



## **Transforming Public Sector Engagement with Kyndryl Private Cloud**

## The public sector has long recognized

the need to modernize existing IT systems and operations to better serve communities. But budgetary limitations and procurement requirements have historically created roadblocks, slowing holistic digital transformation and transition to the cloud.

The pandemic crisis created a new inflection point for modernizing public sector IT infrastructure, however. Agencies and entities are now taking a new look at cloud as they accelerate efforts to deliver new digital services, build resilient IT operating models, and streamline manual processes. The goal: to better serve constituents who have been unable to take care of business in person this year due to lockdowns and restrictions associated with the global pandemic.

“The pandemic taught us that those that jumped in and leveraged the value of the cloud model were able to balance shifting client demands with ease,” notes Archana Vemulapalli, former CTO for the Washington, D.C., government. “Those that didn’t [embrace cloud] saw revenue loss, security issues, and all kinds of other problems. My advice to every CIO in the public sector is to lean forward, not lean back.”

The cloud is the engine to drive digital transformation, but security and compliance present a hurdle for this sector, especially as both relate to public cloud. Government agencies, other public sector organizations, and public infrastructure have been the target of high-profile cybersecurity attacks this year—emphasizing the importance of advanced security when planning a cloud migration strategy. In addition, the sector must comply with data residency mandates and a range of regulations, from the Federal Risk and Authorization Management Program (FedRAMP) to International Traffic in Arms Regulations (ITAR), to ensure that sensitive cloud workloads are secure.

As in the private sector, the public sector’s IT modernization journey is also stymied by the lack of internal expertise for cloud management and application deployment. This includes specialized skills in Kubernetes, containerized services, open source APIs, and DevOps. Because the initial wave of public sector applications was shifted to the cloud for cost savings, often by individual agencies or departments, the landscape is punctuated by a complex web of siloed systems that don’t easily communicate with each other and are difficult to manage.

The times call for a third-party partner that can help public sector organizations navigate the transition to the cloud and IT infrastructure modernization. This requires a set of end-to-end services that accelerate transformation while managing and mitigating potential risks; filling skill gaps; and providing holistic, end-to-end management.



The times call for a third-party partner that can help public sector organizations navigate the transition to the cloud and IT infrastructure modernization.

## WHAT'S DRIVING THE PARADIGM SHIFT?

IT modernization via the cloud is critical in the public sector, for a variety of reasons, most notably to garner operational efficiencies and to create more resilient public services and infrastructure. At the same time, public sector entities are trying their hand at IT innovation to improve access to government services and promote much higher levels of citizen engagement—and doing both on a large scale.

■ **Improve citizen engagement.** Citizens are accustomed to the readily accessible and highly personalized user experiences popularized by consumer platforms such as those from Apple, Amazon, and Netflix. Simply put, they now expect that same level of simplicity and individualized interaction when using government services.

Public sector organizations need cloud and its infinite compute and storage capacity to leverage advanced analytics, machine learning, and AI capabilities for reinventing the citizen experience. They are also creating mobile-ready apps and digital systems that enable remote common tasks such as license renewal, voter registration, and passport applications at any time.

■ **Unlock the value of data.** The government is rich in data, but that bounty is typically strewn across legacy systems and locked up in different system silos. A modern IT architecture facilitates secure connections and interoperability between different government systems, ensuring that data can be leveraged effectively as part of digital transformation initiatives.

When a modern IT architecture is combined with advanced analytics, AI, and machine learning, public sector entities can better leverage big data to identify patterns and gain insights. These can be used to shape specific services or government programs. For example, they can employ data insights to optimize current and future vaccine rollouts, streamline transportation services, inform disaster recovery planning, and even target and mitigate crime.

■ **Transform core operations and modernize systems.**

Cloud can help cash-challenged government agencies and public sector organizations maximize limited resources. A modern cloud infrastructure helps organizations eliminate redundant infrastructure and underused or unnecessary software licenses while consolidating workloads in pursuit of optimized and standardized operations. With cloud technologies, agencies can take a page from private industry, adopting more nimble development practices that enable faster innovation and response to shifting policy trends and citizen needs.

■ **Promote secure, resilient operations.** With the public sector being a prime target for cyberattacks and data breaches, the cloud model creates a standard for more secure operations, including proactive detection and remediation of security events. Cloud also enables continuous delivery of new features and ensures consistency in service quality, making certain that public sector entities are well positioned to deliver resilient and secure services to citizen populations.

