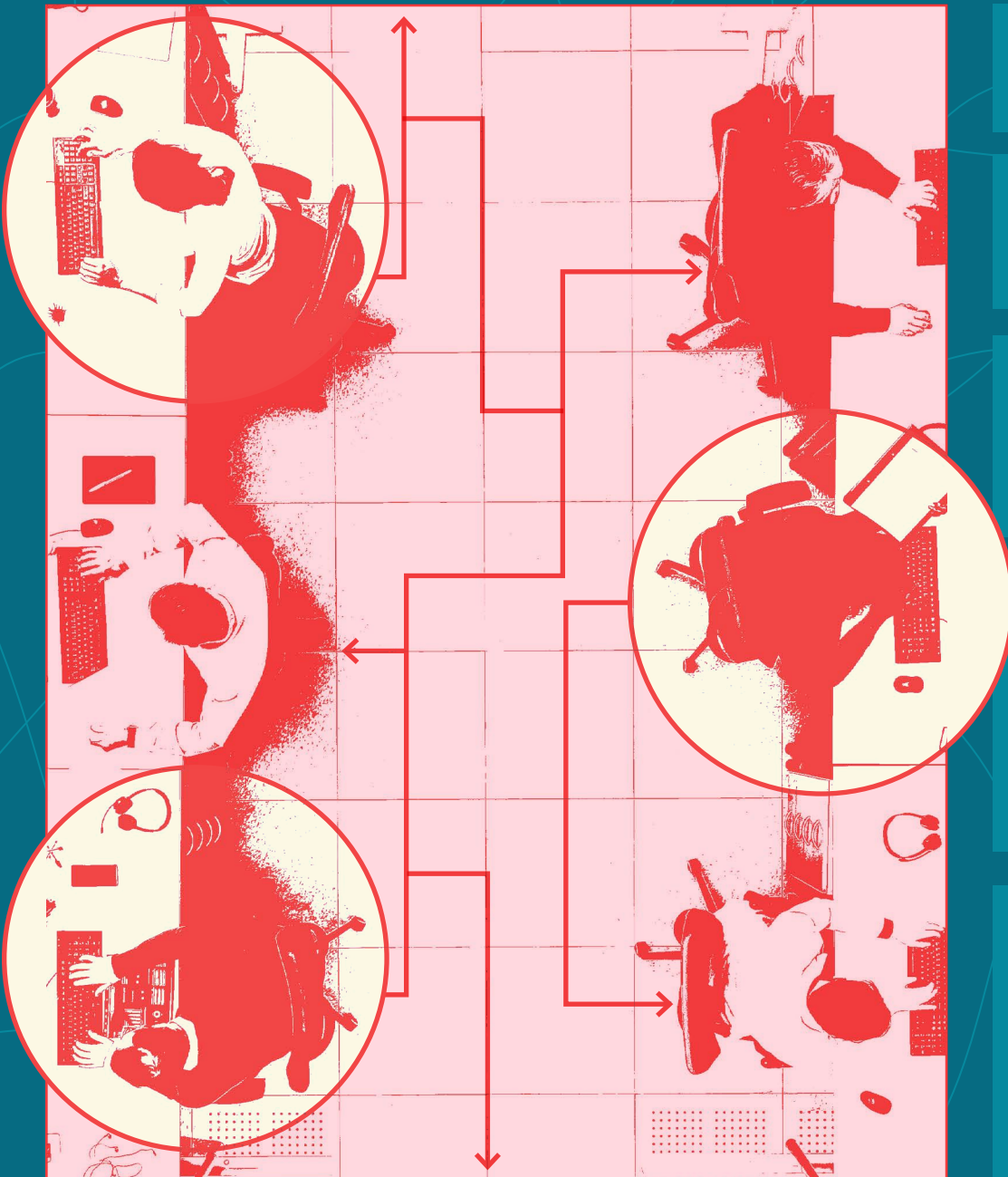


HOW TO BE A **PIVOT-READY** ORGANIZATION



A

GOVLOOP

GUIDE



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INTRO



Recent history has made clear that agencies can't anticipate future mission and IT requirements...but that doesn't mean they can't be better prepared for the unknown.

Cloud services — namely, as-a-service solutions — can help agencies become future-ready and free from technical debt. By transferring some or all their digital needs to a cloud provider, agencies can liberate themselves from hands-on management of complex IT infrastructures.

This guide will make sense of the cornucopia of “as-a-service” products — including everything, or anything, as a service (XaaS) — and will offer strategies to prepare organizations and their employees for cloud-based transformation.

And because as-a-service options require a new approach to funding and procurement, we explore their impacts on agency budgets. We answer the question, are as-a-service products ultimately cheaper?

With tangible advice from experts who've shepherded cloud-based changes through their agencies, these pages are your guide to preparing for tomorrow.

ANYTHING EVERYWHERE ALL AT ONCE: AN XAAS PRIMER

More than a decade after the emergence of cloud computing, maybe it's time for government agencies to get out of the business of managing their own IT infrastructures.

That's not to say they can put their data centers up for sale on eBay; for the foreseeable future, they will need to keep many applications and datasets on premises. But increasingly, they can buy core components of their IT operations as cloud-based services, relying on industry vendors to manage the underlying infrastructure. The Air Force has bought into this vision, launching a program called Enterprise IT as a Service (EITaaS), which eventually will cover three areas of IT operations: end-user services, networking, and compute and storage. The Air Force launched the program's first phase, known as Wave I, earlier this year, awarding a contract to a team led by CACI.

