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Smoothing a Path for Innovation

PGRI Introduction: There are lots of differences between the forty five lotteries which operate within the U.S. Different statutes and regulations prescribe what game categories they sell, how they can advertise and sell them, and many other aspects of how they must operate. And there are lots of similarities. They are all owned by the government and they all operate within the borders of their own state with the exclusive rights to sell lottery products within their state. All forty-five lotteries want to sell great lottery games that consumers want to play. They all want to apply the most effective sales, marketing, and promotional strategies to maximize sales. They all stretch to operate in the most efficient ways. They all work hard to achieve the highest standards for Responsible Gaming, integrity, and security.

And land-based retail is the predominant channel for distributing lottery products (to the tune of 99% of sales!). The common interests, the similar games they sell and similar business models and methods to sell those games, and the fact that they do not compete with each other forms a rich foundation for working together

to achieve those shared objectives. States collaborate to sell Powerball, Mega Millions, Hot Lotto, Lucky-for-Life and other very successful games. And states are working on standardizing operational processes to make it easier for multi-state retailers to do business with lottery.

A problem, though, is that each individual lottery has its own IT platform, each with its own software protocols and language. New games, new technologies, new innovations, can result in

time-lines for integrating new games, technologies, and innovations could be significantly reduced?

Well, happily, there is—by leveraging the use of standardized APIs (or Application Program Interfaces). APIs are very well established within the IT (Information Technology) business. Basically, an API provides very specific details on how software components interact with each other. When APIs are established and set as “standards,” then developers can use

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requiring integration into all the different IT platforms of each individual state. This can be a costly and inefficient especially if it cannot be done in a uniform way across multiple jurisdictions. What if there were a way to streamline this process such that the costs and

those APIs with the knowledge that their code will work with those APIs and they won't have to change them on a regular basis. What if the Lottery had a set of standard published APIs that would allow 3rd party developers (like retailers) to securely interface with

our systems (for example performing a lottery wager purchase)?

We can also further entice 3rd parties to develop against a standardized Lottery API, by centralizing the API service. This means that 3rd parties don't have to integrate with numerous lottery interface points (albeit with the consistent approach that the API provides), instead they can interface once which further reduces complexity and cost. Standardized APIs fuel the growth of major companies such as Facebook, Amazon, and Netflix that expose their APIs and allow hundreds if not thousands of 3rd party companies to access their systems and features.

Of course there are obstacles to implementing a centralized API. But the benefits are so compelling that we owe it to our Lottery stakeholders to try to make it happen. Terry Presta helps us to understand the benefits of an API, identify and address some of the obstacles, and otherwise discuss how we as an industry could apply this powerful technological solution to the service of Good Causes. Mr. Presta would emphasize that he does not presume to have all the answers. At this point, our goal is to move from the genesis of an idea into the stage of dialogue, active assessment of its merits, and the pathways to making it happen.

Terry Presta owned and managed the chain of Presto Convenience Stores in Kansas for thirty years before selling it in 2010. Mr. Presta also served in the Kansas House of Representative between 1995 and 1999. He was appointed to be executive director of the Kansas Lottery in January of 2014. Mr. Presta has brought his vast experience in Retail to bear in helping the U.S. lottery industry build upon the incredible partnership that it has forged with its network of dedicated retailers.

Paul Jason, PGRI: *What will it take to make it happen, to unlock the power of an API to simplify the deployment of innovation within the lottery industry?*

Terry Presta: To begin with, it will require concerted effort and consensus among the community of vendors and lottery directors. To get that, we will need to begin the dialogue about how and why the API will benefit the industry in general, and each and every lottery operator in each and every jurisdiction in particular. We will need full cooperation and support from all the main vendors and lottery directors.



One of the main beneficiaries of this API is our retailers, the multi-state retailers in particular. These retailers need us to make it easier for them to integrate lottery into their systems. The national retailers are really fed up with having to negotiate 45 separate deals with 45 different IT solutions and all that goes along with that. An API platform that enables a single digital interface is crucial to overcoming that bottleneck.

Lottery has had continuous growth since the beginning of the modern era in the 1970's. Until recent years, it was the only game-of-chance even available to most of the U.S. population. But that's changed. As lottery directors, we need to think about the future. The big Powerball jackpot will help us deliver the growth we need this fiscal year.

And Lottery's momentum probably won't change in a big way over the next few years. But we need to start acting now to make sure Lottery is positioned five and seven years down the road. Just because most of us are prohibited from selling lottery products online does not mean we should ignore the whole digital revolution. E-Commerce is just one small part of the transformation to a digital economy. On the consumer level, digital technology is completely reshaping entire lifestyles. On the business operations level, digital technology is reshaping the way B2B commerce is conducted.

