

COVID, Culture and Cloud:

The case for a Cloud Center of Excellence

State and local governments have long known the benefits of moving workloads to the cloud. However, many have been slow to embark on a cloud journey for a variety of reasons. Funding, staffing, compliance concerns, legacy applications, lack of a clear return on investment or comprehensive strategy—the list of adoption hurdles are seemingly endless.

The coronavirus launched a new era of teleworking and escalated citizen demand for digital services and communication with government agencies. This, in turn, created an avalanche of unanticipated demands on agency IT systems. Many government agencies have responded by adopting cloud-based platforms that help them streamline their operations, facilitate constituent communications, and improve service delivery. Cloud tools enable a more distributed workforce to collaborate, access necessary data and continue operations remotely. In fact, in an October 2020 survey of state and local IT leaders by the National Association of State CIOs, 41% of respondents report having a cloud-first strategy for new applications, with another 17% describing their agency as having instituted or in the process of instituting infrastructure as a service. “With the impact of the pandemic, this is a trend that is likely to continue,” NASCIO notes in the report.

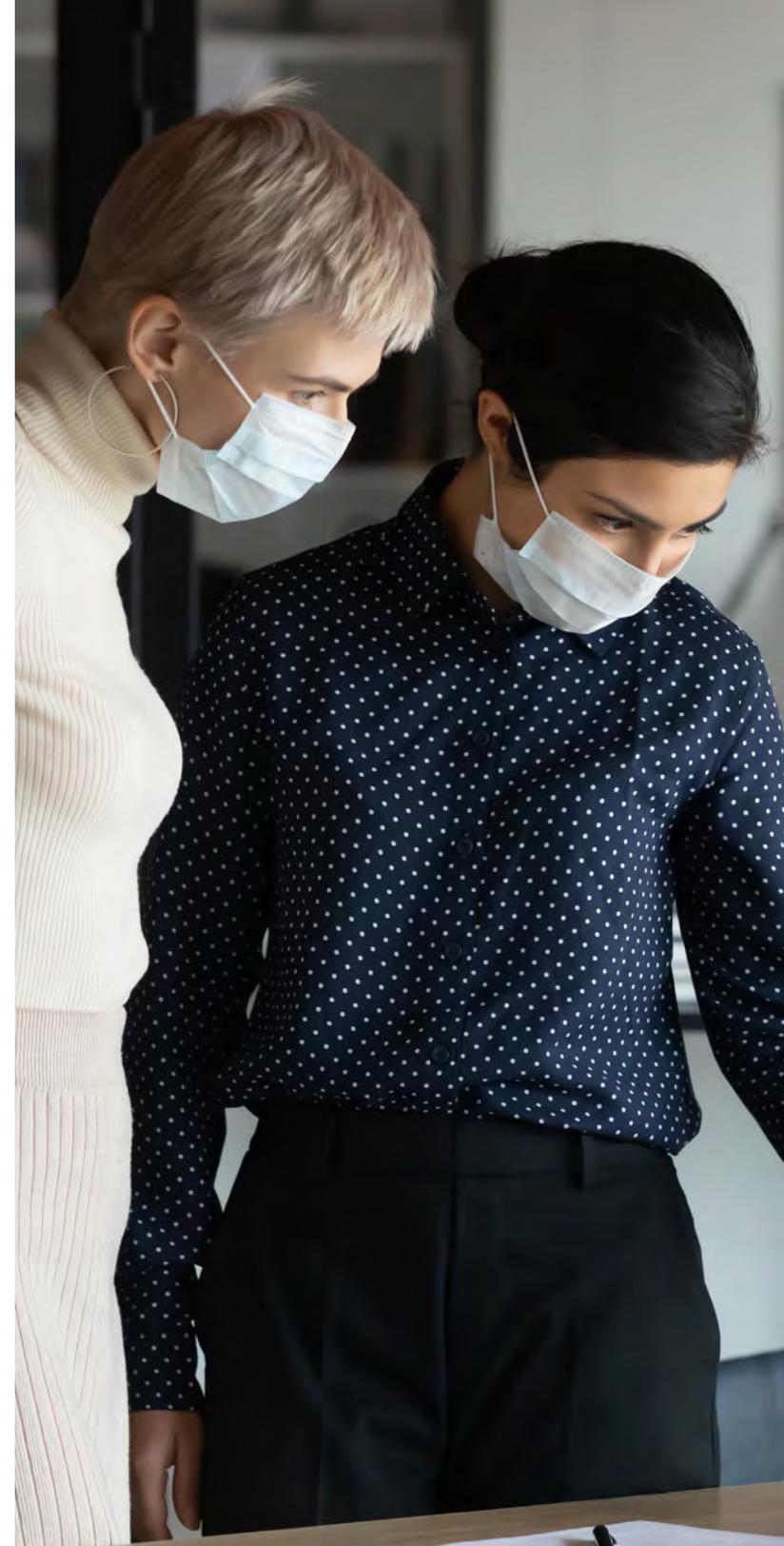
To successfully move operations to the cloud requires both technology and culture change facilitated by a Cloud Center of Excellence (CCoE).

