



# Building a future-ready IT infrastructure

Modernization efforts are gaining momentum as the pandemic spurs progress in key areas



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**T**HE SHUTDOWN OF government offices and the reprogramming of funds in response to the coronavirus pandemic have helped jump-start many IT modernization efforts that had been lagging. Now agencies are harnessing new capabilities and expanding existing ones to speed the way they achieve their missions and deliver services to the public and other constituents.

The government's goal should be to build an IT infrastructure that is future-proof, flexible, scalable and adaptable. That infrastructure must bridge private data centers and public clouds and scale up and down for different classification levels, specifically within the Defense Department and the intelligence community.

## Telework, modern apps and artificial intelligence

Agencies are making progress in several key modernization areas, most recently in workforce mobility. Teleworking accelerated tremendously due to the pandemic. For example, the Department of Veterans Affairs increased the number of mobile devices for clinicians from about 80,000 to 220,000 in March, when the pandemic began to have an impact. Also in March, a combatant command with strict security requirements was able to shift thousands of onsite workers to remote work almost overnight.

In addition to mobile devices, agency users need

modern apps that are designed to run on any cloud. Many agencies are creating software factories so they can build their own applications based on containers and microservices. That approach gives agencies a tremendous amount of flexibility to add features and change their applications almost in real time – rather than the weeks, months or even years it takes to update agencies' traditional, monolithic applications.

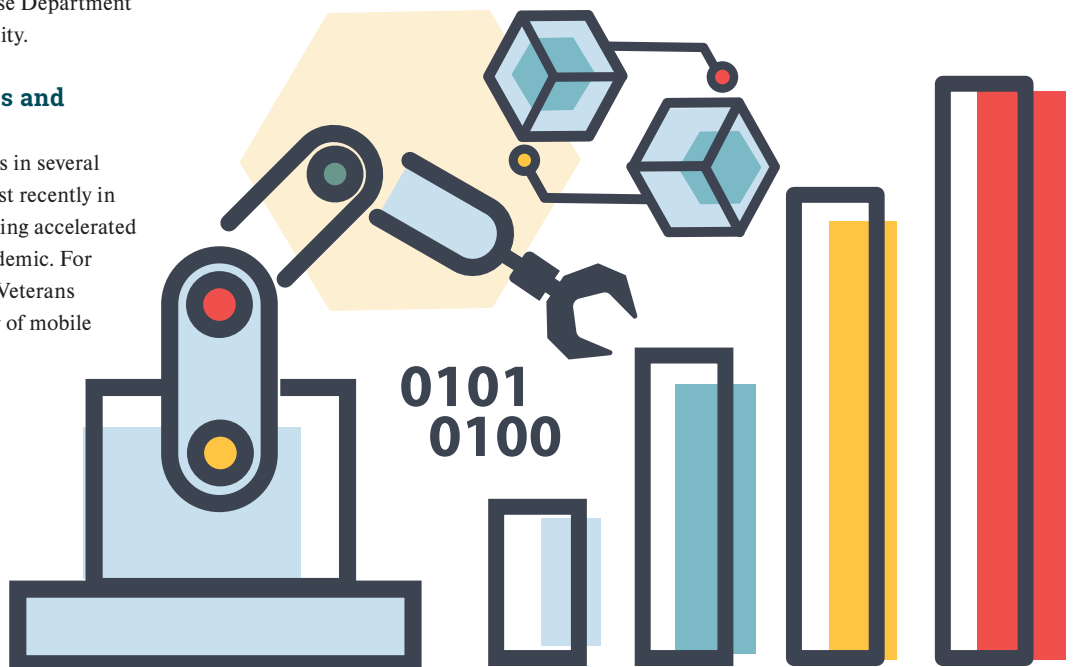
Ultimately, agencies need to be able to put data into the hands of mission owners, which is why many are developing artificial intelligence and machine learning initiatives. Those initiatives must run on

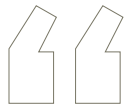
modern applications that are cloud native, rapidly created and updated, and extremely secure.

In one of the most notable projects, DOD's Joint Artificial Intelligence Center plans to build a cloud platform as a service that DOD organizations can use to create their own AI and ML tools and software.

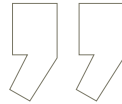
## Understanding the value of modernization

Cybersecurity needs to be front and center in any modernization strategy. Agencies can no longer afford to buy bolt-on security tools or niche solutions for a unique





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purpose. Therefore, rather than looking at traditional cybersecurity tools, agencies should explore solutions that allow them to make security an intrinsic part of their infrastructure.

Zero trust is another approach to security that is gaining ground. DreamPort – a cyber innovation, collaboration and prototyping facility that works in conjunction with U.S. Cyber Command and other DOD organizations – has

developed and tested a comprehensive zero trust architecture that officials are now working on putting into production. If successful, that framework would be extended throughout DOD.

CIOs and IT staff typically understand the value of modernizing their agency’s IT infrastructure, and most agencies have developed strategies for achieving that goal. Executing against those strategies can be challenging, however, and many aspects

are initially costly, complex and time-consuming. But the stakes are high because modernization efforts have profound implications for all aspects of government operations.

Therefore, it is essential that leaders at all levels of government support and push for modernization. ■

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