Do the main commercial partners in the industry support the concept of an API? The lower cost-of-entry for third-party suppliers would seem to not necessarily benefit the incumbent suppliers.

T. Presta: I can't speak for them. But, it does benefit them and I believe they understand that. The API would strengthen the position of Lottery in an increasingly competitive market-place. That benefits everyone, including established vendors. The net result is a sector that is healthy, growing, and modernizing to meet the needs of the market-place and channel partners like retailers, and is positive for all stakeholders, including our current vendors.

The API would greatly reduce the costs for lotteries to integrate new technology which may replace older technology. And better performing games may push out some under-performing games. But I really don't think that any vendor would think that the best customer retention strategy is to make sure the barriers to entry and the cost of change be artificially inflated. By lowering the cost and barriers to entry, the API will raise the performance bar. But that's a challenge that all successful enterprises embrace because that is what drives progress and continuous improvement and keeps our industry in the leadership position.

You know, the community of commercial partners invests in an incredible wealth of R&D which support the lottery indus-

try. There is product and innovation in the pipeline just waiting to be deployed. The cost and inefficiency of deploying it across 45 different IT platforms is an obstacle that can and should be removed.

We've had two meetings on the API and it seems like everybody is supportive. The API initiative would directly impact sales in a very positive way. We estimate the increase in sales resulting from penetration of multi-state retailers, faster deployment of new technologies and game content, and streamlined operational efficiencies would be north of \$400 million a week in sales. That's \$20 billion a year. There are start-up costs, and shifting of cost centers and budgetary adjustments to be done. The end result, though, is that the efficiencies would generate cost savings and increased sales for everyone.

I would liken the API to the IOS used by Apple to enable fast and low cost deployment of Mobile apps. One of Apple's competitive disadvantages in its competition with the PC / Microsoft platform in the eighties and nineties was its insistence on over-controlling its operating system, making it hard for programmers to create and deploy new content for the Apple and Macintosh products. Steve Jobs didn't make that mistake twice. Our system of 45 different IT platforms that communicate in different languages is similarly counter-productive. I think the first step is for all of us to appreciate the opportunity we have to change a system that is so inefficient and wasteful into a system that would catapult lotteries into the technological leadership position in the games-of-chance industry.

The vote to have all lotteries provide the option of 21-days settlement was unanimous and illustrative of the ability of lottery directors to come to consensus on important matters.

T. Presta: And it will help us to meet the needs of the multi-state retailers. Of course we come together as an industry to deliver better value to our players and all Lottery stakeholders. We just need to do more. Much more.

It's hard to generate excitement for a back-office technology. The excitement ensues when we think about how the API effectively unlocks our imagination to know that innovation can be brought to market. It puts us into a place where we can know that "whatever the mind can conceive and believe, the mind can achieve." The API platform turns that Utopian-sounding sentiment into a reality.

And if the experience resembles Apple's, smoothing the path for creatives and technologists to realize their dreams is the key to bringing innovation to market. And for the financial gate-keepers, accelerating the speed at which investment in R & D is monetized in the form of products that are brought to market would have the collateral impact of stimulating more investment, more innovation, and still more and better products being brought to market. Bill Gates calls this a positive feedback cycle.

All of which would attract more investment capital from more companies that would be racing to develop new products and innovation for Lottery. The Apple iPhone model would seem to be a good blueprint to follow?

T. Presta: Absolutely. Who could have predicted the explosion of low-cost Mobile apps? Who can predict how an API that would unlock the imagination, and the capital resources, might impact our industry? Is there any reason why we might not expect that it could have a similarly explosive effect on Lottery? Maybe it would include game concepts and technological solutions that we can't even imagine now. And instead of months turning into years to deploy them, they would be commercialized within timelines that we can't conceive of with our current system. Why wouldn't there be a gold-rush of companies that would focus solely on game development? Our major commercial partners would be vital to the process of integrating them into our portfolio of existing products. But the API would streamline that to make it fast, efficient, and cost-effective. Totally unlike our current system!

Each individual jurisdiction would still have total control over the games that are sold within their jurisdiction. Each Lottery would retain control over the games and the functionality that is or is not activated within their jurisdiction?

T. Presta: Of course. Easily done. Each jurisdiction will continue to have its own state laws and statutes which are all different from each other and all of which need full compliance. It would still be up to each individual director and lottery to decide what games they offered and which technologies to implement. They would simply have much more choice, many more options, as to what they chose to do.

The multi-state retailers would also be more receptive to a business process that enabled them to streamline the process of doing business with Lottery.

T. Presta: The API would enable them to connect with one universal hub that has communication and software programming protocols that would enable programs to be instantly disseminated. It would enable data to be collected and reports generated in a consistent format. It is exactly what they have been asking for and would enable them to interact with Lottery in ways that meet their needs for efficiency and speed. The API would have an absolutely transformative impact on our ability to penetrate and develop the big multi-state retailers.