Creating a successful cloud culture

To make the most of the cloud and maximize return on investment, government IT leaders need a strategy to ensure that cloud-based solutions are implemented in the most efficient, effective and secure way possible. This may mean a shift in culture: dropping old paradigms and looking beyond the organizational boundaries of functional departments and agencies. Moreover, security, infrastructure and applications must be considered together, which often requires central IT and state agencies to work in close cooperation. Creating a CCoE can facilitate that collaboration and consideration.

A best practice CCoE is comprised of a cross section of experts supporting both mission and technology disciplines. These stakeholders are empowered to identify application interdependencies and potential efficiencies, foster collaboration between application, infrastructure and security teams, eliminate stovepipes and ensure that the organization enjoys all the benefits a move to the cloud has to offer.

Yet, it's no easy task to assess application portfolios for cloud readiness, migrate applications to the cloud, build cloud native applications, and assess cloud platforms, capabilities and tools. A trusted vendor partner can help introduce best practices and provide deep technology experience to ensure that IT transformation is undertaken in the most optimized and cost-efficient way possible. Moreover, a technology partner can provide insights and feedback honed from years of experience and help to accelerate the culture change required to operate effectively in a cloud ecosystem.





CCoE best practices

A CCoE should be formed with a small team, hand-picked to build the foundation for ongoing success. At a minimum, the team should include one or more cloud architects, cloud application developers, cloud operations engineers familiar with infrastructure as code (IaC) concepts, database specialists and agile project managers. The specific number of resources depends on the size and speed of the government organization's transformation agenda.

The CCoE provides a centralized command and control point focused on activities such as:

- **Aligning security, compliance and service management policies**
- **Reviewing and approving the use of cloud-native tools**
- **Standardizing and automating commonly used solutions**
- **Defining and administering processes to assess cloud readiness**
- **Executing initial cloud migrations and/or cloud application development**

In addition to these functions, the CCoE is responsible for teaching others how the new cloud infrastructure works, best practice use cases and more.

Initially, a CCoE may begin with educating a small team, such as equipping developers with the knowledge and training necessary to create and deliver a service. According to cloud leader [Amazon Web Services](#), "effective CCoE teams start small, develop an approach for implementing cloud technology at scale for your organization, and can become the fulcrum by which your organization transforms the way technology serves the business."

As successes mount, the CCoE team evangelizes best practices, sharing concepts and key skills that promote ongoing success to relevant teams and agencies. In this way, the CCoE can extend cloud learning and best practices alongside cloud services. From there, agencies can tap the CCoE to create a base from which they further expand and fortify the cloud.

“Strategy and planning that look at both near-term tactical needs along with long-term strategic goals is absolutely critical. Without strategy, government won’t achieve the cloud ROI that is often promised but rarely delivered.”

