

# Innovation and Digital Transformation

Summary of Roundtable, hosted by ATARC in October 2022

WHITE PAPER

In a recent roundtable hosted by the Advanced Technology Academic Research Center (ATARC), topic experts across Federal agencies came together to discuss how emerging technologies have transformed government, and the hurdles agencies must overcome to achieve modernization.



“The real challenge for us is knowing the right questions... We didn't always know what to ask for.”

*Roundtable Participant*

While the term “digital transformation” is meant to spur change, Federal agencies are seeing that change play out at different speeds and in different ways across the organization. Modernization through digital transformation requires new ways of working, new consumer behaviors and revamped business processes in all areas – not just in IT. While the COVID-19 pandemic forced many agencies to adopt new technologies and ways of working, digital transformation across the entire Federal government remains a slow, yet incremental process.

## Current Status of Digital Transformation

As agencies consider what digital transformation means for them, many view modernization efforts holistically and in anticipation of emerging technology, such as mobility and AI. Agencies are in the process of identifying the tools, shared devices, consulting expertise, or other support services they might need to conduct their work effectively in the context of new technology. Understanding the correct questions to ask technology experts in the context of use cases also plays a part in how quickly agencies are able to transform digitally.

Roundtable participants agree that all aspects of agency processes should be considered in the digital transformation journey, not just those in IT.

While few agencies have the resources to innovate and operate software factories like those in the private sector, many more struggle with the effects of outdated legacy systems. However, roundtable participants maintain that it's not technology holding agencies back from modernizing, rather it's adapting to new ways of working and meeting requirements without relying on legacy systems. For agencies to fully digitally transform, all use cases, processes and requirements that rely on legacy systems should be evaluated to determine if they are worth modernizing and whether they remain a critical part of the agency's mission.

## Emerging Technology Changing IT Infrastructure

What was considered “emerging” in the private sector years ago is just now reaching government agencies as they race to catch up. While the private sector has blown past things like zero trust, quantum computing, blockchain, RPA and machine learning, many agencies are just beginning to immerse themselves in these technologies.

A good example is the Internet of Things (IoT) phenomenon. With so much data available as a result of IoT, agencies will need to not only make sense of the data, but also determine their authority of that data. Agencies will need to quickly adapt policies surrounding IoT data and to configure infrastructure to meet the influx of data from IoT services.

While adoption may be slow, the speed at which technology is changing is forcing agencies to become more adaptable, more

responsive, and more flexible in their approaches to infrastructure, processes and policies. Roundtable participants reiterate that understanding and talking about emerging technology is not a topic that should be reserved for technologists. Everyone, regardless of position, will need to be a part of the government's digital transformation journey.

## A Need for Better Data Interoperability

As more agencies collect data and as data becomes more readily available, roundtable participants acknowledged a need for better data exchange capabilities among agencies. In their attempts to create modern data ecosystems, agencies are running into burdensome administrative approvals and other business hurdles that impact efficient data interoperability.



“You don't have to be a deep subject matter expert in the technology to understand how you can leverage it in your organization.”

*Roundtable Participant*

Other participants shared concerns with data quality, and the challenges working with data owned by other agencies that are riddled with errors and inconsistencies. Sometimes the data doesn't contain errors, rather agencies collect data and define terms differently than other agencies. Having dedicated persons assigned in each agency to manage data quality will become more important as data interoperability improves.

## Pandemic Effect on Digital Transformation

The pandemic became a great forcing function for some agencies to adopt not only new technologies, but also to adopt new ways of working in the fast moving mobile environment. Perhaps one of the biggest shifts roundtable participants have seen is with talent recruitment. Now agencies are open to a larger, more diverse pool of talent than they had been before the pandemic. While most consider the influences of the pandemic on digital transformation positively, one participant shared challenges with managing and accessing data pulled into data lakes during the pandemic. Roundtable participants reiterate the challenge is not with technology, but

with the changes to workplace culture that must occur to achieve full digital transformation.

## Hurdles to Overcome

Roundtable participants recognize that in order to fully embrace modernization, agencies and their people will need to shift their perspective on how technology plays a role in their day-to-day work lives. By shifting to a human centered design perspective, many agencies are beginning to view technology as a tool to improve service delivery and achieve agency mission, rather than a mandated burden. But achieving this perspective shift is easier said than done, as many agencies remain dependent on legacy systems to meet mandated requirements.

Engaging everyone, not just technologists, in the process of human centered design approach to technology adoption is also something roundtable participants are hoping to see more of. Currently, much of the focus when adopting technology is on effects to performance and deliverables. Roundtable participants argue that by asking customers what they need from technology, performance and deliverability will follow.

By upskilling and providing awareness of new technology across the entire workforce, more people will be able to connect the dots and provide better use cases. Agencies also need to begin proactively participating in external technology innovation groups and organizations in order to stay ahead of new technology advancements.

## Key Take Aways:

- ❖ Digital transformation includes the entire organization, not just IT departments
- ❖ Data interoperability remains a problem for most agencies
- ❖ Engage everyone in a human centered design approach to technology adoption



Check out Digital Transformation themed [events](#) and [Working Groups](#) facilitated by **ATARC** to help solve pressing challenges within Federal Government with the help of emerging technologies.