"This award marks a major milestone in transforming Air Force Enterprise IT into a more modern and efficient service," said Col. Justin Collins, Senior Materiel Leader, Enterprise IT and Cyber Infrastructure Division, in a [statement](#). "In addition, it will allow Airmen to shift their focus from day-to-day IT operations to warfighting initiatives and imperatives."



XaaS: Think Bigger

But EITaaS is just one instance of a broader vision sometimes referred to as XaaS — everything or anything as a service.

With XaaS, the goal is to shift to an as-a-service approach for as many IT services as practically possible. This approach has several overarching advantages, experts say:

- **Faster deployment.** Typically, adding new applications means buying and installing new equipment in the data center, which can be a lengthy process. With XaaS, you simply sign up for a service, much as you would download an app on your phone.
- **Better scalability.** In the same vein, it's easier to accommodate a surge in demand for a particular service. You pay more as long as the surge lasts, then scale back when it's over.
- **Reduced data center overhead.** Because the vendor is responsible for managing the underlying infrastructure, your IT staff does not need to manage new equipment and the associated costs of power and cooling.
- **Built-in tech refresh.** When you buy something as a service, you pay the vendor to meet specific performance metrics. They are responsible for keeping the infrastructure up to date so that they can meet those metrics.

3 Basic as-a-Service Models

In general, cloud-based solutions are deployed in one of three models. Here are the key attributes of each, according to GSA definitions.

Software as a Service (SaaS)

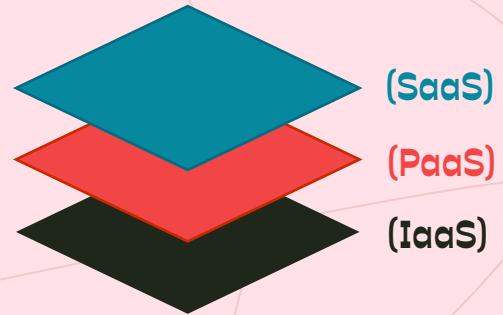
- A commercial application runs on commercial cloud infrastructure.
- The application is accessible through either a thin-client interface, such as a web browser (e.g., web-based email) or a program interface.
- The agency does not manage or control the underlying cloud infrastructure (e.g., the network, servers and operating systems) or, in most cases, the application configuration settings.

Platform as a Service (PaaS)

- An application that the agency develops or acquires runs on commercial cloud infrastructure using programming languages, libraries, services and other tools that the cloud services provider supports.
- The agency does not manage or control the underlying cloud infrastructure.
- But the agency does control the deployed application and possibly the configuration settings for the application-hosting environment.

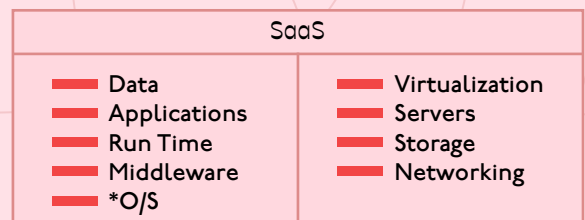
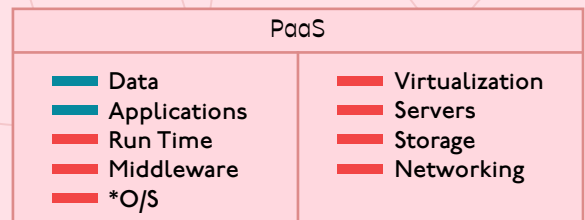
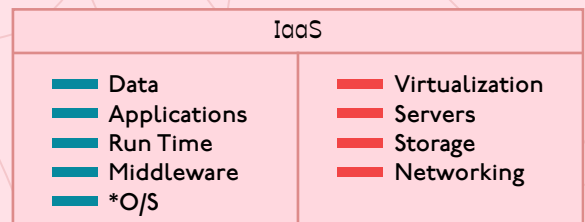
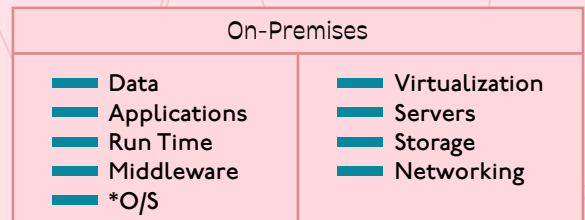
Infrastructure as a Service (IaaS)

- The agency acquires storage, networks and other computing resources from a cloud services provider.
- The agency can build a virtual environment where it can run applications, operating systems and other software.
- The agency does not manage or control the underlying cloud infrastructure but has control over operating systems, storage, and deployed applications, and possibly limited control of select networking components.



Different Approaches to the Cloud Have Different Scopes of Adoption

— Customer provides — Cloud provides




*Operating System

Source: ITIF

The Growing XaaS Toolkit

Many traditional desktop and enterprise software products are now available as SaaS offerings. But in recent years, some specialized solutions have also appeared. They include:



	Authentication as a Service (AaaS)		Security Operations Center as a Service (SOCaaS)
	Ransomware as a Service (RaaS)		Unified Communications as a Service (UCaaS)
	Database as a Service (DaaS)		Disaster Recovery as a Service (DRaaS)

Emerging Tech

The as-a-service approach also provides a way for agencies to adopt emerging technologies without making a big upfront investment.

One example is Artificial Intelligence as a Service (AlaaS). Through AlaaS, a vendor provides the underlying hardware and software infrastructure and technical expertise needed to train and run AI programs. Popular AlaaS offerings, per [TechTarget](#), include:

- **Bots and chatbots** (e.g., ChatGPT), which use natural language processing to interact with humans
- **Machine learning**, which provides advanced analytics
- **Data labeling**, which helps automate the organization of data

Another example is **Edge as a Service (EaaS)**. Edge computing makes it possible for people collecting data in the field to process it locally, rather than send it back to the data center and put up with latency issues. As with AI, edge computing requires both technical expertise and a tech infrastructure.