I can't imagine anyone not agreeing that the reasons to implement an API are totally compelling. What I can imagine, though, is that there are obstacles to making it happen. What might some of those obstacles be?

T. Presta: The first major concern will be security. Obviously, everybody now has their own servers and is responsible for their own security. And assuring that security is paramount. The API, for instance, would enable retailers all across the country to validate tickets, and maybe even activate tickets, right through a singular central API server. Again, only at the direction of each individual lottery. So the very first question will be about the security of such a system and pro-

cess. It is a legitimate concern and needs to be fully addressed. The bottom line is that it can be done. In truth, the central API server would improve security. The resources required to assure the security and integrity in 45 different jurisdictions is huge. For those resources to be aggregated and a small portion of that to be applied to securing the integrity of one central server would clearly result in a much higher level of security. I am not trying to diminish the importance of this issue, or the need to address it with complete transparency and due diligence. I am just saying that the concern for security should not be an obstacle that prevents the implementation of an API that serves all the lotteries. To be sure, the security of the API would be its most mission-critical obsession.

There would need to be a transition period during which lotteries would continue to use the functionality within their own system even while using the centralized API. Some states may choose to always have both. But that's no reason not to enable a centralized API that would deliver functionality that we do not have now. The API would be a resource that has the capacity to replace much of what is being replicated in 45 different lotteries. I would think that many lotteries would want to take full advantage of that. And that all lotteries would use at least some of the capabilities of the API. But that does not mean that a lottery is forced to relinquish control over any particular functionality. Redundancy, back-up systems, disaster plans, and all other measures standard with the most advanced security programs would be in place. They would in fact be superior to what is in place now. The API would be a resource, a technological tool, that would augment and improve upon what is already being done.

Other obstacles?

T. Presta: Cost. In the long-term, there would be significant cost savings. In the short-term, we have to come up with a way to fund the development of the API. The ROI on the investment would be

very positive. But it is an investment that requires capitalization to make it happen. The ongoing allocation of costs would not be an issue. To a large extent, those costs are already being borne by the individual lotteries. The API will deliver a result that will incur a net savings. The aggregate costs to deploy new games and technologies will be greatly reduced, cost-savings that will be enjoyed by each lottery. It's true, though, that these are complicated issues that will be challenging for lottery directors to come together and agree on an action-plan.

Another big issue is where the API server would be hosted and what entity would manage its operation. That's problematic. Is it going to be NASPL, MUSL, or a third party vendor? That involves servers, IT infrastructure, redundancy, security, oversight, and no small amount of other complicated issues. But these are obstacles that we can overcome. Put it this way, business leaders in the commercial world are constantly faced with obstacles that are far more formidable than the ones we face in the lottery industry. They have to invent solutions in impossible circumstances that seem to have no solution. We have the solution staring us right in the face. All we are dealing with are logistical challenges. It's not even a financial challenge. There is no risk or uncertainty as to the need and viability and ROI. We just have to sort out the logistics. It's true that we are tasked with managing a public Trust and that requires prudence and responsibility above all else. But we should not use that as an excuse. We owe it to our stakeholders and Good Causes to figure it out and forge forward and do everything we can to optimize the value of the public Trust which is Lottery.

Would retailers have access to data?

T. Presta: Access to data would all be restricted as per the requirements of each jurisdiction. Nothing would happen apart from the instruction of each individual jurisdiction. Central servers and APIs are fully capable of preserving security, and controlling access for, multiple different users. It may seem like it involves a level of complexity that is more diffi-

cult to secure. But the technological tools and security apparatus are already being applied to far more complex systems than what would be needed by an API that serves the needs of the lottery industry. And the technology being applied to ensure the security of a centralized API server would be far more sophisticated and effective than those being used in the 45 different jurisdictions right now.

How do we begin the process of implementing the API?

T. Presta: The first step is for everybody, vendors and lotteries alike, that are working on this project to sign an NDA in which we all agree that the open discussions will be held in the strictest confidence. Without the NDA, there can be little in the way of substantive discussion about how to move forward with this project.

The centralized API would not compel anyone to do anything they do not want to do. It would enable much more fluid communications with retailers, but the Lottery does not need to activate those capabilities. It would make a lot more games available, but the Lottery can pick and choose as they wish. The Lottery vendor relationships do not change. The centralized API just provides an incredible resource with robust functionality and a conduit for new games and innovation. But each service, every game, every function is individually activated and employed solely according to the direction of each individual lottery. Lotteries would still operate the way they do today, just with the additional benefit of access to an incredible resource that would augment their operation. ■