

[New Government AI Initiatives Showing Stellar Results](#)

Various agencies are finding success in early use cases for AI, machine learning and RPA.

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Artificial intelligence, machine learning and robotic process automation are at the forefront of emerging technologies for both the public and private sectors. These nascent technologies promise to not only streamline the collection and processing of large data sets, but also automate many of the day-to-day tasks of IT offices, carry out astrophysics calculations in seconds and enable assistive medicine that can monitor patient health and recommend treatment operations, to name a few proposed use cases.

Some government innovators in this area are already using predictive algorithms and other AI precursors. Neither government nor industry has arrived at a single definition of what artificial intelligence looks like – and what separates it from the predictive algorithms that currently exist – nor has either agreed upon a timeline for when artificial intelligence will enter the marketplace, as government leaders noted at the ATARC artificial intelligence working group launch July 15. While some predictions estimate AI is still a decade away, NASA and its industry partners predict AI is much closer – three to five years, said John Sprague, the acting associate CIO for NASA’s transformation and data division.

Sprague detailed several use cases for AI that his division is already testing. In one example, NASA has built a “constant digital employee” named Washington G. Bot, which can perform some automated tasks and assign others to employees to optimize workflow. In another, the Langley Research Center has an automated system to collect scholarly articles and other research on relevant technologies and issues such as carbon nanotubes and space radiation. While neither of these use cases may be true artificial intelligence, they already demonstrate potential uses for RPA.

Sprague also discussed NASA’s AI initiative for experimental projects. Each project receives about \$30,000 in funding and runs for approximately 90 days, he said. Last year, NASA funded four such projects; this year, it had already funded and tested four projects by July. Sprague projected that NASA would be able to fund several others throughout the second half of 2019.

In the long term, NASA will use AI to transform its capabilities in outer space, Sprague explained. The next Mars rover, due to launch next year, will be not only self-driving, but also able to schedule its own collection and analysis activities, including what it targets.

Other AI working group leads cautioned implementing AI and RPA merely for their own sake.

“We’ve got to figure out how to inject emerging technologies [into contracts] without contributing to scope creep,” said Keith Nakasone, deputy assistant commissioner for acquisitions in GSA’s Office of IT Category. His office is looking to industry to learn from existing use cases and whitepapers.

For agencies that are wary of allocating scarce resources toward the technology, engineers and other employees who act on their own initiative can lead the way. Alexander Measure, an economist at the Bureau for Labor Statistics, said the agency was skeptical in 2010 and 2011. That attitude changed after economists and others began taking massive online open courses on machine learning and big data, then applied the knowledge to their projects, he added.

Although the bureau keeps human reviewers in the loop to ensure the new processes work as intended, innovators’ knowledge in machine learning has transformed the agency’s data-processing capabilities, especially when it comes to surveys and other natural-language data.

“The environment now is very pro-AI,” Measure said.

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