Through EaaS, an agency can turn to a third party for key capabilities, including the underlying infrastructure and services such as workload orchestration, performance monitoring, traffic routing and security.

More to Come

Market watchers expect XaaS to grow in importance in the coming years.

Analysts at IDC, a market research and consulting firm, see the as-a-service model playing a critical role in digital transformation efforts by providing organizations with more ready access to technology innovation, according to its FutureScape2023 report.

Gartner, another research and consulting firm, sees a more practical appeal to XaaS, especially for government agencies: It provides a way to make IT spending more predictable, while also reducing the money spent on maintaining legacy technology, according to a June 2022 report.

“Gartner predicts that by 2026, most government agencies’ new IT investments will be made in XaaS solutions,” the report states.

Air Force EITaaS Wave 1

The first phase of the Air Force EITaaS program covers three main areas of end-user services:

- IT service management, asset management and operations management, supplying a comprehensive IT storefront from which all Air Force employees will order their IT services
- Enterprise service desk support and local field services covering more than 800,000 users
- End-user devices and device management



BUILDING A PIVOT-READY ORGANIZATION

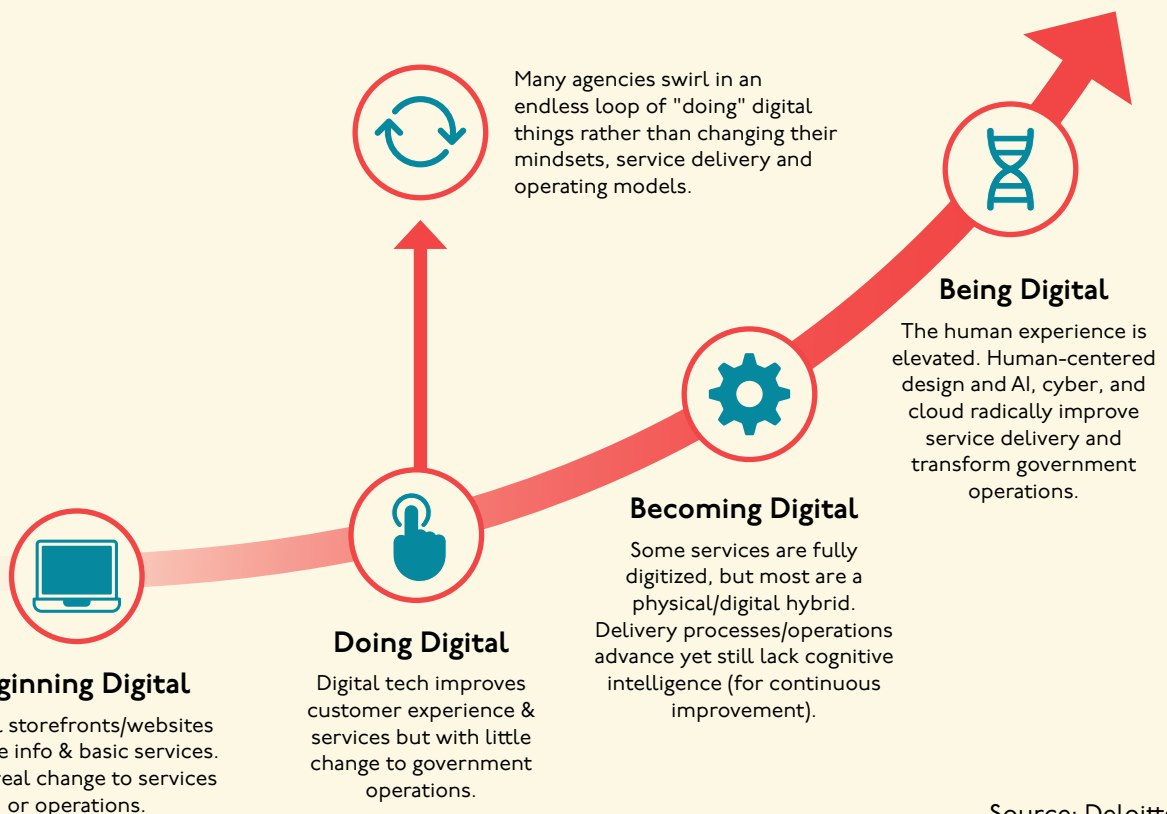
In today's world, organizations weighed down by legacy IT have trouble adapting, and one of the most significant measures of an agency's flexibility is how much it relies on the cloud. But whether an agency goes all in for XaaS or tries more limited cloud services, pivoting to cloud technology requires a management strategy that sees years down the road. And the strategy itself must be nimble.

In the past year, GovLoop heard from government thought leaders who shepherded cloud-based changes through their organizations. They identified priorities, acknowledged concerns and spoke about the future.

Here are their thoughts on becoming a pivot-ready organization.

Governments must move from "doing" digital to "being" digital

Too many government agencies think that developing digital services makes them a digital organization. But digital transformation is about fundamentally shifting an agency's operations and mindsets from "doing" digital to "being" digital.

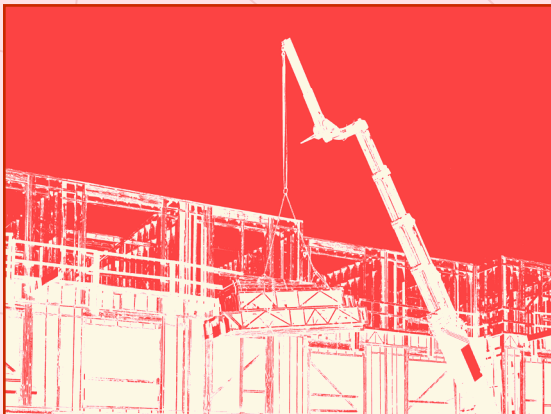


Tips for Structural Change

Choosing from the menu of cloud services is like standing at a buffet with dozens of tempting options.

