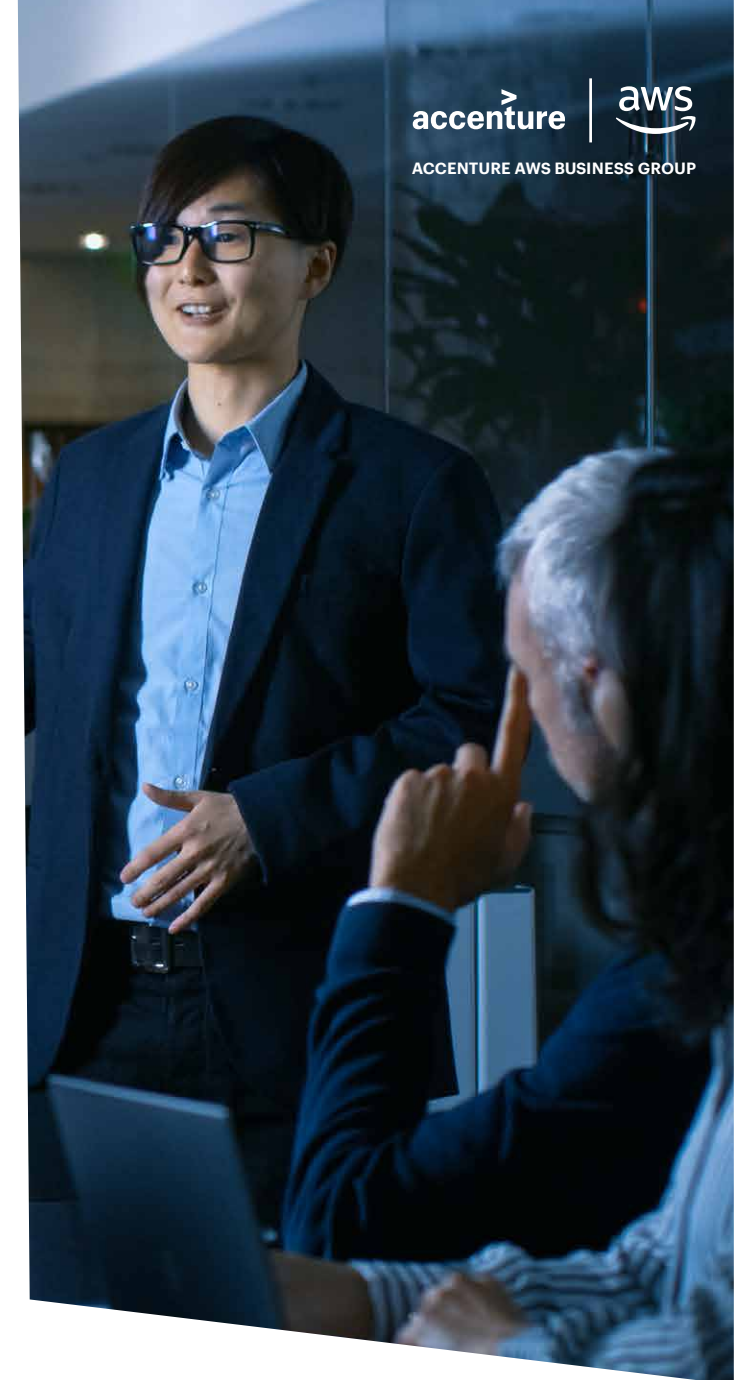
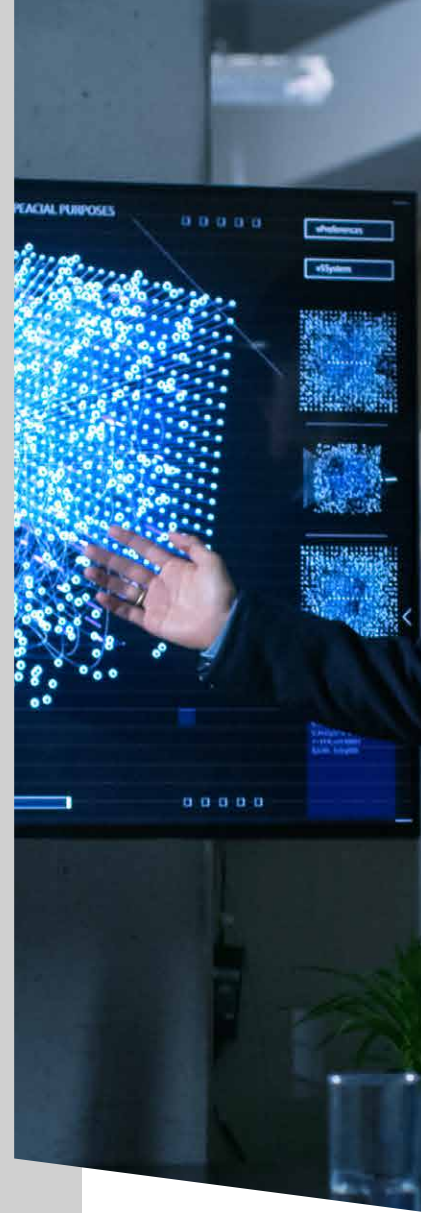


