

# Capitalizing on **cloud's** transformative nature

Cloud adoption can be a complex undertaking, but it is essential for unlocking the speed and flexibility necessary for modern digital enterprises

**D**uring the pandemic, government employees shifted to remote work, and the demand for digital services skyrocketed. To meet those needs, agencies turned to the cloud. The experience gave them a taste of how essential the technology is to modernization efforts.

In a recent survey of FCW readers, 87% of respondents agreed with the statement that cloud technology is a foundation for modernization at their agencies. Furthermore, “cloud solutions: software as a service” is No. 1 on the National Association of State CIOs’ [top 10 priorities](#) for technologies, applications and tools in 2022.

On-premises systems cannot match the speed and flexibility of the cloud, making it essential for the use of emerging technologies such as artificial intelligence, data analytics and edge computing. In fact, 44% of FCW’s survey respondents said artificial intelligence was of particular interest to their agencies, and 36% cited edge computing.

Cloud allows agencies to keep pace with commercial innovations. “Cloud adoption is no longer seen as one path to greater efficiency, but as *the* path to IT modernization for new cloud capabilities and for existing on-premises infrastructure,” Forrester analysts

wrote in a recent [blog post](#). “It is the benchmark capability for IT infrastructure in the U.S. today.”

## Enabling broader use of cloud

The shift to cloud-based systems often requires a corresponding shift in budgets, employee skill sets and IT management techniques. When asked what steps would enable broader use of cloud technology at their agencies, 64% of FCW survey respondents said building a cloud-savvy IT workforce, and 52% said shifting the way they pay for technology to accommodate the nature of cloud spending. The No. 1 answer at 79%, however, was revamping their

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## Cloud by the numbers

Sources: Bloomberg Government, FCW, MarketsandMarkets

**\$8.5B**

Federal government’s projected annual cloud spending by fiscal 2023

**\$77.5B**

Projected size of the global cloud security market in 2026, up from \$40.8 billion in 2021

**87%**

FCW survey respondents who said cloud is a foundation for modernization at their agencies

**68%**

FCW respondents who said employee productivity is a cloud-enabled benefit of particular interest to their agencies

approach to managing a mix of on-premises and cloud-based systems.

Hybrid environments blend in-house legacy systems with cloud services, while multi-cloud environments are spread across many cloud platforms and providers. Hybrid environments will likely be the reality for most agencies. In a recent [NASCIO survey](#), 89% of respondents said hybrid cloud was their ideal cloud state, which mirrors the 89% who said their states still had mainframe computers.

Deciding between those two approaches is just one element of an agency's larger cloud strategy and even broader strategic plan "to ensure that all elements of the IT infrastructure work together to optimize efficiencies and effectiveness," according to the General Services Administration's [Multi-Cloud and Hybrid Cloud Guide](#), released in September 2021.

### The promise of better security

When asked what cloud-enabled technologies and benefits are of particular interest to their agencies, FCW survey respondents overwhelmingly chose cybersecurity at 87%. Due in part to the growing sophistication of cybercriminals and the increase in bring-your-own-device workplaces, MarketsandMarkets has projected that the global cloud security market will surge from \$40.8 billion in 2021 to \$77.5 billion by 2026.

Although GSA's guide notes that agencies can achieve the same or even greater security in the cloud, the complexity of hybrid cloud environments can increase the attack surface. "If architecture is configured incorrectly,

security risks increase," the document states. "To protect against security threats, agencies need service visibility and strong automated governance controls." The guide also stresses the need for centralized management, security guardrails, shared processes and a more versatile IT workforce.

Cloud technology plays a pivotal role in security because of the relative ease of updating cloud systems with the latest innovations in that area. Furthermore, the cloud industry is responding to government concerns about ransomware and other security threats by building robust tools for protecting data while also enabling data analytics at a broader and deeper scale than is possible on premises. That's because rapid processing power and massive volumes of data are necessary for technological advances such as artificial intelligence and modern app development.

In fact, the need to build secure, modern apps more quickly is behind the Defense Department's decision to reposition its cloud strategy. In February, officials released the [DOD Software Modernization Strategy](#) as a subset of the Digital Modernization Strategy and the latest evolution of DOD's Cloud Strategy. Officials wrote that although "the need to transition from disparate cloud efforts to a structured, integrated and cost-effective cloud portfolio remains the department's intent, [the Software Modernization Strategy] sets a path for technology and process transformation that will enable the delivery of resilient software capability at the speed of relevance."

### The journey to innovation

In terms of civilian agencies, no discussion of cloud would be complete without mentioning FedRAMP, the federal government's program for authorizing cloud products and services. It has played a central role in boosting agencies' confidence in cloud technology and speeding adoption. The authorization process, however, has been criticized for being unnecessarily lengthy, and officials have taken a number of steps to address those concerns. Most recently, they [announced](#) an effort to standardize and streamline the review of authorization packages through the use of the machine-readable Open Security Controls Assessment Language.

Determining an optimal cloud strategy can be daunting for agencies. Yet regardless of the path they choose, the end goals are the same: modernization, innovation and better security. In other words, cloud is part of the journey but not the destination.

In a [press release](#) announcing Gartner's projection that worldwide public cloud spending would reach nearly \$600 billion in 2023, Research Vice President Sid Nag wrote: "IT leaders who view the cloud as an enabler rather than an end state will be most successful in their digital transformational journeys. The organizations combining cloud with other adjacent, emerging technologies will fare even better." ■