But regardless of the cloud solution you choose — or the process you want to improve — there are ways to make change palatable for the people and entities involved. And no single approach is enough.

“The government is a living organism, just like the rest of us,” said Dorothy Aronson, Chief Information Officer (CIO) at the National Science Foundation (NSF). “It’s always growing, always changing.... So, for me, government transformation now is thinking about our future a little bit differently and with the concept of continuous change and continuous modernization always in mind.”



Strategy

Building a pivot-ready organization starts with evaluating your current environment and crafting a strategy focused on your specific objectives and desired outcomes. From there, decide what supporting tasks a cloud services provider can handle and what more mission-specific tasks should remain in-house. Break your overarching strategy into smaller, more manageable pieces.

“We need to understand where we want to be in five years and constantly be building little pieces to that endpoint,” Aronson said.

André Mendes, CIO at the Commerce Department, explained it this way: “Cloud migration is and will continue to be a journey that will see a substantial number of iterations taking place, even as the cloud itself evolves.”

A relatively gentle approach is more practical than trying to migrate everything to the cloud at once. But you need a blueprint that outlines your short-, mid- and long-term initiatives, or you risk creating a fragmented IT infrastructure. Moving to the cloud without a coherent plan for how all systems can and might integrate causes trouble.

A good strategy also recognizes financial truths, Mendes said. “The reality is that there is a substantial amount of time during which there is some parallelism of both [old and new] operations, and the federal government has not ever had a good solution for parallel efforts, for the same tasks being equally financed,” he said.



Dorothy Aronson
CIO at the National
Science Foundation



André Mendes
CIO at the Commerce
Department



Ann Dunkin
CIO at the Energy
Department



Susan Little
Director of the CMS Division
of Records and Information

Data

One of government's most valued resources is the data it holds, but "the power of data doesn't come from the data we own by ourselves," Aronson said. "It comes from the data we have, plus all the other data we can reach [through the cloud]." NSF focuses on controlling the quality of its data, not managing the tool that collects it.

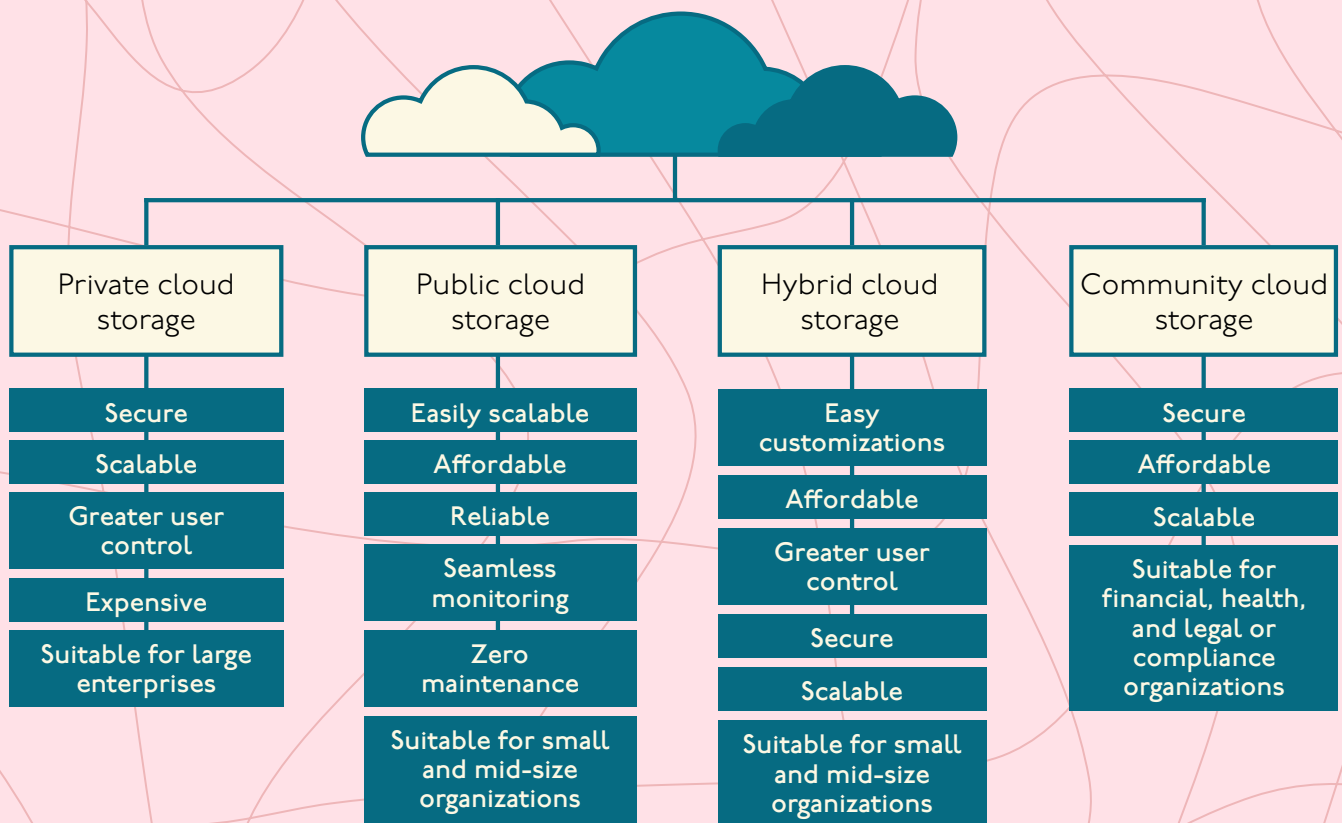
The cloud is "not a panacea, but it has a lot of advantages if you use it wisely," agreed Ann Dunkin, the Energy Department's CIO.

