Improving Application Delivery & Customer Experience Through Cloud-Based Technologies

MARKET TRENDS REPORT

govloop

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Introduction

The value of cloud computing for federal agencies is far more than potential cost savings and the ability to reduce their data center footprint. Cloud has the ability to transform the way employees collaborate across siloed departments, access critical data to make decisions and improve the timeliness of federal services.

At the Labor Department (DOL), for example, its DOL IT Platform consolidates the department's case management systems by investing in a cloud-based environment. This platform has helped DOL launch several tools, including the Apprenticeship Finder Tool, which offers career-seekers a digital platform to search through about 1.4 million job postings by city, state and occupation.

For the Justice Department (DOJ) and similar agencies, cloud computing has the power to dramatically improve the way agents in the field generate and share case files and other critical data.

These are only two examples of the many ways cloud empowers federal employees and the people they serve. Budgetary constraints, organizational silos and resistance toward cloud adoption, however, are among the many barriers agencies must address on their cloud journey. The new federal cloud computing strategy, known as Cloud Smart, coupled with the administration's focus on customer experience (CX), are providing the impetus agencies need to make the benefits of cloud a reality.

GovLoop partnered with Affigent, an Akima company and platinum partner for Oracle, to explore the challenges and benefits that agencies experience when embracing cloud. **For the report, GovLoop surveyed nearly 45 of our community members from DOL, DOJ and the Interior and Homeland Security departments to learn about the state of cloud adoption and how it impacts the public's interactions and experiences with government.**

Thirty-one percent said they are considering or have adopted cloud, with Platform-as-a-Service (PaaS) and Software-as-a-Service (SaaS) being the preferable choices. You'll see more of those results throughout the report and gain insights from Dave Pipes, Senior Solutions Architect with Affigent.

More specifically, in the following pages we show how PaaS and SaaS can improve customer experiences at DHS, DOI, DOJ and DOL.

Cloud Computing Adoption in Government

72

is the number of systems that DOJ plans to move to the cloud, according to the department's strategic plan for fiscal years 2018-2022.

Source: DOJ Strategic Plan

Customer experience (CX): Refers to a combination of factors that result from touchpoints between an individual, business or organization and the federal government over the duration of an interaction and relationship.

Source: Circular A-11, Section 280

171 of 628

(or 26%) of DHS systems are either in planning, in development, actively migrating or operational in the cloud, as of December 2018.

Source: DHS

*"Agencies should conduct regular evaluations of customer experience and user needs to ensure that their solutions successfully foster **efficiency, accessibility, and privacy.**"*

Source: Cloud Smart

20+

different cloud service provider environments support delivery of the Interior Department's cloud-based IT offerings.

Source: doi.gov/cloud/portfolio

*"Effective technology **improves** the way information is delivered and continues to **transform** how the government operates, allowing us to meet the public's expectations for online services."*

Source: Labor Chief Information Officer Gundeep Ahluwalia

THE CHALLENGE
Improving CX Through Data Accessibility, Scalability and Security

One of the areas that stands to see the greatest gains from cloud computing is customer experience — both internally and externally. Federal employees and the constituents they serve have come to expect seamless interactions with government whether via phone, online or in person. Cloud can better deliver in this area over legacy environments by enabling seamless, secure and faster access to government services and resources.

"Government services have to hit a certain bar when providing customer experiences," Pipes said. As the demand for government services increases along with the customer base, the collective impact of a positive or negative experience will be much greater for customers. "Agencies literally have to get their act together to meet those expectations," Pipes said.

For a growing number of agencies, cloud is an attractive option for addressing the growing pains that come with fewer resources and greater responsibilities. According to our survey, Cloud Smart is already ushering in a new era of cloud computing for federal agencies.

When asked about Cloud Smart, 36% of respondents said they are discussing the strategy and its recommended policies and best practices. But there is still a learning curve, considering the strategy was just finalized in June 2019. Twenty-eight percent are somewhat discussing Cloud Smart, but 17% are not and 19% aren't even familiar with the strategy.
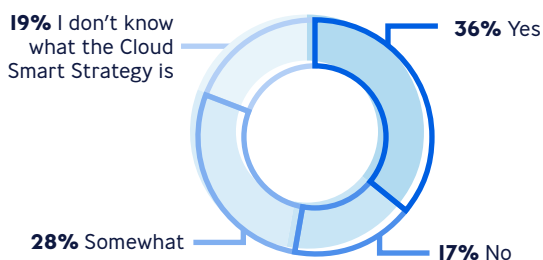
Unlike its predecessor, Cloud Smart doesn't aim to drive cloud adoption at all costs. Instead, by focusing on cloud security, procurement and workforce challenges, the strategy aims to encourage the thoughtful adoption of cloud where appropriate.

