

# The Impact of Emerging Technology on AI Within the Federal Government

Highlights from the March 30, 2022 Roundtable

In a recent roundtable discussion hosted by the Advanced Technology Academic Research Center (ATARC) in partnership with **Amazon Web Services (AWS)**, government IT experts shared the various challenges and solutions they have encountered with the emergence of artificial intelligence (AI) technology and advanced data analytics (Data). The group also discussed where they see AI and Data heading in the Federal government, and what steps should be taken for these emerging technologies to be fully accepted and adopted.

Discussion additionally flowed onto how the COVID-19 pandemic influenced the advancement of some technology. Over the past three years, Federal IT met new challenges with the rapid shift to remote and hybrid work as well as dealing with supply chain issues. AI and Data have greatly been impacted by this shift to the “new normal”. Despite these challenges, new and emerging technologies have assisted in overcoming some of the hurdles of integrating, updating, and training new employees on AI and Data.

## Recent Success with Emerging Technology

Roundtable participants reflected on the current workforce’s willingness to better understand new technology. It was noted that more employees are curious about AI and ways to use the technology in research and operations. One panelist shared that a survey was sent out to help gauge interest and levels of understanding of AI and Data within the agency. This information is useful to both determine levels of training required and to help communicate the need for training.

Another participant shared that their agency has been quite successful in creating a recruitment pipeline of interns and reservists with critical AI skill sets. A young generation of AI talent is critical to the future success AI and Data integration and implementation. Several roundtable participants discussed the creation of AI Accelerator programs within their agencies designed to upskill the existing workforce on new technologies.

There is a high demand for not only these skillsets, but also for continual training and re-certification of the workforce.

While not all Federal employees need the same, high-level training, there needs to be a way to democratize the use of AI by putting advanced technology tools into the hands of those without an AI background.

Roundtable participants agreed that much of the workforce does not need to understand technology or code to use AI effectively. There needs to be a clear distinction in the training of AI to different users to provide them with enough knowledge to recognize and respond to technology faults without becoming developers. Most agencies still need to identify what level of education is needed for each type of user.

## Overarching Goal

To reframe the narrative surrounding AI by showing users that AI is a tool to make jobs easier – and not a tool to replace them.

The goal among roundtable participants is to reframe the narrative surrounding AI by showing users that AI is a tool to make jobs easier – and not a tool to replace them. Leaders should be expressing the value of being upskilled to create excitement about the integration of AI and Data within the workforce.

## COVID-19 Impact on Emerging Technology

Participants agreed that the COVID-19 pandemic accelerated the integration of technology, created efficiencies, and helped to reshape workplace culture around accepting and adopting new technology.

Several shared that due to the pandemic and shift to remote work, they have identified opportunities to improve processes and create efficiencies with emerging technology. One participant shared that a cumbersome paper-only process was quickly improved by connecting two disparate



systems for better record integration. Another participant shared that their organization was forced to completely redesign the hiring process to allow for remote hiring. Yet another participant shared that the pandemic showcased their ability to respond quickly to emergencies. Another organization developed robots to replace humans in environments that required human interactions during lockdown.

## Signs of Success

- ❖ Workforce's willingness to better understand new AI technology
- ❖ Recruitment pipeline of interns with critical AI skill sets
- ❖ Accelerator programs to upskill existing workforce
- ❖ Continual hands-on-tools training and re-certification of the workforce

Other panelists shared indirect effects of the pandemic on shifting cultural paradigms within the office. Meetings that once took place at a classified level were suddenly forced to be conducted virtually at an un-classified level. This shift created an environment where decision-makers were in the same room as advisors and managers, making the meetings more efficient and productive.

All agreed that without emerging technology, it is unlikely any agency could continue work outside of the office during the pandemic. The shift to remote work also happened at a time where people were more comfortable and open to learning new technology.

## Emerging Technology Integration Challenges

One of the concerns most expressed by the workforce is the misplaced idea that the proliferation of AI will replace jobs. Panelists discussed ways to change the narrative to one where AI is a tool to support existing work, intended to make work easier and more enjoyable. It was noted that personnel often do not realize that they are already using AI, as many programs use algorithms.

Panelists agreed that it's important to begin raising awareness of what AI is and what it can do for the Federal government. Equally important is to identify what resonates with the workforce when upskilling and to meet people where they are in their understanding of technology, to create successful training and education programs.

Getting organizations excited about AI is an important first step but note that the development and integration of AI will come with time. Considerable work still needs to be done by way of upgrading backend systems and building new infrastructure to fully integrate AI and Data.

Panelists consider AI as a constellation of technologies and a possible tool among many to solve problems, adding that correctly matching a problem with an AI type is critical and remains a challenge. It is important to always start with the problem, before determining if AI is the right tool or solution.

An audience participant at the roundtable asked for guidance from the expert panelists on where to receive more practical experience in AI as someone without a technology background. Discussion turned to the importance of offering opportunities to the current and future work force to have hands on experience integrating AI into business operations. As training and skilled talent become more prevalent, agencies will need personnel mechanisms to track where available talent is located, especially if individuals receive training without a formal degree.

AI opens the door to endless opportunities. With a mission to deliver Federal government services to more people, faster and cheaper, agencies must integrate AI into all aspects of administration, including budget and procurement. Agencies should also work on shifting culture towards a new way of thinking about how government could operate.

There is incredible amounts of data already available to fuel AI. We are currently in the age of AI development, where all the work conducted in labs over the past decade is starting to be implemented in real world settings. Agencies should work towards AI capability development by future casting the needs and goals of the department through the lens of advancing technology and improving processes. On a conceptual level, leaders will need to pay attention to the ethical use of AI, and how AI should be written into current and future policies. Contact us for more information [here](#).