"If you use it for the right thing, it's a data center that someone can run better than

you can for that particular application or service," she said. "And, of course, if you're buying a cloud app, you don't have to build that, you don't have to maintain that, you don't have to update it — and you don't risk getting behind as you would with an on-premise capability."

Choose your cloud storage solution — whether it's a private, public, hybrid or community option — based on your typical use case. What's suitable for your agency's size? How scalable does the storage option need to be? How much user control do you really need?

Types of Cloud Storage



Source: Spiceworks

Culture

A common refrain among IT leaders is “people, process, technology.” In other words, change starts with the people who implement the processes that technology helps achieve. It’s a relationship that applies to all kinds of IT reform, including migrating to XaaS or other cloud services.

Everyone in the agency needs to support the transformation. Leaders must make a clear case for the reform and address financial, technical and political considerations, among others. Employees need to understand what’s happening and why, and how it will affect their jobs. And managers must instill trust.

“Listen to your staff,” said Susan Little, Director of the Division of Records and Information Systems at the Centers for Medicare and Medicaid Services’ Records Officer. “Everyone wants the shiny object. At the end of the day... the technology is fantastic and we all love it, but we have to understand that if our people are the implementers, then we can’t just buy that system, because that’s the easy piece.”

“To move our staff along and to have them comfortable with that change... that’s what success looks like,” she said.

Aronson’s team has found a somewhat organic way of getting staff to embrace new technology. “Our trick in implementing change is getting it to be subliminal, getting [people]... to use tools to do their jobs and then tell other people about them,” she said. “All of that is a way of implementing change without being a disruptive change agent.”

“You can’t get innovative solutions with the culture that designed, delivered and supported the legacy application,” Dunkin added. “You can’t get to a new place by taking the old way.”

Moving Beyond Legacy IT

An interview with Sam O'Daniel, Vice President of Civilian Sales, TVAR Solutions

Legacy IT looks different from agency to agency. Some organizations haven't fully embraced the cloud; others still run key operations on Windows XP. But all organizations in need of modern technology have challenges to overcome.

According to Sam O'Daniel with TVAR Solutions, which works with IT partners such as Dell Technologies to help agencies meet their transformation needs, those obstacles include antiquated workflows and procurement processes.

"It's key for government agencies to understand that you could have the greatest technologies in the world, and they can help you change your agency's direction and capabilities in a heartbeat, but you are never going to be able to adopt those technologies without modernizing the processes and the legacy policies that have been in place for decades," he said.

Scale Up, Scale Down

O'Daniel describes legacy IT as "a byproduct of the legacy workflows and policies that are in place today that essentially inhibit modernization and transformation." To implement new IT solutions and be more agile, organizations must welcome automation and other reforms and understand what their people and missions need.

And "from a scalability perspective, [organizations must] be able to leverage resources on demand as needed, going up [and scaling] down to... control and manage costs," he said.

In the future, as agencies continue to evaluate what they need and when they need it, we'll see a "massive push and greater rate of adoption of consumable-as-a-service [offerings], not just technologies, but overall services in general," he predicted.

Navigating Procurement

Government IT projects that cost millions of dollars and extend for years are less popular now that on-demand, cloud-based alternatives exist.

But reform would be much easier if procurement were less archaic. Months often pass between when an agency realizes it needs something and when it gets a cost estimate, budgets for the update and ultimately receives it.

"Government agency budget cycles [and] procurement [requirements]...do not allow agencies to invest the necessary capital in technologies and services to be able to support [agency] efforts as they transform and modernize at scale and speed," O'Daniel said. "The government just doesn't fund themselves that way."

So, one benefit of scalable as-a-service options is that they bypass rigid procurement rules. They're governed by multiyear service agreements that more reliably and quickly help organizations operate.

How TVAR Solutions Helps

TVAR Solutions helps federal agencies create a multi-phased transformation roadmap, including one for a large agency engaged in a massive consolidation since 2018. Multiple organizations within the agency, each with their own individual controls, CIOs and IT budgets, are merging into a centralized shared-service organization, O'Daniel said.

His company is aggregating and standardizing the software, hardware and other technology and now is building out a "truly consumable as-a-service infrastructure," he said. The project is moving into Phase 5.

When consolidation began, the agency didn't understand what it needed and what transformation would look like — but fortunately, O'Daniel said, TVAR Solutions did.



A Cloud-Driven Business Model

Adopting the as-a-service model has major implications for budget and procurement. Where data centers require periodic investments in hardware, moving to the cloud changes the equation. You're replacing heavy upfront capital expenditures (CapEx) with ongoing operating expenses (OpEx). In place of maintenance and depreciation, you face continuing vendor relationships and planning adequately for the services you'll use.

Moving to a cloud ecosystem of products and services calls for a new way of thinking about everything from storage and compute to budget and acquisition.

Is It Cheaper?

The short answer is no, said Sagar Samant, Associate Chief Information Officer at GSA's Federal Acquisition Service (FAS). Exchanging your on-premises system for cloud-based services adds value, but it probably won't lower costs.

Instead, it allows agencies to better serve customers, adapt to policy changes, and update systems and security. Plus, they pay only for the digital services they need. "In the case of a government agency, the value lies in your mission," noted Samant. It's not a matter of cutting costs directly, he said, but of lowering the price of improvement.

