

# GET READY *FOR THE* NEXT WAVE *OF* PLAYER EXPERIENCES

What are the **benefits of Cloud Computing** for lotteries and players – and is the technology ready for the lottery industry?

Lottery customers around the world joined IGT and **invited experts from state government and the IT sector** to consider these questions in the latest session of IGT's **Players Project series**.



## THE players PROJECT

### TECHNOLOGY TRACK



**Participants**, clockwise L to R: **Charles Cohen**, Industry Consultant; **Doug Robinson**, Executive Director, National Association of State CIOs (NASCIO); **George Humphrey**, Vice President and Managing Director, Technology & Services Industry Association (TSIA); **J.R. Sloan**, Chief Information Officer State of Arizona and Chair of NASCIO's StateRAMP; **Srini Nedunuri**, IGT Vice President iLottery; **Rachel Barber**, IGT Senior Vice President and Chief Technology Officer, Lottery & Gaming; **Pranay Ahlawat**, Partner and Associate Director, Boston Consulting Group

Enterprises in nearly all industries have “moved into the Cloud,” adopting Cloud computing technology to service some or all of their business needs.

Some, like Netflix, were architected on the Cloud, offering a vivid demonstration of the benefits – from greater agility and faster innovation speeds to hyper-personalization of the user experience.

Cloud technology is also now in use by **state and local governments**, whose leaders view the shift as central to their own modernization efforts.

But what does Cloud adoption mean for lottery specifically, and what lessons can other public and private organizations offer the industry?

The second session of IGT’s live-online **Players Project** series invited experts to weigh in on how this technology can help lotteries move faster and move ahead.

Following are highlights from the exchange of ideas. To get the bigger picture, you can watch the event on replay.

Visit [IGT.com/cloudreplay](https://www.igt.com/cloudreplay).



*“A question our customers have asked us to address is what modernization of the lottery infrastructure looks like. If, collectively, our industry is going to be ready to deliver what players and other stakeholders want in the next decade, Cloud technology is an essential base layer.”*

**– Fabio Cairoli, IGT CEO Global Lottery**

## What is Cloud? Separating Hype from Reality

To set the stage, the Players Project welcomed two experts who are on the call-lists of major corporations and governments when it comes to innovation strategies:

**Pranay Ahlawat**, Partner and Associate Director, Boston Consulting Group, and **George Humphrey**, Vice President and Managing Director, Technology & Services Industry Association.

**George Humphrey:** Cloud really is as big of a deal as the tech industry wants us to think it is. It’s about getting access to the data and insights as fast as possible to deliver business results that weren’t previously possible.

In its simplest form, Cloud is taking the intelligence of technologies and moving it off the premises of the customer and into a

data center, a co-location facility. The reality is that there’s a continuum of premises-to-Cloud models: Sometimes, for example, it’s a private Cloud, where the infrastructure and applications are dedicated to a particular customer, or a multi-tenancy model, where the software is run in the Cloud and can serve many customers.

**Pranay Ahlawat:** What companies are hoping to achieve once they move to the Cloud is three-fold. Because everything is software driven, it gives organizations the ability to innovate at speeds they weren’t used to before. With high-level platform services, they can get out of the rut of managing hardware and databases to **focus**

**on innovation.** Next is **cost:** Customers can expect anywhere from 10-30% total cost reduction in labor and hardware. And third, Cloud gives you infinite **scale.**

Those are the primary benefits, but what’s really interesting – and **where I think it might transform the gaming industry** in particular, is two vectors: One is **next-generation player experiences.** If you look at a lot of the innovation that’s happening on the Cloud – investments in AR, VR, Amazon Web Services, and other services – these are technologies that will enable organizations to deliver customer experiences that weren’t possible before, and frankly will be very hard to deliver if you built the stack on your own.



**Charles Cohen**  
Industry Consultant



**Pranay Ahlawat**  
Partner & Associate Director  
Boston Consulting Group



**George Humphrey**  
VP and Managing Director  
Technology & Services Industry Association



## What is Cloud? Why does it matter?

- Generational shift in the way technology/software is consumed
- Few limits to what type of application can be put “in the Cloud”
- Opens opportunities for new types of services

The second is that Cloud has also become the **preferred destination for analytics**. The customer experience today is a function of AI and Analytics. It's only natural that Cloud becomes the preferred destination and architecture for gaming companies as well.

