to the OrderCast predictive ordering system, instants sales jumped 16 percent the first year to more than \$183 million,” says Cash. “In 2015, the Lottery set record sales for both instant games and total sales.”

“The world as we have created it is a process of our thinking. It cannot be changed without changing our thinking.”

-Albert Einstein

Illinois Lottery

In 2011, the Illinois Lottery was the first in the U.S. to move to a private management model, with Scientific Games as its primary instant game and CSP provider. With more than \$1.7 billion in instant game sales in 2014, the Lottery is ranked among the Top 15 in the world for instant game per capita sales. With a total of 45-50 instant games

annually, the Lottery has 35-42 games in market at any given time. Game launches are monthly, with product and price point mix determined by a static 24-bin plan-o-gram philosophy. Top sellers are \$10 Crossword, the Cash for Life family of games across all price points, and in general, higher price point games.

“There was a lot of opportunity for the Illinois Lottery with its instant game products. We began with the strategy to implement best practices and grow the business from there,” says Cash. Scientific Games then deployed SciTrak Ultra, OrderCast and distribution services in August of 2011.

The Lottery experienced 13 to 15 percent year over year growth the first year as the strategy took hold and created a solid foundation. Year over year growth peaked at 50 percent in February 2012, with no month growing less than 10 percent year over year until November 2013. By the end of 2015, instant products in Illinois were providing an estimated \$127 million more per year in profit to the Lottery’s beneficiaries – education and capital projects – than before CSP began.

“Life is like riding a bicycle. To keep your balance, you must keep moving.”

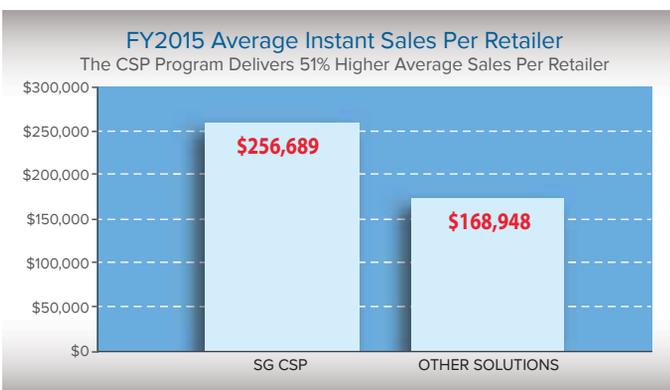
-Albert Einstein

Since it began in the mid-1980s, the Company’s CSP has driven a higher rate of instant game per capita sales growth than any other program of its kind. It has also increased a higher rate of retailer sales commissions.

“CSP is where science meets art for our customers. Our philosophies in instant game management are powered by highly advanced data and technology systems. Our customers trust the unparalleled expertise of our people. The program is tailored for each individual lottery and has proven time and again that it produces measurable results,” says Kennedy.

“This has been a 40-year journey for Scientific Games, and we understand every cog in the wheel involved in researching, designing, manufacturing and marketing one of the biggest consumer product categories in the world.”

Since 1974, Scientific Games has helped create momentum for instant game sales across the globe. The company continues its research on consumers, retail economics, logistic efficiencies – and the art behind designing games that have become a part of modern culture. Our mission is to empower our customers by creating the world’s best lottery and gaming experiences.



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