Cloud Continuum

Powering Smart Government in APAC

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The era of compressed transformation

Widely acknowledged—and now proven—the pandemic accelerated digital transformation across industries. The same holds true for governments. Think back to the rapid responses that were mobilised for contact tracing and later vaccine management in countries around the world. All of that was enabled by new digital platforms.

Just like in other industries, digitisation in governments hasn't been limited to immediate pandemic-related priorities. Globally we've seen public service organisations accelerating their digital investments to respond to immediate issues, drive ongoing operational efficiencies and sustainably meet the demands of digitally connected citizens.

We've entered the era of compressed transformation. Rapid change across markets, continuous business disruption and new human behaviours are combining to drive a far greater sense of urgency for organisations. But these trends also create unprecedented opportunities for organisations to increase their agility, explore new business models and build new capabilities that boost resilience.

As a consequence, we've never seen such a rapid shift in enterprise technology. And what is the single most powerful tool organisations have to master change at such speed and scale? The cloud.



Making significant advances in cloud adoption

Public service organisations have been making significant advances in cloud adoption beyond migration. In Accenture's "Public Service Cloud: A continuum of opportunity" research, a global survey of 350+ public service executives, a majority report that their organisation now has between 30% and 75% of its data on the public cloud – and 57% say they have scaled cloud across at least most of their organisation.¹

Likewise, in the Asia-Pacific (APAC) region, public sector organisations are at an inflection point in their digital transformations with cloud. An IDC estimate pegs spending on public cloud by governments in APAC (including China and Japan) at US\$12.6 billion in 2025, growing by a CAGR of 20.3% between 2020-25.²

Now is the time for public service organisations to build on existing momentum to scale their digital transformations and drive forward into a new era of innovation and change.

Recognising the challenges

While many government agencies in APAC had begun their transformation journeys before COVID-19, the pandemic emphatically demonstrated cloud adoption as a driving force for enhanced citizen experiences and more effective service delivery.

The easy answer may appear to be driving ahead towards fully digitally-enabled operating models and putting citizens in control of their data and the services they access. But there are still hurdles to overcome on this journey, including how best to manage enduring legacy technologies and perceived concerns over privacy, security, and data sovereignty.

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Understanding the cloud imperative

The direction of travel is clear, however, “Cloud first” strategies are coming closer to standard practice in the region, as public service organisations recognise that cloud provides the must-have foundation for their digital transformation initiatives.