To hear the full discussion from this segment of the program, visit [IGT.com/cloudreplay](https://www.igt.com/cloudreplay).

## How is Cloud Being Adopted by Governments?

The Players Project event also welcomed **Doug Robinson**, Executive Director, National Association of State CIOs (NASCIO) and **J.R. Sloan**, Chief Information Officer, State of Arizona, and Chair of NASCIO's StateRAMP, an organization created to assist states by assessing third-party Cloud providers to ensure they meet regulatory compliance and maintain published cybersecurity policies (see sidebar).

Discussing how much Cloud-related activity is underway at the state and federal level, Robinson noted that NASCIO member are responsible for services to tens of millions of citizens for everything from driver's licenses to tax refunds. While Cloud is becoming ubiquitous in the private sector, public bodies have a very different set of demands and expectations, not to mention a higher level of public scrutiny.

Nevertheless, consumers are now accustomed to getting goods and services on demand, either physically or virtually, and the public will expect the same from government services.

**Doug Robinson:** States are slightly behind the private sector for a variety of reasons, although Cloud has been on our radar since 2009 and continues to be in CIOs' Top 10 priorities for states. States are spending a little over \$60 billion this year on information technology, and Cloud is **the major force of change for the future of state government services**.

Some states have several dozen Cloud service providers. Right now, we estimate that about 20% of state government's workload is in the Cloud – which seems nominal,

but if you look at the size of the workload in state governments, it's dramatic, complex, and very different from the private sector.

The use of Cloud is diverse – from delivering healthcare services such as Covid-tracking, vaccine registration and scheduling, to health and human services, criminal justice, and core or foundational applications like budget, finance, and human capital management. With many of the commercial platforms now making state-government specific Cloud offerings, **we're seeing states take the jump** to move those things that for four decades have been on-premise services.

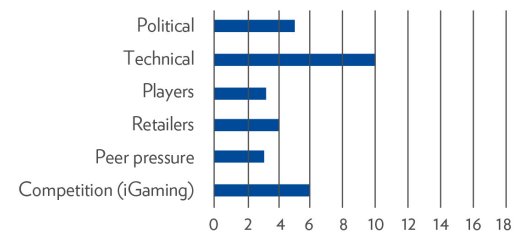
For states, I think the driving factor in adopting Cloud is the shift from the owner-operator model. **States' model for the past five decades is changing**. They're looking for options where they're not investing capital in owning boxes and wires but looking to do that [via managed services with] a private firm.

**J.R. Sloan:** To me, the key driver for Cloud adoption across the board is **business value**, delivering services within the organization and to constituents more efficiently and at the right scale.

**Doug Robinson:** Based on a new study that NASCIO just released with Accenture, the key phrase is **modern**. Every state CIO and their business partners want to be perceived as a modern organization. Cloud technology moves states into more of an opportunity to **transform their businesses processes**.

To hear the full discussion on Cloud Adoption by Government Agencies, visit [IGT.com/cloudreplay](https://www.igt.com/cloudreplay).

## Who or what is likely to drive Cloud adoption by Lotteries the most?



**Lottery participants engaged in live polling (top) throughout the event, offering additional perspective on the topics discussed by guest speakers (bottom).**

## StateRAMP: A Resource to Help States Assess Cloud Vendors for Security Compliance

"NASCIO's StateRAMP organization is focused on helping U.S. state and local governments achieve regulatory compliance and assure that the data of citizens going into Cloud environments receives the proper care and protection," said **J.R. Sloan**, Chief Information Officer, State of Arizona and Chair of StateRAMP. "U.S. states have commonality in terms of regulatory compliance. Rather than taking 50 different approaches to ensure data privacy, StateRAMP provides some efficiencies and economies of scale to assess vendors and security compliance. It also helps the vendor community avoid the same review process multiple times."

