

A key part of the FutureGame process involves strategic portfolio management and review.

"We are constantly working with lottery customers to assess their current portfolio and evaluate what the market and the player base are ready for," explains Francesco Parola, Vice President of Global Lottery Game Development. "If a portfolio review shows that a lottery needs to modify an existing game or there is room for a new game, the FutureGame process is designed to identify the right solution."

The team offers lotteries a way to look at opportunities differently, beyond the same levers that the industry has relied on in the past. This is particularly true of the focus on draw games, which are not regularly and visibly refreshed in the same way as instants. With a strong understanding of game design and the ability to draw on many different skill sets—from data analysis to marketing—FutureGamers are able to investigate, research, and model new opportunities for customers.

Customer Advantage

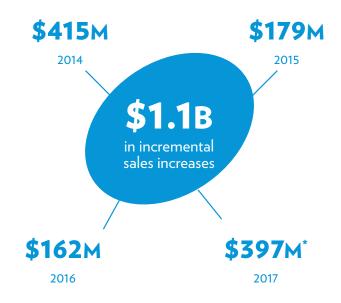
The optimization services available to lotteries encompass everything from portfolio gap analysis and evaluation of new game opportunities, to profitability and risk analysis, market research, predictive modeling and data analytics, pay-table best practices, and more.

Often analysis indicates that there is still some unexplored, untapped potential with a current game, where augmentation is a better solution for the portfolio than launching a net new concept. Potential enhancements can range from a small tweak that drives dramatic improvements to a complete overhaul of a game's make-up, while keeping the brand



The Value of Optimizing

Lottery partners in the U.S. have generated more than \$1.1 billion in incremental sales increases in recent years by working with IGT to implement draw-game changes and launches.

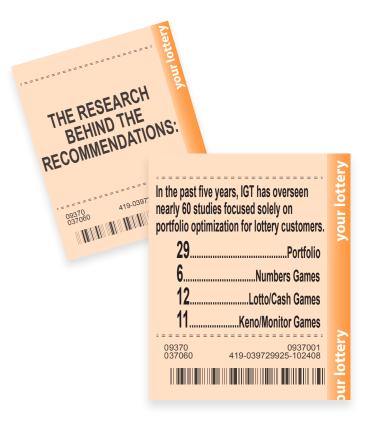


U.S. Draw-Based Game Portfolios from 2014-present (excluding multi-state)

"It's not just game dynamics," notes Sarah Simpkins, Director, Game Development and Portfolio Management. A mathematician by training who joined IGT as a data analyst 12 years ago, Simpkins now uses her training and broad knowledge of the games across U.S. lotteries to help customers find the best way to strategically optimize their draw-game portfolios and build the business cases for execution. "We look at the retail network, player behavior, the whole picture. We want to set our customers up for success, and, to do that, we're able to support them with depth of analysis and understanding in very specialized areas."

Members of IGT's FutureGame group (L to R): Sarah Simpkins, Brad Heathcote, and Francesco Parola in a video conference with Aaron Koll.

^{* 2017} estimate assuming current sales projected over year



In North America and internationally, the group typically engages with lotteries through targeted requests or via an overall portfolio-health assessment as part of an annual or biannual strategic planning process. In addition to making tactical recommendations, they often work with customers all the way through implementation and rollout.

"Sometimes there are tweaks that can be made to a lottery's existing portfolio that aren't flashy—they're not brand new games—but what I'd call 'small to medium term' strategies that can be implemented to increase our customers' transfers to good causes," explains Aaron Koll, Director, Game Development and Portfolio Management. Like Simpkins, Koll is a mathematician by training who has spent a good part of his 12 years at IGT focused on draw-game optimization. He notes, "I spend most of my time studying draw games, thinking about draw games, working with customers and looking inside and outside the industry for new approaches and ideas. What might we do differently?"

Room for Growth

Even the most successful and mature lotteries have found incremental growth by taking advantage of portfolio analysis and recommendations to optimize. While draw-game sales remain strong globally among a base of core players, the industry recognizes the need for new approaches to appeal to new player groups.

As IGT Senior Director of Marketing Insights, Gerard Caro, observes, refreshing the portfolio is as important to draw games as it is to any other consumer product: "The makers of yellow mustard didn't stop at one product even though people liked it and sales were strong. They continue to refresh their portfolio with all kinds of line extensions."

The FutureGame team helps generate measurable results across the following areas:



Numbers Games

"Numbers games are the biggest segment of draw-game sales in the U.S.," notes Simpkins. "We know how important they are to our

customers from the perspective of both sales and transfers. Over the past few years we have worked with them to modify draws, make adjustments to liability limits, and introduce add-ons that we've developed such as Fireball and others. First, we'll do a basic health assessment, and that shapes our recommendations. If it's a strong game, we might recommend add-ons to energize the core. Or we might suggest a cool new promotional feature that we've seen work well elsewhere."