How a Cloud Ecosystem Adds Value

"Even though cloud is not cheaper, the value it generates is much higher, from the mission perspective, than using the traditional data center," Samant said. GSA began its cloud journey in 2011, as the first agency to adopt cloud-based email. Since then, it's become a bellwether for cloud in government. Samant said they've found four major areas of benefit.

- **Operational efficiency:** "Because it's all built on shared services, data sharing is easy, shared security is easy and we're able to standardize a lot of processes to reduce duplication of effort," he explained.
- **Faster delivery:** "Cloud ecosystems, by their nature, allow you to build things faster, better and in a reusable architectural format," Samant said. "At FAS, we were able to fulfill mission-critical features at a much faster pace than when we were in a traditional system."
- **Flexibility:** "The flexible nature of cloud systems allows us to build new features and products faster, keeping pace with our customers' needs," he said. That means an improved ability to respond to changes, including new administration priorities.
- **Improved security and resilience:** Security is built into cloud platforms and services, and that improves recovery and resilience. "That increases our stability," Samant said. "We have almost no downtime."

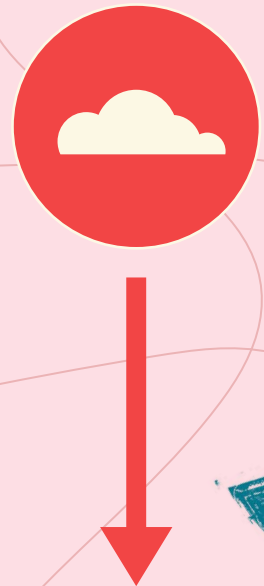


Thinking Differently About Budget

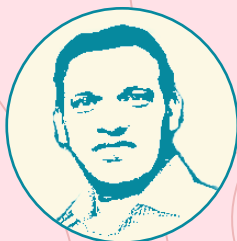
There's more to budgeting for a service-based approach than flipping the switch from CapEx to OpEx.

In setting up a data center, you try to anticipate the capacity you will need over the life of the hardware. With a cloud ecosystem, you can scale some elements up or down to meet changing needs, but there are fixed costs to keep the system running. "You need a strategic plan in place. You need to forecast the cloud-related cost for the next five to 10 years, and you need to be transparent with your customers about those costs," Samant said.

"You also need to monitor your use as you're moving forward, because technology changes, business priorities change," he said.



“Even though cloud is not cheaper, the value it generates is much higher, from the mission perspective, than using the traditional data center.”



— **Sagar Samant**
Associate CIO at GSA's
Federal Acquisition Service

Work With Your CSPs

Your relationships with cloud service providers (CSPs) are likely to be somewhat different from those with other kinds of vendors, and you'll need to work with them to get the most out of your cloud.

"Cloud is not just about storage and compute," Samant said. "It's not just about moving your servers from a data center to the cloud. A cloud ecosystem offers tools, technologies and services, and agencies need to be smart about what services they're buying."

The key is to understand how your CSPs charge you so you can optimize your cost.

"Don't just buy what the CSP is offering," he cautioned. "Understand what you're trying to do, whether you're reimagining the business process, putting together a hybrid approach or just moving some components. *Then* ask the cloud service provider, 'What are the tools and services you have that would address this?' And then you do the math."

How to Scale up Your Data Initiatives

An interview with Chris Townsend, Vice President for Public Sector, Elastic

As soon as agencies started thinking in terms of enterprise-level data initiatives, their existing data solutions became legacy systems.

Let's say an agency's security operations center wants to use analytics to improve its ability to detect and respond to threats throughout its environment. The problem is the necessary data is scattered across the organization and stored in siloed systems both on premises and in the cloud or, more likely, in a multi-cloud environment.

Legacy data management solutions simply were not designed with that kind of scenario in mind, said Chris Townsend with Elastic, which helps agencies find the answers they need from data in real time and at scale.

"The way that we have many of our systems today, making that data available to our government analysts can be very cumbersome," he said.

A Data Lake Reality Check

Some organizations try to alleviate their data complexity by dumping all their data into a central repository, such as a data lake. But with enterprise-level initiatives, too much data is spread too far to make a central repository a practical solution.

But even if it's doable, a data lake doesn't fit with how most agencies want to operate, Townsend said. They will continue to maintain some of their data on premises and some on their various cloud platforms.

"We need solutions that are more flexible in allowing access to all that information in a very fast, efficient and cost-effective manner that's operationally sound," he said. "That's where things are going."

A Different Tack

An increasingly popular alternative is to leave that data in place, but to index it using a common platform that makes the data readily accessible and findable. This is the approach that Elastic takes.

This decentralized architecture — sometimes referred to as a data mesh — makes it possible to handle growing volumes of data without running into performance problems.

That is what made Elasticsearch a good fit for the Continuous Diagnostics and Mitigation (CDM) program at the Department of Homeland Security. Elasticsearch is the foundation for the CDM Dashboard II, which enables cyber teams at the Cybersecurity and Infrastructure Security Agency to search cyber data in hundreds of federal agencies as part of threat-hunting efforts.

"We're deployed in some of the largest government agencies at scale because this is a very flexible, efficient way to index and ingest the data," Townsend said.

Elasticsearch as a Service

To help agencies pivot quickly to this approach, Elastic offers Elasticsearch as a managed service. The service ensures one-click upgrades to the latest software, as well as immediate access to new features and fixes.

Additionally, Elastic will take responsibility for maintaining snapshots for backup and recovery, monitor network and hardware performance, and provide engineering support as needed.

Agencies can purchase Elasticsearch Service within the Elastic Cloud console or through the cloud marketplaces offered by Amazon Web Services, Google or Microsoft.