Joe Kyle | vice president of Public Sector Strategy and Alliances, NTT DATA

Culture + strategy = success

Writer and management consultant Peter Drucker once famously said, “culture eats strategy for breakfast.” In the case of cloud adoption, strategy and culture must be in lock step to succeed. States cannot afford to take a haphazard approach to cloud. Rather, they should have a focused, prioritized technology strategy to achieve maximum impact.

“Strategy and planning that look at both near-term tactical needs along with long-term strategic goals is absolutely critical,” says Joe Kyle, vice president of Public Sector Strategy and Alliances at NTT DATA. “Without strategy, government won’t achieve the cloud ROI that is often promised but rarely delivered.”

In the absence of a coherent strategy, potential pitfalls include everything from lack of visibility to hosting costs, to missteps with workload suitability. The idea that cloud migration is a simple “lift and shift” of legacy workloads to cloud platforms fails to consider many other benefits of cloud computing.

Kyle has seen firsthand the negative impacts that a cloud migration can have when it is pursued without a formal strategy. In the case of one state government that was eager

to move to the cloud, “they lifted and shifted applications that were running in their data center,” he says. Once the migration was complete, however, IT leaders were unable to discover any measurable return on investment. “In the end, they were paying more for the cloud infrastructure than they were in their own data center because they didn’t look at the bigger picture. It was business as usual—just now in the cloud,” Kyle notes.

Merely moving legacy workloads to the cloud rarely yields the desired results of a cloud migration, including cost savings, improved efficiencies and better service delivery. The lift and shift approach often occurs when the journey to the cloud is seen as an infrastructure problem rather than a new way of building and managing workloads. By instead shifting the culture to begin holistically approaching security, infrastructure and applications, and building a sound strategy, government can prioritize and plan procurements to optimize the return on their cloud investment.

Ultimately, guided by a strong strategy, government can achieve significantly better outcomes across risk, cost and operations.

Prioritizing value

While a lift and shift migration may be appropriate for some workloads, the approach doesn't take advantage of cloud-native tools and features. However, other migration options will, including:

Replatforming: Sometimes called "lift, tinker and shift," this approach moves assets to the cloud with a small amount of up-versioning to take advantage of cloud infrastructure and cost optimization, without the level of resource commitment required to re-architect an application.

Re-architecting: This often involves a more advanced process of recoding some portion of an application to take advantage of cloud-native frameworks and functionality. While this approach requires the most upfront resources, it can offer the greatest cost efficiencies as agencies modify their applications and infrastructure to take full advantage of cloud benefits.

The CCoE, working with an experienced partner, can build a cost-benefit analysis to help agencies prioritize applications for migration and choose the most appropriate migration strategies. Successful CCoEs often choose to start with a project where value can be delivered quickly, validating the ability to modernize systems and free teams from technical debt. In this way the CCoE can begin creating more and more value across agencies and for employees and constituents.

The power of cloud

With a strong strategy supporting cloud migration, state and local governments can benefit from the power and scalability of cloud computing by:

Responding quickly to new demands for telework

Providing users with on-demand access to resources

Emphasizing a user and business focus in cloud deployments

Ensuring regulatory compliance

Scaling programs, optimizing applications and reducing costs



Culture + strategy = excellence

A CCoE offers an effective way to outfit a modern IT organization with agile approaches to capture and implement business requirements. It does this by more effectively encouraging cultural change as well as generating best practices. These practices can be shared and used across the agency to create repeatable, federated policies, frameworks, procedures and reference architectures, all of which can be used to support the organization's application development, infrastructure and security teams as they migrate applications and infrastructure to the cloud.

As in-house cloud champions, and change agents, the CCoE team can impact state and local government approaches to the culture, thinking and workflows necessary to facilitate inter-agency cooperation and realize the benefits of the cloud.

Vendor support for state and local CCoEs

While it is possible to stand up a CCoE using only internal resources, there's no need to go it alone. In fact, most state and local IT leaders will find it more effective to partner with an experienced third-party provider in such an undertaking.

