Think Big to Realize Lasting Results with AI

Artificial intelligence (AI) can help make small improvements to discrete agency operations, or it can be a game changer that helps agencies meet their missions in ways we can't imagine today. David Kushner, Executive Vice President at enterprise IT solutions provider ViON, to discuss how agencies can move beyond narrow use cases to achieve long-lasting, impactful change with AI.

Question: There are many so many use cases for AI technology, from detecting and assessing cyber threats to building knowledge libraries to improving customer service. Where can AI deliver the most benefit for Federal agencies in the short and long term?

Kushner: Use cases permeate the Federal government – from identifying people, places, and things for defense agencies to tracking COVID-19 cases and predicting weather for civilian agencies. Right now, agencies tend to focus on narrow use cases, like predictive maintenance on aircraft, and a single outcome. Those things can be valuable, but typically agencies are not investing much in them. They're temporary and small.

The real, long-term strength of AI is in all-encompassing capabilities that can support multiple use cases. We may want to achieve a certain outcome, but the data may tell us something completely different. It may surface five other outcomes that we never thought about – and those outcomes can help us advance the agency mission or advance the

technology. So let's build real AI practices. Let's hire and train data scientists. Let's build systems that have multiple uses. Let's understand how to build a model, train it, keep it up to date, and use it in our everyday lives.

From White House leadership on down, they're promoting the idea that government needs to be a leader in overall capabilities, not just one-off projects that lean on a vendor. ViON wants to encourage that kind of innovation. That's the path forward to where we want to be as a country.

Question: What do Federal agencies need to help achieve the goals laid out in the national AI strategy?

Kushner: AI has become very successful when agency analysts who understand the agency's data and mission then train on machine learning. Agency time and money is well spent training existing staff or retooling roles before hiring. If you don't understand the data, the use cases, and the agency's business processes, you can't move forward with AI. The world's greatest AI system wouldn't help.

Question: For agencies that have little AI experience, what are some of the early steps they can take to kickstart their use of the technology?

Kushner: Our first AI conversation often ends up being about storage, data access, and understanding your data – because massive amounts of data make AI models accurate and allow continuous improvement. Without that, you're just spinning your wheels. We always tell organizations to start small and go as slow

or as fast as their expertise and infrastructure allow.

Sometimes we ask an agency: "Where's your data?" And they say, "We're not really sure, and we're not sure if you're allowed to access it or combine these two data sources." That can kill an AI project or cause at least a six-month delay.

Question: What are the biggest barriers for Federal teams to overcome as they implement AI pilots and then try to expand those pilots enterprise wide? How can they overcome those barriers?

Kushner: Outsourcing is a very tempting path, but that approach can become a sandbox. The contract goes for a year, and when it's done you haven't built any capabilities internally. Even agencies that are dedicated to AI get caught in that cycle. That's why some of the larger agencies are appointing AI information officers who understand how AI aligns with the agency's mission and what success looks like.

We're also seeing more companies moving away from the "black box" approach to AI. They are working on making AI frameworks and tooling systems more universal, which makes it easier for government and industry to do machine learning and deploy models. This approach is going to become more and more popular.

Question: Increasingly, agencies are moving operations to the cloud – but you advocate for AI production outside of it. Let's explore that idea.

Kushner: For the lowest cost and greatest benefit, an AI production environment should be on premises or behind a firewall in a colocation facility because of the scale and volume of data. I always say develop in the cloud and operate at scale on premises.

That's because AI systems are demanding and compute heavy. They need large amounts of data and need it fast. AI systems tend to be 100 percent in use for a single use case for hours, days, or weeks. They don't align well with the as-a-service cloud model of paying for the flexibility of temporary usage.

We encourage agencies to own the systems they'll use 90 percent of the time. That can be in a colo, on prem, a straight buy, or a subscription. A recent cost review we did for a customer showed that owning all the equipment outright and using it for four to eight years would cost less than a quarter of what they planned to spend on cloud.

Question: How can ViON support Federal agencies in adopting and implementing AI solutions? What sets ViON apart from other solution providers?

Kushner: We design and implement AI solutions across a huge variety of vendors. We partner with every major OEM and many smaller AI shops. In fact, we have brought several small, innovative AI providers into the Federal market. We're vendor agnostic. We look at the customer's challenge, infrastructure, and expertise as well as the outcome they're trying to accomplish, and then we pick the right solution. We have the experience and the expertise in AI and machine learning to be able to make that determination. We also have deep experience in managing data, securing it, and making it accessible for complex initiatives.

Our customers appreciate that we drive outcomes more than technologies. We help the agencies that want to roll up their sleeves and build capability – not just pay a million dollars over five years and have somebody else do it. We do pilots and we have internal labs. We're still hands on keyboard alongside our agency partners in their data centers. A lot of interesting companies are doing good work in AI. But a lot of them are an idea and a webpage, and they provide support remotely. We are actively involved in ensuring mission success. That's why we incorporate the agency folks who will take ownership of the solution, even when they don't feel like they have the experience to do it. When we get buy-in from them, the agency is more successful in the future.