## CHALLENGES TO CLOUD MIGRATION

Public sector entities face a variety of challenges as they navigate a complex hybrid and increasingly multicloud landscape, especially in terms of security and compliance. The vast portfolio of legacy IT systems in the public sector is difficult and expensive to modernize, due to decades-old infrastructure and applications. Many of these applications are written in outdated programming languages, which makes them brittle and susceptible to breakage even as they are regularly tweaked to accommodate policy changes.



With cloud technologies, agencies can take a page from private industry, adopting more nimble development practices that enable faster innovation and response to shifting policy trends and citizen needs.

In fact, the public sector's reluctance to offload technical debt is one of the biggest obstacles to accelerating cloud adoption, Vemulapalli says. "The dependence on legacy systems and the fear and unwillingness to move away from those systems create a barrier to innovation," she adds. "This impacts almost all vertical markets, but it's more acute in the public sector, because of the structure and organizational model."

Complex interdependencies tied to different transactional systems, coupled with tight integration with on-premises security models and operational systems, create additional hurdles. For example, security and regulatory mandates can be exceptionally challenging in multicloud, hybrid IT environments. The cloud forces organizations to think differently about long-standing perimeter-based security models. Yet many public sector entities lack experience and expertise in modern constructs such as the shared security model; zero trust; and devsecops, which shifts security requirements from an afterthought to the earliest stages of application design.

Public sector organizations also lack IT experts versed in agile development practices and cloud-oriented operations and service management approaches, which significantly limits the benefits of modernization. Too many in this space are also focused on application migration strategies as opposed to rethinking wholesale business processes. "The entire construct of centering your core technology and business transformation around the cloud model is a transformation narrative, not a shift narrative," Vemulapalli says. "That's the step change everyone needs to get comfortable with."

**The US General Services Administration** estimates that agencies could save \$3 billion annually if automation gave federal workers just 20 hours back a year to focus on mission-critical tasks. Estimates are, however, that only 20% of the \$92 billion spent by the US government annually on IT is currently devoted to modernization.

## KYNDRYL PRIVATE CLOUD: THE BEST OF BOTH WORLDS

So how can public sector organizations "go cloud" and gain the agility and unified management advantages without security and compliance risks? The answer lies in Kyndryl Private Cloud<sup>1</sup>, a solution that combines the best of cloud and on-premises models to give public sector organizations a jump on digital innovation.

The Kyndryl Private Cloud solution delivers dedicated on-premises deployment of storage, compute, network, and management services in an extendable software stack that spans private as well as public cloud resources. The model combines the security, latency advantages, and controls of an on-premises environment with the efficiencies, flexibility, and scalability of the cloud while also reducing compliance and security risks and the headaches of day-to-day infrastructure management.

Key to the benefits of Kyndryl Private Cloud is the shift from a capital expenditure (CapEx) model to an operating expenditure (OpEx) consumption model. This enables organizations to pay only for the resources used without having to make significant up-front investments in hardware and storage infrastructure. Compared with a traditional on-premises model, Kyndryl Private Cloud automatically scales up and dials back resources, based on workload demands, while providing a seamless and consistent approach to IaaS across hybrid clouds. In addition, security, along with compliance with GDPR and other data privacy and data residency regulations, is seamlessly controlled locally or on-premises as part of the Kyndryl Private Cloud delivery model.

<sup>1</sup> Kyndryl was spun-off of IBM IT infrastructure services in 2021. Kyndryl's global base of customers includes 75 of the Fortune 100 companies. With 88,449 skilled professionals operating from over 100 countries, Kyndryl is committed to the success of our customers, collaborating with them and helping them to realize their ambitions.



Agencies could save \$3 billion annually if automation gave federal workers just 20 hours back a year to focus on mission-critical tasks.

Kyndryl Private Cloud accelerates cloud transformation, by providing an elastic-cloud-like experience on-premises for those workloads that aren't a fit for public cloud, such as those with strict security requirements or data transfer latency constraints. Instead of using the multitenant architecture of public cloud, Kyndryl Private Cloud delivers a fully managed, single-tenant environment that elevates cybersecurity by using data encryption and management to physically isolate workloads on physical servers or virtual machines along with "air gaps" from client infrastructure.

This model also significantly simplifies IT management, with updating, patching, provisioning, and other routine management tasks covered in the service model. This lessens the burden on internal IT departments and frees them up to pursue higher-value innovation efforts along with evolving modern IT constructs such as DevOps. A self-service portal completes the ease-of-use picture, automating time-consuming maintenance functions.

