

# DOD's Journey Towards Intelligent Automation

There's a lot of movement in DOD to expand and build applications using AI and ML technologies. That's Intelligent Automation. That's exciting.

**W**hat started three years ago as a Robotics Process Automation (RPA) program has evolved into what we now call Intelligent automation (IA).

At the outset, we looked at the RPA opportunity space within our financial management programs to see how can we improve our processes. It quickly morphed beyond that so we could not only build it for our financial management processes, but could we also build a shared service, a platform that could help promulgate this technology across the DOD.



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Right out of the gate we partnered with other organizations inside of DOD. For example, Army was one of our initial partners and we stood up an RPA infrastructure on our shared service platform housed on Advana, which is DOD's advanced data analytic platform that any group within DOD

interested in using RPA can come and connect to the platform. It makes it a lot easier; it removes many — but not all — of the barriers and challenges that groups are facing. Now they can start their programs and or mature them with have better management oversight of their programs.

Today we have 25 different tenants on the platform across DOD leveraging the RPA service platform. That's been a really good success story and we are planning to have more than one RPA vendor offering on that platform making it a really good growth opportunity. Plus we really haven't had to advertise the service that much. Word has spread.

We started with RPA, but we are very aware that RPA has limitations as to what it can do. RPA is great for those standard repetitive tasks. That was apparent right out of the gate. But many applications are not going to be solved with RPA. A lot of them require additional technologies such as AI and ML.

So recently, we partnered with the Joint Artificial Intelligence Center (JAIC) to do prototypes of how can we weave in ML in conjunction with RPA to build that continuum to develop more advanced automation solutions that go just beyond RPA technology.

The bottom line is we are going to see a lot of movement in DOD to expand and build applications using AI and ML technologies. That's exciting.

### Data Entry Success

A big success is the prototype that we partnered with the Defense Innovation Unit and the JAIC to build and we're actually in the process of deploying this into production.

One of the very first automations we built for RPA was actually automating the data entry into an accounting system to clear unmatched transactions. And even though it was just the data entry piece, we soon found this was saving a significant amount of time for the groups that were using it.



Erica Thomas spoke at the Federal Executive Forum on Federal News Radio

At the same time, we recognized there was still a lot of time and effort being spent doing the research for identifying what is the corrective action that needs to happen; what is that entry that needs to occur in the accounting system to clear that unmatched. We recognized there were additional opportunities to use other technologies to make a more robust impactful solution for our agencies.

Our action plan was to use ML and a lot of the data that is already consumed on a regular basis on Advana. We built models that can predict — based on how prior unmatched transactions were cleared — how we can clear new unmatched transactions that have come into the queue. So that was our initial use case. We've built that out, we've proven it and now we're in the process of deploying that out to defense agencies in DOD and we're excited to get that into the hands of the users.

### Future Vision

We have a number of things in the pipeline, but there are three that I'm most excited about.

First is removing additional barriers. We have a shared service platform and that helps eliminate some of the barriers of entry for people getting started like RPA. But we know there is still more so what can we do there as a shared service to eliminate some of those additional challenges. One thing we recently did is deploy an unattended RPA infrastructure that again is available for other groups to use.

We also are looking at potentially piloting a capability where we can offer virtual work spaces within the Advana environment for both development and run time, helping groups develop their own virtual environments.

I think the second area is really just expanding and getting more use cases that are going beyond RPA. What can we do with machine learning in conjunction with RPA and AI, but potentially even getting beyond RPA. Maybe we have some use cases that don't that don't have any RPA components. I think we'll be building that inventory and hopefully we'll be having more pilots, more deployments of solutions that expand into intelligent automation.

Then the third area is growing the inherent capability within our workforce. While our industry partners are always super critical and will remain very important, we need to adopt and embrace emerging technology and ingrain that in our government workforce and culture. Training is paramount.

I see a lot in this space now where we've got a pretty heavy reliance on contractors; but I think as we embrace this technology across the department in DOD there's going to be further adoption; and again ingraining that within our workforce and getting folks trained and comfortable with that. ■

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