

Cloud's unprecedented capacity for innovation

Agencies unlock access to innovation, efficiency and scale in the cloud



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Google Cloud

Government's modernization goals are often rooted in three key objectives: providing better citizen services, creating a more secure experience, and making more efficient use of taxpayer dollars. Cloud computing directly supports those objectives because of the virtually unlimited capacity that is available on-demand, the security that is built into every layer and the ability to pay only for what you use.

On-premise data centers have been challenged to keep pace with the rate of innovation and delivery of new services that we see from cloud providers. Cloud providers can often develop and release a new feature or service long before an agency would be able to procure the appropriate infrastructure, develop the software, receive an authority to operate and implement production. Furthermore, this frees an agency to focus more of their time on public interactions and services rather than spending time on the underlying infrastructure.

If agencies want to take advantage of the latest technical capabilities and

innovations to accomplish their missions, the cloud is a great place to do that.

Ingesting and analyzing petabytes of data

To make data-driven decisions, an agency needs to be able to access its data without concern for capacity constraints based on recent storage and compute contracts.

Public cloud services can offer unprecedented scale and speed, and a cloud provider like Google can help government ingest data, and compute as necessary to answer complex analytics questions in real time.

Some of our customers have stored tens of petabytes of data in Google Cloud's serverless, cost-effective multi-cloud data warehouse, BigQuery. Analysts decide what questions they should ask and BigQuery will determine how much computing is necessary to consume it on demand – all without having to manage or configure the underlying infrastructure and services.

Taking advantage of higher-level innovations

We talk a lot about breaking down data silos in government but authority and operational silos can be just as challenging to overcome. With a myriad of operational challenges to manage, it's easy to adopt the viewpoint that "this is my swim lane and any new service has to meet all of my pre-existing requirements." But a newer, innovative service may not snap into an existing lane.

Therefore it's vitally important for agencies to be flexible in how they adopt new technology around their existing paradigms for procurement, compliance, management and operations. For example, agencies sometimes choose a multi-cloud strategy and then limit their cloud consumption to Infrastructure-as-a-service (IaaS) to avoid vendor lock-in. However, that approach limits the ability to take advantage of higher-level, cloud-native innovations and serverless capabilities which can truly deliver on

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the scalability and economic promises of cloud.

Google Cloud relies on open-source tools and interfaces that are compatible with customers' existing workloads and tool sets, which allows for simpler workload portability. Anthos, our application management platform, is based on open-source Kubernetes. Google created Kubernetes to run on whichever on premise or cloud infrastructure our customers prefer and

give users an automated, fully-managed, single control plane for orchestrating and operating all of their containerized applications.

Further, most cloud-native services are taking an API-first approach to connecting data and applications, which can be overwhelming for agencies that have traditionally relied on commercial off-the-shelf software but it is crucial for making the most of cloud-based

tools. Investing in tooling such as Google Cloud's Apigee API Management platform helps agencies integrate their portfolio of on-premises and cloud-based applications and data, allowing agencies to not only meet but exceed their modernization objectives. ■

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