How to Be a Nimble Employee

There is one thing that's certain:
Things change.

While it's comforting to do the same tasks in the same way with the same technology, that won't help you be a responsive public servant. And it won't help you adapt to emerging XaaS and other cloud offerings.

Employees must be nimble. But what does that mean? How do you become or remain nimble as circumstances change so that you are a positive force for tech innovation and not a witness or obstacle to it?



Don't Be Afraid of Uncertainty — Explore It as Opportunity

Change doesn't mean abandoning your old technology and jumping into an abyss. You're jumping into *something*.

From new visual analytics platforms to data extraction and management tools to virtual environments for enhanced collaboration, Kim Wittenberg has made her fair share of technology transitions.

As Health Scientist Administrator at the Department of Health and Human Services' Agency for Healthcare Research and Quality, she focuses on knowledge management and how new platforms preserve data. And after experiencing several transitions, she's learned a few things about staying nimble.

"The biggest challenge is just the uncertainty of change, and the stress that goes along with the uncertainty," Wittenberg said.

To feel grounded, focus on the mission — "the stable piece" — and look at change as an opportunity to better meet it, "to explore the opportunities that might be lurking within that change," she said. That mindset will keep you calm.

Wittenberg also recommends taking advantage of technology trainings offered by service providers, colleagues or outside sources.



Keep Communicating

Some colleagues may be nervous about new technology, while others will power forward and become early adopters of it. Reach out to them!

Whatever you're transitioning to, "there's probably someone out there who's already been using it," said Wittenberg. Be open to both training and collaboration with someone who overcame new technology hurdles.

If you have trouble adapting and feel alone, know that you probably aren't. Wittenberg recommends speaking up and making your colleagues, including leaders, aware of your challenges. Don't let a problem fester or suffer alone in confusion. Instead, communicate, connect and problem-solve together.



Measure Outcomes to Assess the Difference

So, you've updated your technology and moved certain tasks to the cloud. You've met the goal, right? Wrong! The goal isn't just change. It's to change and improve.

That's why you need to measure the outcomes you've produced before and after experiencing something new.

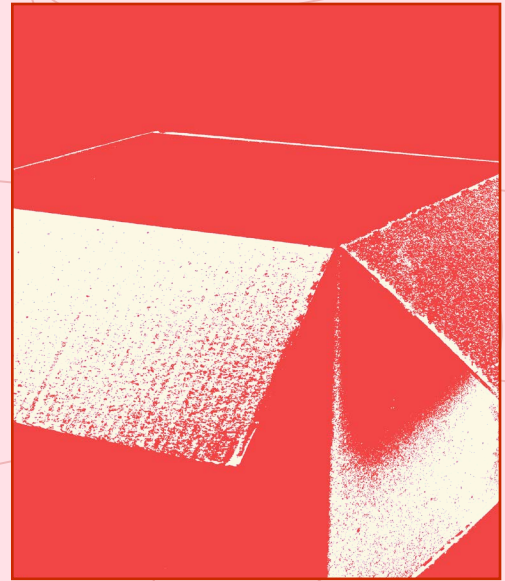
"I think there [are] a lot of anecdotal thoughts about change, but it's much more powerful if there's already a baseline and you know what was going on before that change happened," Wittenberg said. Knowing the "before" and "after" status of a project means you can identify what has or has not improved. "It's helpful to introduce change in a way that's measurable and under our control, so that we have the ability to react to it and adjust," she added.

Create Stretch Goals

You're learning new things and, after a few months, you're more comfortable with your updated situation. But why stop there?

Wittenberg recommends cultivating an open mindset toward what could come out of the change, or the positive possibilities.

"With advances like machine learning and AI, you can think outside the box and create stretch goals, because many of the things that folks once thought were unattainable are now within reach," she said.



Be Open to Evolving

Change is often difficult, but it can be easier when you have the right perspective and trust in the outcome. Remember to communicate with colleagues, look for growth possibilities, measure progress and create goals. You may not feel nimble initially, but cultivating these habits could help you lead the way during future agency transitions.

"The biggest challenge is just the uncertainty of change, and the stress that goes along with the uncertainty."



— **Kim Wittenberg**
Health Science Administrator,
Agency for Healthcare
Research and Quality

Wittenberg founded the Federal Leadership and Professional Development Seminar Series, a "by government/for government" series presented by federal experts to employees across government, to share federal leader expertise and lessons learned; disseminate successful strategies for common goals and hurdles; provide free training; and foster connections, collaborations and sharing.

Government employees may join the seminar series listserv by sending a blank email from their government email address to FedLeadershipSeminar-subscribe-request@listserv.gsa.gov and can access past seminar recordings and materials [here](#) and [here](#).

How to Improve Cybersecurity Through Simplicity

An interview with Felipe Fernandez, Chief Technology Officer with Fortinet Federal

Increasing the technology payload with more hardware, software, applications, and storage solutions will not thwart the surging cyberthreats that continue to menace U.S. Government agencies. As long as agencies treat their cybersecurity programs with an arms race approach, they will likely remain trapped in a reactive and defensive posture against sophisticated and well-resourced adversaries.

"The greatest challenge U.S. Government agencies face today is the speed which threat actors are advancing their capabilities and their procedures," said Felipe Fernandez of Fortinet Federal, a recognized provider of enterprise-grade cybersecurity and trusted networking solutions, designed to meet public sector standards and requirements.

