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Five Ways PaaS Improves Government **Innovation**

Platform as a service can help
public sector CIOs modernize
faster in the cloud and on premises

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CIOs at federal agencies are prioritizing three areas of innovation as they face opportunities and challenges from the Trump administration's effort to modernize federal IT systems:

- **Adoption of agile practices**

- **Creation of DevOps processes, structure, and culture**

- **Continued progress moving relevant systems and services to cloud[1]**

Clearly, these leaders support, or are already making, meaningful changes. In assessing how to meet their modernization goals, the cloud is a recurring theme.

As IT, procurement, and other line-of-business (LOB) professionals discuss infrastructure as a service (IaaS), software as a service (SaaS), and other cloud services, it's important they don't overlook the value of platform as a service (PaaS). The administration wants cost savings and better citizen services to drive modernization, and PaaS delivers on both while also accelerating timelines to get there.

PaaS delivers the infrastructure and middleware components that enable developers, IT administrators, and end users to build, integrate, migrate, deploy, secure, and manage mobile and web applications.

It's the tooling that allows employees to discover possibilities for new, innovative solutions within all IT systems, both on premises and in the cloud. PaaS can be such a powerful part of systems architecture that it can actually improve ROI as an agency modernizes. Here's how.

1

The benefits of cloud start sooner.

PaaS provides an integrated system that ties together services that teams need to efficiently and effectively use the cloud, such as heterogeneous security and auditing, identity management, containers and microservices, and Java.

Teams can use this system immediately to access tools to change how government agencies manage technology and interact with citizens, adding capabilities such as self-service mobile apps, autonomous processes, and instant system adjustment to 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. Additionally, PaaS eliminates the need for expensive integrators, which saves money.

2

Agencies need fewer expensive, specialized IT services.

In some cases, PaaS tools are designed for IT professionals to use, but many are specifically designed for the layperson to be able to implement and use themselves, with little-to-no assistance from IT or data experts.

For example, Oracle's Data Visualization Cloud Service has a two-step process: 1) upload data and 2) use drag-and-drop to conduct compelling analysis and display rich visuals. As LOB teams use this service, a DBA at the same agency could be using integration and replication PaaS tools from Oracle Cloud to manage the data represented in the visualizations.

The two roles don't even need to talk to each other to orchestrate the separate-but-connected work, thus taking some of the pressure off over-extended government IT teams.

3

On-premises hardware and applications can continue to be used.

Most government IT systems are a confusing mix of deployments and technologies, including on-premises, public cloud, and private cloud environments. PaaS can pull them all together to minimize costs, increase the pace of meaningful change, and maximize the value gained from both the technology and the employees using it.

One example: Pre-built adapters for SaaS and on-premises integration can deliver data integrations up to six times faster, so agencies can add SaaS versions of back-office applications in a shorter timeline because the cloud versions immediately share data with remaining on-premises applications in a closed and repeating loop. This gives on-premises processes and applications the benefit of rapid cloud refreshes and keeps them synced with cloud apps.

The other benefit of PaaS is that it makes cloud more adaptable in fluid systems. As agencies continue to move more workloads to cloud, PaaS tools contribute to smoother and more secure transitions.

4

Develop in-demand apps without building out a development platform.

Citizens and government employees expect the same user experiences from government that they have with consumer organizations. CIOs and LOBs must innovate to demonstrate measurable change in user experience while controlling costs: DevOps and agile development are means to that end, but building a DevOps infrastructure and instilling agile practices can be costly and time-consuming.

PaaS gives public service agencies a low-resource path to improved agility, responsiveness, and employee/citizen experiences. Agencies don't have to build out a platform for application development, operations, and innovation. The cloud does it for them. PaaS can also automate inclusion of intelligent helpers like chatbots into internal and service apps, which improves employee and citizen experiences with digital rather than physical resources.

"Many of our workers are embracing Agile, and we have a number of advocates for our shared services."

— ANONYMOUS PUBLIC SECTOR CIO[2]

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5

Use more automation to reduce cost and risk.

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 customized, blockchain-based supplier networks with automated and fully traceable transactions and shipments; or a self-learning, IoT-based network of embedded sensors to monitor and manage expensive physical assets. Humans would eventually be needed only for managing exceptions instead of constantly monitoring for exceptions.

The potential for resource savings and performance improvement across functions is immense with app-delivered intelligent process automation. Consider the current period-to-close workflow in an agency's accounting and finance function. It takes about eight steps. It's predicted that in the near future that will be reduced to three steps as machine learning-capable automation starts taking over tasks that people now do.

"**68%** of public sector executives believe digital ecosystems are already having a noticeable impact on, or will dramatically transform, the industry."

— ACCENTURE AND GOVERNMENT BUSINESS COUNCIL SURVEY

Prioritize PaaS in Cloud Planning

PaaS essentially "completes" cloud by putting easy to use tools in handy places throughout systems for both IT and LOB roles – no matter the mix of on premises and cloud resources. These tools are always there as an agency transitions more systems and workloads to the cloud.

As agency leadership teams evaluate options and strategize on how to meet the call for a more modern government, they should prioritize PaaS as their go to toolbox to implement cost savings and better service quickly.

Learn more about Oracle Cloud and PaaS tools.

Sources:

[1, 2] Grant Thornton and Professional Services Council, *The 2017 Federal CIO Survey*, September 2017