According to our “Public Service Cloud: A continuum of opportunity” research, enhanced flexibility, resilience, scalability and speed provided by cloud are all viewed as non-negotiable for future capabilities. Underlining this, 45% of the public service leaders in this study indicated that their organisation has established a cloud centre of excellence in the past year.³

As well as driving digital transformation initiatives for public service organisations, cloud can also help them to double-down on their sustainability goals. Cloud technologies can help accelerate sustainability beyond the obvious reduction in carbon emissions related to on-premise data centres. That’s because the underlying infrastructure allows for better power and cooling improvements that reduce energy consumption and improve server utilization rates. In fact, based on an **AWS 451 Research** report, moving on-premises workloads to AWS can lower the carbon footprint by 88%. AWS’s infrastructure was also found to be 3.6 times more energy efficient than the median of surveyed enterprise data centres.⁴

Take the innovative project recently delivered by Accenture jointly with the Australian Institute of Marine Sciences. This is to support the Institute’s wider coral reef monitoring efforts and accelerate global protection of coral reefs, with ReefCloud—a digital platform to enhance coral reef monitoring using the **Amazon Web Services (AWS)** cloud, AI and data science. It will enable reef scientists to share data faster, foster collaboration between scientists and organisations and ultimately assist in worldwide conservation efforts.⁵

Transformation through effective use of connected technology, empowered by cloud migration and hybrid cloud architectures, is only the beginning of the journey. Instead of viewing cloud adoption as the destination, organisations must recognize that cloud is actually a future-proofing continuum—one that spans from public cloud to the edge and everything in between—including private cloud and hybrid architectures. All of this is dynamically supported by next-generation connectivity such as 5G and software-defined networks, the Internet of Things (IoT), AI and robotics.

Pillars of success: traversing the cloud continuum

So, what can public service organisations do to ensure that they maximise the value that the cloud continuum provides?

Taking an **outcomes-focused approach** and putting citizens and workforce at the heart of execution should enable them to get the most from their adoption of cloud in terms of pricing, governance and security, while avoiding unnecessary costs, unwanted risks, and inefficiencies caused by legacy systems.

If the cloud journey is undertaken without a continually evolving vision, there's a risk of missing out on the benefits. With cloud today, there are countless approaches and solutions to choose from—but our research points to four key practices that can help organisations develop a cloud strategy that is most appropriate to their needs.

What are these four practices?



1. Prioritize experiences for citizens

To harness the long-term value of cloud initiatives, public service organisations need to put people at the heart of their digital transformation strategy. This is already happening. According to Accenture’s research, 48% of public service executives have pursued increased citizen value as a key organisational goal, while 45% have pursued faster time-to-market for new services globally.⁶

The pandemic is a good example of how governments can rapidly scale up the use of digital solutions to improve citizen experiences. During the early stages of the pandemic, public service organisations pivoted quickly to implement new digital and virtual services to serve people remotely.

In response to the COVID-19 outbreak, the Government of India launched the Covid Vaccine Intelligent Work (CoWin) portal—an online platform designed to monitor real-time data, from vaccine registration to delivery of certificates of vaccination. This application was built on the AWS cloud and has enabled the government to administer 1.3 billion doses of vaccines (as of December 2021) to citizens at tremendous speed and scale.⁷

Singapore’s Changi Airport Group is another organisation that has tapped into the cloud to keep up with rapidly changing consumer and business needs. By partnering with Accenture and AWS, the airport operator has been able to accelerate the design and delivery of new digital applications and products during the pandemic. An example of this is the rollout of the safe travel concierge application, a one-stop portal that provides all passengers arriving at [Changi Airport](#) with a handy checklist of all entry requirements into Singapore. Leveraging AWS cloud, this application was built in just four weeks—enabling Changi Airport to focus on improving each passenger’s travel experiences.⁸

In a post-pandemic era, governments will need to continue keeping pace with the heightened expectations of citizens, who demand more and improved digital services on par with the experiences they receive from private businesses.



2. Prioritize experiences for the workforce

To add more value for citizens, public service organisations must reimagine the way their employees use and interact with technology, as well as consider how cloud solutions can enhance their everyday work experiences.

To implement new ways of working, agency leaders need to consider how to empower employees to play a bigger role in shaping their future workplace experiences. Public service organisations that focus on this 'human' aspect of cloud adoption are poised to reap benefits including improved employee retention and increased innovation to build a future-ready workforce, in turn leading to better services for citizens.



