

Agencies Tap As-a-Service Models to Spur Data Innovation





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CAMERON CHEHREH | *chief technology officer and vice president, Dell Technologies*

We live in a world where data is being generated at an exponential rate. For the teams at ViON and Dell, this represents not a challenge but an opportunity for government agencies.

"Many years ago, the tongue-in-cheek conversation was, 'We've entered the Information Age,'" says Cameron Chehreh, chief technology officer and vice president of Dell Technologies. "It was referencing the rise of technology, but actually, I think what we're seeing as a result is the rise of the Knowledge Age and the Situational Awareness Age."

This is because the information and access technology affords has changed the game for individuals and industries across the board.

"We're all carrying an average of 2.5 smart devices with us, all of which are content creators and content data generators," Chehreh says. "So, the information explosion we're seeing is literally historic."

This affords agencies prime opportunities to make use of data to increase situational awareness once paired with artificial intelligence, which can help to analyze and make sense of data. But, as many agencies are keenly aware after having spent the last decade modernizing processes and technologies to adapt to a rapidly changing landscape, that surge of data isn't without its challenges.

For instance, the influx of information adds pressure to agency infrastructure, causing information silos at the edge rather than centralizing in traditional data centers, Chehreh explains.

"There is this enormous pressure to build up edge infrastructure and network infrastructures in order to keep up with the demands of generating and utilizing data," he says.

As agencies look to keep up with infrastructure demands, Chehreh stresses that it's vitally important to rethink the ways that agencies are computing and storing data.

"The focus is really on edge and that's really where that pressure lies in infrastructure. Modernizing at the edge is almost becoming an imperative rather than an option," he says.

The Rise of XaaS

One solution rising to the top is the as-a-service model, which allows agencies to rapidly achieve modernization and, as a result, put their data to work in ever-more-meaningful ways. In fact, the global anything-as-a-service (XaaS) market is expected to increase at a compound annual growth rate of 24% between 2019 and 2024.

This approach incorporates AI across multicloud solutions within the data center as well as in on-premises private clouds. In the past, high-performance computing was out of reach for smaller deployments, but with the new advances in multicloud as-a-service models, the higher capacity for complex advanced analytics and heavier data loads generated by AI are within reach for agencies revamping one part of their infrastructure at a time.

“Especially in the government, you typically see a mission need tied to data,” says Rob Davies, executive vice president of operations for ViON. “We have regional sites, workloads that needs to be handled, but then you also need to be able to bring that data back centrally, because we want to be able to analyze it in real time in order to make it useful for government leaders and warfighters.”

Spotlighting Data Management

It's not enough to have agility with the cloud at the data center — agencies also want agility at the edge, with the capability to deploy data where and when they need it.

While an AI-driven multicloud solution enables rapid deployment and real-time management of data across clouds, it also makes it imperative to have a bird's eye view of the entire data system in place in order to facilitate the data management necessary to maintain a multicloud environment.

Chehreh likens the data management challenges to those of an investment portfolio: When there's money invested in various funds, it's imperative to have a holistic view of the portfolio to ensure return on investment is maximized.

When considering multicloud and data management, it's critical to have a well-structured data management strategy so the appropriate security policies are applied across each one of different cloud environments — whether they are public, private cloud environments or hybrid environments — and that data sets and data structures are accessible to an agency's AI deployment.

It's also vital to get access to the data and the critical metadata associated with it to allow these AI algorithms to work efficiently and effectively, Chehreh stresses.



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Knowing what data needs to be used by AI and when can also help an agency slash costs, according to Davies. And having a proper data management plan for deployment is key, because that operational construct will have substantial impact.

“If you don’t understand the need to make a minimal amount of data accessible to an application, to what analytics I’m running or what AI I’m looking at, and you just throw it all up in the cloud . . . pretty soon, your access fees are going to go up because you didn’t plan what you need,” Davies says.

On the other hand, by laying out the data management framework at the beginning of a project, it can help an agency achieve a solid roadmap, fulfilling 90% of the business planning.

Speeding Modernization

Another significant advantage of the XaaS model is that it can simplify procurement. By eliminating the need to purchase rapidly changing, expensive equipment, the as-a-service option shifts procurement away from the long and tedious traditional cycle to an agile and rapid deployment as part of an agency’s operational funds.

Whereas prudent planning used to include owning the infrastructure, today’s explosive growth of data and technology renders this strategy nearly impossible. On the other hand, as-a-service providers, like ViON, have sought to simplify procurement for the federal government. ViON began by developing and implementing a financial model that would help to enable the acquisition of technology for federal agencies, making it faster and easier for them to update their technology without expensive refresh cycles. What naturally followed was the capability to implement the as-a-service model alongside federal agencies.

“ViON started in the federal business as-a-service, whereas most of our competitors are looking to adapt a commercial offering and make it fed-friendly,” says Judson Graves, director of analytics solutions for ViON. “This is very difficult because their systems are often non-starters with federal requirements.”

By partnering with Dell, ViON has changed the game in terms of the ways federal agencies can stand up new programs with the latest solutions — shifting the timeline to days or weeks instead of months or years.

“When we think of cloud as an operating model and not just as a destination like Azure or Amazon . . . this starts to unlock a lot of power of the ViON’s business model,” Chehreh says. “Because now with as-a-service, I can offer you more than just your primary

compute and storage. I can offer networked, managed services all the way down to a customer end-point, which is very different than a cloud provider.”

The teams have already witnessed first-hand the impact this strategy has had on several federal agencies, including the U.S. Patent and Trademark Office, the National Institutes for Health and the U.S. Army. In all, ViON serves 22 federal agencies.

Among them is the U.S. Geological Survey, whose adoption of the edge-to-data-center model offered the agency the ability to intake data in the field and immediately have it available within the multicloud system.

“You imagine the edge analytics, the power that they can gain from that — and then keeping that data over time when you’re talking about environmental studies and environmental quality, that can have a substantial impact on the quality of our lives,” Davies says.

As agencies see the advantages of as-a-service and many recognize the true power of a hybrid multicloud model, not just in terms of AI and analytics but across the data center, ViON and Dell are seeing an uptick in the speed of deployment for as-a-service.

“As-a-service really does drive innovation,” says Graves. “It can help break that logjam of how agencies can stand up new solutions.”



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can help your agency innovate.