Combined with IBM Cloud Satellite, Kyndryl Private Cloud enables on-premises workloads to run in tandem with public cloud workloads from a single pane of glass, delivering a unified and consistent approach to IaaS across the hybrid landscape.

With Kyndryl Private Cloud, public sector entities can fast-track the shift to the cloud and stay focused on innovation. "The best outcomes for public sector organizations is when we get our technical teams out from the day-to-day operational lens of managing infrastructure assets to moving into how technology can drive strategic business outcomes," Vemulapalli says. "To do that, you need to adopt a cloudlike model that provides flexibility and scalability as you need it."



## Getting started with Kyndryl Private Cloud

Public sector organizations eyeing Kyndryl Private Cloud should consider several factors as they evaluate offerings and potential partners:

- **Consider the reputation and breadth of talent** at the managed services provider. The quality and experience of the team are crucial to planning the best cloud migration road map and getting service delivery right.
- **Ensure that the offering supports a true cloudlike consumption model** and experience paired with the benefits of a dedicated private cloud infrastructure. The switch from a capital dependency to an OpEx cost structure is key to the value of Kyndryl Private Cloud.
- **The ability to reduce operational complexity** is the direct line to freeing up IT to focus on innovation initiatives tied to strategic business outcomes.
- **Pay attention to service-level agreements (SLAs)**, and tie metrics to specific business outcomes.
- **Prioritize applications** that would benefit most from a flexible, consumption-based cloud model—don't start the modernization strategy with what's easiest.
- **Don't look at the cloud model as an afterthought** or a new way to deploy old systems. The best practice isn't to do brownfield modernization but, rather, to move confidently ahead with greenfield deployments built as cloud-native and designed to transform processes.

For more information on Kyndryl Private Cloud, visit <https://bit.ly/kyndrylprivatecloud>.

## THE PARTNER ADVANTAGE

Given the complexities and what's at stake, it's critical for public sector entities to align with the right partner and ecosystem. An IDC 2021 worldwide services report estimates that three-quarters of customers undergoing digital transformation are seeking vendors that can offer end-to-end services to ease the challenge of cloud migration and the management of hybrid, multicloud IT infrastructure. Kyndryl's solution offers just that.

Public sector organizations in particular can benefit from a third-party assist. Saddled with underresourced IT departments and budget constraints, public sector entities are more likely to need help defining cloud migration strategies and determining where to run critical workloads. They may also need coaching and support to optimize their cloud road map, whether that entails a lift-and-shift strategy for existing systems or starting fresh with a clean slate of cloud-native applications.

With decades of managed services experience and more than 21,000 clients, Kyndryl is well positioned to deliver Kyndryl Private Cloud as a flexible, usage-based consumption model. The solution offers a variety of compute services, including bare-metal servers and general-purpose virtual instances to support a range of data analytics and high-performance applications. Customers can specify their choice of products to run on the provided infrastructure, from bare metal to virtual machines, through the orchestration platform. Clients can also work with Kyndryl for tailored services designed specifically for their needs.

As part of the Kyndryl Private Cloud portfolio, Kyndryl's migration services will help public sector entities find the optimal path for moving legacy applications to the cloud. The platform supports a usage-based consumption model that offers flexible terms—with this cloudlike pricing structure, organizations get the flexibility of pay-per-use models with the predictability of traditional enterprise license agreements.

One of Kyndryl's key differentiators as a managed services provider is the scale and scope of in-house talent, deployed across 115 countries and having delivered for hundreds of clients for years at scale. With IT talent at a premium—especially across key cloud competencies such as security, containerization, devops, and cloud management—public sector agencies can immediately benefit from Kyndryl's top-drawer talent pool instead of having to find and develop their own bench of experts.

“By making our talent pool an extended shared service for anyone in the public sector, it ensures they are getting the knowledge and experience at a fraction of the cost of building it out on their own,” Vemulapalli says. “That's the advantage of expanding your ecosystem in a smart way, and that's what we do with Kyndryl Private Cloud. It's the combination of solving an infrastructure problem, getting to a cloud operating model, and bringing the right skills to bear so you get immediate value and can focus on driving transformational change.”

## THE BOTTOM LINE

Modernizing IT infrastructure in the cloud is the Holy Grail for delivering new government services and helping the public sector cater to the needs of an ever-changing population. Kyndryl Private Cloud combines the best of both cloud and on-premises environments, helping organizations accelerate the shift and paving the way for a more innovative future.

For more information on Kyndryl Private Cloud, visit <https://bit.ly/kyndrylprivatecloud>.



Public sector organizations in particular can benefit from a third-party assist.