New Areas of Risk

The problem is not just the number and frequency of potential cyberthreats, but the complexity and diversity of the threat vectors used to compromise agency systems, networks, and data. New and emerging areas for cyberthreat vigilance include:

- **Cloud Applications and Storage:** As Federal agencies expand the range of applications and data deployed to multi-cloud environments, with the flexibility these new strategies provide, they also create an expanded attack surface, Fernandez said.
- **The Internet of Things (IoT):** Agencies increasingly rely on mobile devices for data collection and sharing over the Internet. Often sensors and other embedded IoT devices are not supported by traditional cybersecurity tools.
- **Operational Technology (OT):** The convergence of IT with OT, such as integrated industrial control systems and healthcare delivery systems, has enabled improvement in enterprise systems monitoring and management, yet, as with IoT, converged systems often lack the cybersecurity capabilities to protect them from emerging cyberthreats.

More Solutions, More Mess?

To simplify agency operational environments, Fortinet Federal relies on one tightly integrated cybersecurity mesh platform, Fortinet Security Fabric. Gartner describes a cybersecurity mesh architecture as "a collaborative ecosystem of tools and controls to secure a modern, distributed enterprise." Managing agency cybersecurity through a single dashboard approach allows for seamless integration of each organization's preferred solutions that secure networks, users, devices, and applications, with an industry-leading, common operating system.

"We want to make sure that U.S. Government agencies can introduce multiple capabilities into their architectures and security frameworks, and consolidate some of these functions, making their security practice and procedures less complex," Fernandez noted. The security mesh fabric approach also makes it possible to introduce greater levels of automation, including the expanded use of artificial intelligence (AI) and machine learning (ML), he added.

Fernandez said that agencies need to liberate their security expertise to focus on the most critical vulnerabilities, mitigate near-term risks, and respond to events as they arise. He added that "the Fortinet Federal team regularly collaborates with agency professionals to automate repetitive, more routine operational capabilities and functions that staff have been juggling with other more pressing priorities. "In the next two to three years, we're going to see AI and ML take center stage in the cybersecurity arena," he said.

Fortinet Automated Security Operations

It's understandable why government agencies are turning more to AI-driven security operations given the volume, sophistication, and speed of the cyberthreats they face. Fortinet Federal offers a portfolio of security operations tools agencies can use for advanced threat protection and response, centralized security monitoring, and automation across the Fortinet Security Fabric.

For more information on how Fortinet Security Fabric and how Fortinet Federal delivers trusted cybersecurity solutions for government, see <https://www.fortinetfederal.com/>.

ADDITIONAL RESOURCES

XaaS Basics

Secrets from Cloud Computing's First Stage: An Action Agenda for Government and Industry

([ITIF](#))

Cloud Information Center

([GSA](#))

What Is Cloud Storage? Definitions, Types, Benefits, and Best Practices

([Spiceworks](#))

Employee Adaption

Learn How to Embrace Disruption and Be Better for It

([GovLoop](#))

13 Practical Ways to Help Employees Adapt to New Technology

([Forbes](#))

The Benefits of Adaptability in the Workplace

([Fairplay](#))

Budget Considerations

Why Cloud Budgets Don't Stay in Check — And How to Make Sure Yours Do

([Gartner](#))

Cloud Budgeting: Essential Aspect of Any Business Operation

([LinkedIn](#))

Cloud Procurement Process

([GSA](#))

Best Practice Guide for Cloud and As-a-Service Procurements

([Center for Digital Government](#))

Pivot-ready Strategies

Scaling IT Modernization Playbook

([Department of Energy](#))

Keys to Creating a Nimble Organization

([Heller Search Associates](#))

How to Achieve Customer Success Through Experience-as-a-Service

([GovLoop featured contributor](#))

3 Steps to Incorporate Experience-as-a-Service Into Your Digital Transformation Strategy

([GovLoop featured contributor](#))

TAKEAWAYS

Based in the cloud, as-a-service offerings help agencies pivot away from legacy IT and toward more modern, efficient and tailored technology. Here are four takeaways from this guide's articles and insights.

1



Overarching advantages. The as-a-service model leads to faster deployment of new applications, better scalability of services, reduced data center overhead and built-in technology updates. The landscape of as-a-service products is expanding.

2



Management strategy. To successfully embrace XaaS offerings, an agency needs a long-term plan — broken down into smaller pieces — that addresses the organization's workforce culture, funding, and data use, among other concerns.

3



New business model. Moving to the cloud means replacing heavy upfront capital expenditures (CapEx) with ongoing operating expenses (OpEx), and agencies pay only for the digital services they need. As-a-service might not be cheaper, but it provides greater value.

4

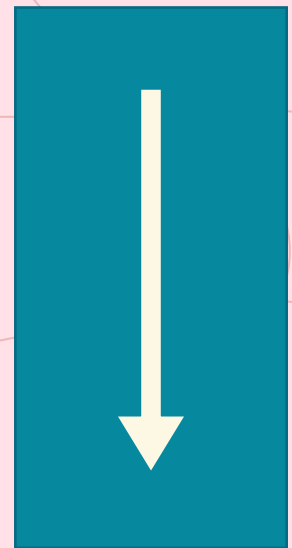


Nimble employees. Staff must be flexible enough to embrace change, especially something as transformative as cloud-based services. Think of the change as an opportunity, communicate with colleagues, measure your progress and create stretch goals.

About GovLoop

GovLoop's mission is to inspire public-sector professionals by serving as the knowledge network for government. GovLoop connects more than 300,000 members, fostering cross-government collaboration, solving common problems and advancing government careers. GovLoop is headquartered in Washington, D.C., with a team of dedicated professionals who share a commitment to the public sector.

For more information about this report, please reach out to info@govloop.com.



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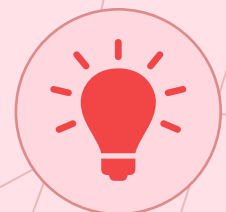
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