"The challenge is, Cloud Smart still doesn't address the organizational changes that are actually needed to adopt cloud," Pipes said. "I think that omission will require a lot of extra work by integrators to help organizations figure out how they should be changing to accommodate cloud over time."

Based on the survey data and research conducted by GovLoop, several trends emerged about how DHS, DOJ, DOI and DOL view cloud and its alignment to customer experience. Respondents cited lack of workforce skills (43%) as a barrier to cloud adoption, followed by leadership buy-in at 29%. Especially for agencies such as DOJ and DHS that maintain highly sensitive data, there are concerns about security and potentially introducing risks that could jeopardize the mission.

Respondents did indicate, however, that they want better access to data (40%), cost-effective scalability (20%), strengthened security (10%) and improved internal engagement. These are all CX-related issues — and areas that cloud is more than capable of enhancing.

Is your agency actively discussing the Cloud Smart initiative and its recommended policies and best practices?

19% I don't know what the Cloud Smart Strategy is

36% Yes

28% Somewhat

17% No

What solutions do you hope to address by adopting a cloud environment/service?

10% Better security

10% Internal engagement & communication

20% Other

40% Better data access

20% Cost effective scalability
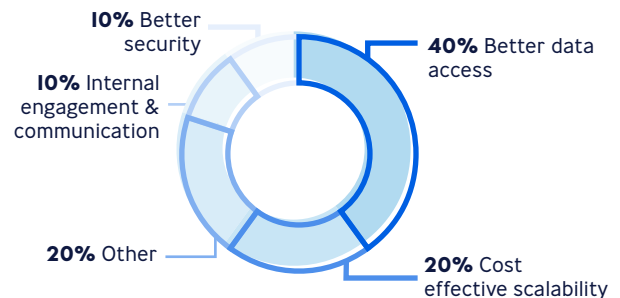
THE SOLUTION
# Cloud-Based Platform and Software Services

We've established that cloud is an ideal answer to the customer experience challenges agencies face, but not all clouds are created equally.

Of the three main cloud service delivery models, Infrastructure-as-a-Service (IaaS), Platform-as-a-Service and Software-as-a-Service, PaaS and SaaS are more popular among agencies because they reduce workloads and free employees up to work on higher-priority CX projects.

"With SaaS solutions, agencies don't have to define the platform themselves," Pipes said. "They also don't have to worry about the infrastructure, except to properly size it. But they do get to customize the service. Once the initial customization is implemented, it takes even fewer resources to operate."

PaaS and SaaS delivery models also help public sector chief information officers modernize faster in the cloud and on-premise, leading to more secure and reliable systems. This is especially critical for agencies with law enforcement and public safety missions and those that provide data and information that control economic markets, such as DOL.

PaaS and SaaS also provide agencies with better access to data, scalability and improved security. The key is taking a thoughtful approach to determine which model is best for your agency and making the necessary organizational changes to embrace cloud. "Adopting cloud is not like going from an old server to a new server," Pipes said. "It's like not having electricity and finally getting it turned on. It's a full-blown cultural change that has to happen in the organization to really reap the benefits of cloud. It's one that takes some getting used to mentally."
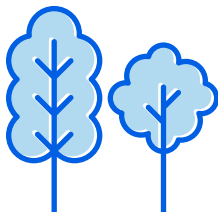
HOW ORACLE HELPS

Oracle has a unique advantage in the market thanks to its widespread use across the government and the development of its own IaaS solutions that serve as the basis for its PaaS and SaaS solutions. Most cloud vendors have to partner with other companies to provide all three solutions, meaning they do not control the entire stack.

"If you're a cloud provider, and you're partnering with a software company for their software, you can't say to them, 'Hey, I want updates every six weeks,'" Pipes said. But Oracle makes the software that it puts in the cloud. The developers of the software sit in the same buildings as the people who develop the cloud. Not only is the development and integration tighter, but tasks such as patching and maintenance of the infrastructure are understood by the software and cloud developers.

"Everything can proceed in lockstep; changes can be made very quickly using Agile development methods," Pipes said. "And it becomes a very responsive ecosystem of cloud-hosted software."