Importantly, StateRAMP includes the key element of continuous monitoring: ongoing review to ensure Cloud environments remain compliant with the security controls that were stated and designed. **For more information, visit [Stateramp.org](https://www.stateramp.org)**

# Lottery is Ready for Cloud Computing – Is Cloud Computing Ready for Lottery?

The lottery industry has a history of adopting new technologies once they become sufficiently mature to support lottery's mission. To discuss whether Cloud is at that stage now,

industry consultant and moderator **Charles Cohen** spoke with IGT executives **Rachel Barber**, Senior Vice President and Chief Technology Officer Lottery & Gaming, and **Srini Nedunuri**, Vice President iLottery.

**Rachel Barber:** The Lottery industry operates within a procurement framework that's quite strict, where solution offerings are required to abide by whatever request or restrictions are outlined in an RFP. Historically, requirements for an in-state or local data center would prohibit any move to Cloud. Earlier this year, the **Multi-State Lottery Association (MUSL)** made an important rule change that allows U.S. member lotteries to embrace Cloud. This is a really important first step. At IGT, our roadmaps are designed around Cloud readiness. We've been making investments for some time now to enable our solutions to run in the Cloud.

**Scalability** and **time to market** are the technical benefits that I see benefitting lotteries and players the most. In our industry, scalability is of course critical. We need to accommodate peak sales volumes during high jackpots, and we're seeing an expanded player base during COVID due to mobile adoption. This also drives the need for scalability due to the higher amount of traffic that grows throughout the life of these contracts. It's difficult to predict at the start of 10-year contract how much

storage or infrastructure or CPU power the lottery will need over a 10-year time frame. Now, with the scalability that Cloud offers, we can expand quickly and grow with the lottery.

**Srini Nedunuri:** Cloud gives you the simplicity to fuel innovation, so that organizations don't have to worry about the scale required, or the processing power, or the other points that Rachel touched upon.

From a **player perspective**, it's important to offer the required services on demand and on time, for example, if players are trying to check their numbers at peak jackpot times when the traffic is quite high. If your service can't handle that demand, it's frustrating for players. With a Cloud solution you can easily scale up, and your services are seamless and fluid. That's certainly one of the biggest advantages: **serving players on demand**. The player experience is absolutely essential, because there's an inherent relationship between the lottery brand and player trust.

Cloud also allows you to frequently update your game content, your websites, features, and so on. At the same time, the Cloud ecosystem enables you with Artificial Intelligence (AI), Big Data, and machine-learning tools. And because you have more computing power and processing speed, you can take advantage of that ecosystem and expand it to **personalization**. We all know how successful Netflix is – that's all Big Data and AI. That kind of personalization can also guide what you offer or don't offer to players, supporting **Responsible Gaming**.

To hear the full discussion, visit [IGT.com/FutureForward](https://www.igt.com/FutureForward).



"Security has always been a critical component for lotteries and for IGT. Cloud providers offer inherent security protections that we can take advantage of, but a move to the Cloud for an IGT solution doesn't mean that we hand over all security measures to a third party. We are still responsible for the design and security of the systems, and we know that we need to continue to provide the strictest controls around security as we always have."

– Rachel Barber, IGT Senior Vice President and Chief Technology Officer Lottery & Gaming

## Lotteries in the Cloud

### Key Drivers:

- Alignment of policy, vendors, operators around Cloud benefits and strategy
- RFPs leaving the door open for Cloud options
- Industry best practice and case studies

### Potential Benefits:

- Improving the product innovation cycle to meet consumer expectations
- Taking advantage of Big Data and AI
- Scalability and Efficiency

## How might Cloud benefit Lottery players the most?



## LOOKING AHEAD

The wide-ranging discussion confirmed that the Cloud is more than hype or clever marketing. The technology is now mature and capable of enabling a new lottery player experience that's more data-driven and more personalized. While the RFP cycle is a key factor, over the next few of years it's reasonable to expect that more RFPs will reflect lotteries' interest in adopting Cloud and new related services.

**For more information on IGT Cloud solutions, contact your IGT Account Manager. ■**