

# Selecting The Right Cloud Operating Model

The cloud provides backbone and infrastructure for the adoption of lean, agile, efficient operations and quickly provisioning new services.

**G**overnment CIOs are primarily focused on three things: providing the best possible customer service, developing enterprise solutions to drive down costs, and continuously enhancing cyber security.

The cloud is not only a foundational digital enabler of mission and business outcomes —providing backbone and infrastructure for the adoption of lean, agile, efficient operations and quickly provisioning new services — it also comes with the ability to address all three CIO priority areas. These advantages have led many organizations to rapidly scale their workloads and move significant parts of their infrastructure to the cloud.



## Joseph Klimavicz

CIO, Department of Justice (retired)  
Managing Director  
KPMG LLP

The cloud has become a mature foundational technology, but there are many options when deciding how to best leverage its capabilities, along with many decisions a CIO needs to make. One of the most common ways of taking advantage of the cloud is simply “lifting and shifting” an organization’s current IT to the cloud environment.

In many cases, this is done without any transformation — many organizations merely establish new governance structures and new ways of working to manage the cloud, and there is limited understanding of the actual cloud capabilities and skills that are required when using the cloud as a replacement for traditional IT roles.

## Focus On Business Transformation Objectives

A combination of these factors can lead to ineffective and expensive use of the cloud, making it difficult to secure future cloud investments. To combat this, the shape and direction of the enterprise cloud program should be driven by business transformation objectives rather than merely using the cloud as a hosting alternative, and cloud-native tools should be taken advantage of to improve reliability, create ease of management, and reduce operating cost.

The journey to the cloud poses a unique set of challenges for large enterprises. Once an organization has made the decision to transition to the cloud, it faces the daunting challenge of prioritizing applications for migration; developing proper structures, policies, and capabilities; training and hiring staff; and migrating applications and data — all while maintaining minimal disruption to ongoing business operations.

For many organizations, adopting cloud technology and deriving value are not necessarily synonymous. The diversity of legacy application estates, the burden of technical debt, and the rapid evolution of cloud services and delivery options (public, private, hybrid) have created a level of complexity in decision making and implementation that can be challenging at best and can create barriers at worst.

### Overcoming “Hybrid” Issues

Organizations that use commercial clouds will need to continue using on-premise datacenters for sensitive data or legacy technology investments. Considered a “hybrid” mode, this will be the norm for the next decade until applications and services are re-architected for the public cloud.

Typical challenges with this hybrid model are integrating on-premise and cloud systems seamlessly, while multiple toolsets and siloed teams are working independently. Beyond integration, CIOs also need to decide on having a single cloud service provider (CSP) or multiple CSPs.

A single CSP may offer less complexity and simplified management; however, it also has drawbacks, such as fewer service options, a single point of failure if not designed correctly, and vendor lock-in.

Multiple CSPs provides a competitive advantage when it comes to production at speed/scale, a greater choice of services that can be tailored to fit various organizational needs, competitive pricing, options to avoid vendor lock-in, and increased service resiliency if properly developed. Of course, multiple CSPs do present some additional considerations, such as having operations and administration associated with — as well as the integration of services and data across — multiple providers and the need for additional skillsets.

### Consider A Hybrid Multi-Cloud (HMC) Mode

Hybrid Multi-Cloud (HMC), which is a combination of on-premise, private, and third-party cloud services, is inevitable for most organizations. And as hybrid cloud usage increases, containers will also likely prove to be more than just a replacement for virtual machines. Containers use less memory and provide greater modularity and scalability, and

they will drive cross-cloud consistency and efficiency and accelerate development. Because of their modularity and scalability, containers are often also used in conjunction with small, independent processes, i.e., microservices, that together form complex applications and utilize language-agnostic APIs. Microservices are built around business capabilities and can be dropped into a Container capable of being moved between different clouds.

The bottom line: HMC provides maximum flexibility, agility, and resiliency. Simply plugging into the cloud will not generate the value needed to directly enable business outcomes at the pace required. A

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holistic cloud transformation must be a business-driven change — not one led by technology — and it is a change that manages for today, while also keeping a multi-cloud future in mind. ■

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**Joseph Klimavicz** is a Managing Director with KPMG LLP where he leads the government Chief Information Officer (CIO) advisory practice and helps government clients develop and implement digital transformations.

Mr. Klimavicz’s 37-year career in the federal government began with the Central Intelligence Agency (CIA) as a scientist and culminated with the U.S. Department of Justice (DOJ) as Deputy Assistant Attorney General and CIO from May 2014 until March 2020.

Mr. Klimavicz also served as National Oceanic and Atmospheric Administration (NOAA) CIO and Director, High Performance Computing and Communications from 2007 until 2014, and as the National Geospatial-Intelligence Agency Deputy CIO from 2003 to 2007. In 2012, Mr. Klimavicz received the U.S. Presidential Rank Award for Distinguished Executive Service, and he is a CIO-SAGE at the Partnership for Public Service.