***To learn more, visit www.affigent.com/oracle.***

Improving CX With the Cloud
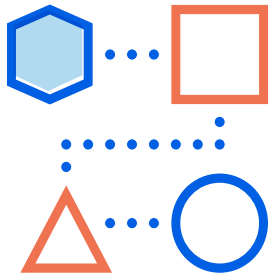
1. Embrace organizational change to drive cloud adoption

In a siloed organization where every group has its own area of interest and control, things naturally move slowly. If you want to sustain operations in and experience the benefits of the cloud, you need to break down the silos and change internal processes and procedures. Only then can you experience the departmentwide agility and savings that often come with cloud. But this new way of doing business requires changing the culture. "If it does not happen, any cloud involvement will only be tactical and short-term," Pipes said. "Cloud will not provide the agility that it could because organizations are still operating in silos — with various budget structures. That's why cloud adoption must be preceded, or at least accompanied by, organizational changes."
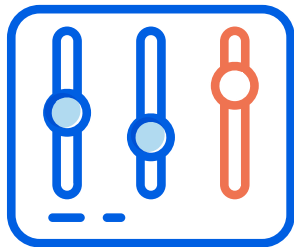
2. Tap into the agility PaaS offers

Agencies can use PaaS to immediately access tools and change how they manage technology and interact with citizens. They can add capabilities, such as self-service mobile apps, autonomous processes and instant system adjustments, as well as implement changes in policy and regulations. With PaaS tools, these capabilities can be added without weeks of rewriting code and lengthy testing cycles. In an increasingly app-everywhere society, an agency could deploy a new app in minutes rather than months with these modular as-a-service tools.
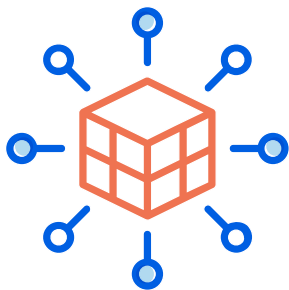
3. Lay the foundation for emerging technologies

With the right PaaS tools, it becomes faster and easier to implement new capabilities that use emerging technologies to automate repetitive and resource-intensive work. Imagine being able to quickly build a customized, blockchain-based supplier network with automated and fully traceable transactions and shipments; or developing a self-learning network of embedded sensors to monitor and manage expensive physical assets. PaaS can provide these capabilities and more as agencies look to free up staff for high-value CX projects.

4. Partner with a trusted provider to deliver seamless experiences

The customer journey does not start or end with a single transaction, and agencies must adapt accordingly. For example, using Oracle CX Cloud Suite, agencies have access to an integrated set of applications that span the entire customer lifecycle. Using social, mobile, messaging, analytics and location capabilities built in to the system, agencies can accompany constituents as they move across channels — from online to mobile to physical locations.

Conclusion

Cloud computing is undoubtedly an enabler that's powering more efficient government workforces and improving citizen services. But reaping those benefits requires agencies to press past cultural, financial and organizational barriers to cloud adoption.

It involves a new way of thinking about acquiring IT resources, one that requires agencies to consolidate investments but enables them to work at a faster pace. They can then quickly scale cloud assets and adapt to customers' evolving needs.

With PaaS and SaaS, agencies can worry less about managing servers and infrastructure and focus on higher-value projects that directly impact how the public interacts with government services.

ABOUT AFFIGENT

Affigent, an Akima Company is a turnkey IT solutions provider dedicated to helping agencies modernize their IT infrastructure while simultaneously improving security and delivering mission-serving solutions faster and at a lower cost. Our engineers, architects and technology partners have experience at all critical points across the enterprise. We can help you exactly when and where you need it most. It may be a cloud assessment, a physical or cyber security issue, or a need to upgrade your network...where we start is up to you. What's important is that together we finish with a stronger, more responsive enterprise and discernibly superior mission outcomes.

ABOUT ORACLE

Oracle (NASDAQ: ORCL) is the world's most complete, open, and integrated business software and hardware systems company. With more than 370,000 customers—including 100 of the Fortune 100—in more than 145 countries around the globe, Oracle is the only vendor able to offer a complete technology stack in which every layer is engineered to work together as a single system. Oracle's industry-leading public sector solutions give organizations unmatched benefits including unbreakable security, high availability, scalability, energy efficiency, powerful performance, and low total cost of ownership.

ABOUT GOVLOOP

GovLoop's mission is to "connect government to improve government." We aim 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 connect and improve government.

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