The right vendor can bring breadth of expertise across a wide range of use cases derived from their experience in working with multiple state and local government entities. Moreover, a strong provider can deliver depth of expertise, with specialized knowledge required to get started on the right foot.

NTT DATA, for example, has vast experience in helping organizations successfully adopt leading cloud platforms, like AWS, and has developed a CCoE model where NTT DATA certified cloud architects and engineers serve as an extension to a government agency's IT team. This means the agency has everything they need to ensure successful cloud adoption without having to hire in-house. Specifically, NTT DATA offers government agencies the power and expertise of more than 500 team members with AWS experience, over 14,000 Microsoft and Java developers and architects, and over 1,000 DevOps build and release (CI/CD) engineers with broad tool experience.

Strategic alliances

A capable third-party provider can also bring to the table significant strategic alliances in support of a government's efforts to stand up a CCoE around its cloud migration efforts. Close working ties with major cloud providers can help ensure the CCoE uses best practices and drives modernization efforts that take timely advantage of industry trends and emerging technologies.

NTT DATA, for example, works closely with leading cloud provider AWS to provide an industry-leading focus on security investment, automation for greater productivity and cloud-native technologies that optimize government services.

For state and local governments seeking a cloud partner, AWS is a good choice. It offers GovCloud to support state and local governments that require workloads to remain within the U.S. or that meet security compliance requirements for CJIS, IRS 1075 and/or HIPAA. With close ties to AWS, NTT DATA is in a strong position to support state and local government CCoE efforts. The alliance gives the NTT DATA team deep insight into AWS's capabilities and emerging best practices. This helps ensure that government CCoEs remain on the cutting edge of cloud adoption.

Real-world outcomes

By leveraging a hub of expertise, NTT DATA has already helped state and local governments maximize efficiencies, drive cost savings in their cloud adoption efforts and glean practical outcomes.

Use cases include:

NTT DATA's CCoE processes helped one state's Department of Transportation migrate its data lake and GIS data warehouse to the AWS cloud.

In support of a leading state's Office of Attorney General, NTT DATA applied its CCoE best practice strategies to assess and migrate an entire portfolio of applications to the cloud using a variety of techniques, including consolidating and migrating applications.



Next steps

When it comes time to adopt a CCoE, there are five steps government IT leaders should take to get started on a successful journey.

1. Maintain strategic cloud adoption as a focal point.

Establish a rigorous approach and a cloud transformation methodology that delivers sustainable value by integrating business know-how with deep technical IT and cloud architecture skills.

2. Hire or develop talent to make best use of the CCoE's strategic and tactical guidance. Cloud-based governmental processes require a different way of thinking and strong leadership to drive that change. For this reason, it is critical to hire and/or develop cloud expertise that can lead the cultural change required to thrive in a cloud ecosystem.

3. Start small, take incremental steps and use the power of the CCoE to demonstrate to stakeholders the value of this model.

4. Set performance metrics for the CCoE to measure progress.

Metrics can range from IT resource utilization to the number of releases each day/week/month as a sign of increasing agility to the number of projects the CCoE influences. When results are combined with a customer-centric approach, it can showcase that a CCoE provides value and is easy to work with, assuring that cloud adoption continues to grow.

5. Seek experienced, objective advice and support to help establish a sound architecture and implement proven processes for assessment, planning, execution and management.

Learn more about how NTT DATA can help your state and local agency make the most of the cloud and adopt a Cloud Center of Excellence.

[VISIT OUR WEBSITE](#)

About NTT DATA Services

NTT DATA Services partners with clients to navigate and simplify the modern complexities of business and technology, delivering the insights, solutions and outcomes that matter most. As the largest division of NTT DATA, a top 10 global business and IT services provider, we combine deep industry expertise with a comprehensive portfolio of consulting, application, infrastructure and business process services.

Copyright 2020 NTT DATA, Inc. All rights reserved.

NTT DATA
Trusted Global Innovator