Between FY'11 and'16, the total numbers-game sales for IGT current customers increased by 11.4%, versus 1.8% for all other U.S. lottery numbers sales. To support customers, IGT also invests heavily in numbers-game research in multiple states. After kicking off a major effort in 2013 to test a large group of add-on games, the Future Game group shared their learnings in a presentation to lottery directors at a PGRI Lottery Expo conference in Miami.



Lotto and In-State

With multistate game changes attracting players, many jurisdictions can benefit from reviewing and optimizing their lotto

and in-state games. Simpkins describes a typical case: "One of our lottery customers had a game that was stagnating and paying out more than designed. We researched it extensively and recommended increasing the price point while at the same time changing the odds to improve them for players, adding an embedded multiplier and introducing a new add-on game. So the lottery was able to offer player-facing benefits as well as achieve better profitability and returns to good causes. There's a risk/reward picture that we're always trying to balance so that the players like it and the value is there."



Multijurisdictional

The game development committees of multistate games typically engage vendors and game designers to work collaboratively

and put together the best proposals for game changes. Explains Simpkins: "From modeling and sharing what the proposed changes could mean for the game under different scenarios, we establish risk profiles for them, look at liability concerns or advise on liability caps and other game rules."

As the vendor to 25 of the 47 jurisdictions operating either Powerball and/or Mega Millions, generating close to 73% of the

sales for those games in 2017, IGT has monitored and analyzed an extensive amount of data and has been proactive in reporting out to the industry on the impacts of changes in both in-state and multistate games.

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Monitor Games

Keno and other monitor games may be mature, but from the standpoint of their importance to the portfolio they offer a lot of untapped

possibilities. "A whole new product plan opens up when you introduce keno," says Simpkins. "We're heavily engaged not only in the design of games but also in the best practices for retailer recruitment, betslip design, even retailer education." As quickdraw keno is a way to engage new lottery players, IGT continues to invest in related and emerging technologies such as the new PlaySpot™ solution, which makes it possible for nontraditional retailers to offer keno and other monitor games while respecting legislative requirements about interactive play. A unique tetheredwagering solution, PlaySpot allows players to purchase and play lottery games on a mobile device within a licensed retail location, connected via Bluetooth directly to the lottery terminal. This solution provides a low-impact way of introducing lottery play to new retailers and trade styles.

"Of all the draw games, keno is the most interactive, and it requires the most attention from us in terms of keeping players engaged," notes Simpkins. "We spend a lot of time with the players, and we survey them frequently." IGT operates 13 of the 19 quick-draw keno games offered in the U.S. The FutureGame group has worked with lotteries to launch quick-draw games in four new jurisdictions (Kentucky, New Jersey, Tennessee, and North Carolina) and four new add-on games to keno, such as Bullseye, Overtime, and Multiplier, in the U.S. over the past five years. The group uses this experience to advise on how to pace launches and add-ons through best practices.

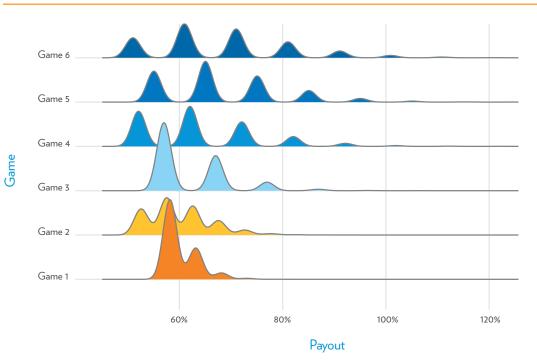
Ideas in Action

Much of the FutureGame group's work in North America is transferable to other markets. "Draw games operate very differently in international jurisdictions, but the innovations can be carried over," says Brad Heathcote, Senior Manager, Game Development and Portfolio Management. "Wherever we're working, we adapt the games and suggested changes to the local market."

"Sometimes when we're working with top-performing lotteries, there's no magic bullet," notes Simpkins. "They are already doing things so well. But we're able to offer them ways to create another level of challenge for players or refresh their gaming experience. We get our enjoyment and victories by coming up with ideas that make games more appealing and drive greater profits for our customers. It can be small things that make a real difference."

Contact your ADM or field marketing representative to engage IGT's FutureGame group for portfolio optimization.

Game-Performance Comparison



The graphic at left shows "histograms" of payouts for six different game pay tables over a period of 100,000 wagers.

Payout analysis is one of many critical levers that the FutureGame group may examine as part of an overall portfolio assessment. Inferences here can help a lottery determine how the expected payout for a game compares to past performance and future trends, helping to understand game performance and better predict profit and transfers to good causes.