A recent case in point is the collaboration between the National Institution for Transforming India (NITI Aayog) and AWS to launch a [Frontier Technologies Cloud Innovation Center \(CIC\)](#). AWS's CIC program provides the opportunity for non-profits, education institutions, and government agencies to collaborate with other public sector organisations on their most pressing challenges, innovate and test new ideas, and access the technology expertise of AWS.⁹

The NITI Aayog Frontier Technologies CIC is the first AWS CIC in India—and the first globally for AWS set up in collaboration with a government agency at a national level. The CIC addresses a core mission: to drive continuous innovation in delivering citizen services by deploying leading-edge technologies.

To make the best use of the cloud, it's essential to build a culture of innovation. To foster continuous digital upskilling in the public sector, government leaders need to consider how best to train existing staff, establish the right tech principles to support rapid growth, and promote cross-government sharing of best practices.



3. Establish standard practices to support constant ongoing adoption of new technologies and operating models

Commercial cloud computing has become the pathway for government agencies to transform into innovative citizen-centric service delivery organisations. According to Accenture’s research, 59% of public services leaders say they expect to increase their total cloud spending over the five-year period 2020 to 2024.¹⁰

A key consideration for public agency leaders is to establish **cloud-first policies** that clearly set out the wider intention to move to cloud. Once governments have established these policies and put the right infrastructure in place, their IT professionals can more effectively engineer ‘born-in-the-cloud’ or ‘cloud-native’ solutions that make the most of the cloud’s embedded high level of security, flexibility and scale.¹¹

Having a cloud-first policy also helps public service organisations adapt their approach to procuring IT. Given the rising level of cloud investment, public agency leaders need to be confident that the organisation is selecting and implementing the right cloud solutions.

When procuring new services or re-procuring existing services, a cloud-first policy requires public sector organisations to fully evaluate

potential cloud solutions before considering other options. This helps to deploy cloud services consistently across government and provide better value for taxpayers. Public agency leaders can further tap into centralised, whole-of-government agreements with cloud service providers to reap significant cost savings, increased flexibility, greater security, and consistency in procuring cloud and professional services used by all agencies, including state and local governments.

These new dynamics are already taking shape in the Asia Pacific region. For instance, Japan’s new Digital Agency was launched in September 2021 to centralise the IT budget for all government ministries and agencies and encourage local governments to shift completely to the government cloud by fiscal year 2025.¹² AWS was selected as one of the cloud service providers that meets the requirements laid out by the Digital Agency.

Another important consideration is to establish strong data governance for security and citizen trust. This may involve government agencies implementing data classification practices to mitigate potential risks—such as creating policies to categorise and manage data based on its level of sensitivity and comply with regulatory mandates.



4. Recognise that the cloud continuum requires continuous commitment from leadership

Leaders play a critical role in any cloud transformation. Today's cloud solutions offer public service agencies the opportunity to shift their focus away from cutting costs and towards a mindset of harnessing the cloud to move fast, scale, and innovate. It is vital for public agency leaders to define a clear, outcomes-based vision, and ensure that new IT structures are closely aligned with organisational goals at every stage of the cloud journey. Leadership must establish and evangelise the organisation's objectives, so all team members understand the vision, cloud best practices and desired outcomes.

For cloud transformation to succeed, government leaders must effectively communicate the purpose—the so-called ‘North Star’—and set a clear mandate for all team members to understand the vision, cloud best-practices and desired outcomes.

A great example of persistent leadership from the top is the Government Commercial Cloud (GCC) initiative in Singapore. Announced in 2018, this bold initiative outlines the Singapore Government’s commitment to migrate the bulk of its IT systems to commercial cloud services within five years. Reaffirming this commitment, Singapore Prime Minister Lee Hsien Loong highlighted how the government will begin to migrate some systems onto the cloud, gain experience in this new mode of operation, and take bolder steps in light of new learnings.¹³

The cloud momentum is carried over with the implementation of Singapore's National Digital Identity (NDI).¹⁴ Tapping into the AWS cloud, and supported by Accenture, the NDI platform brings together key digital initiatives in Singapore, such as SingPass Mobile, and MyInfo Business, to provide greater online convenience and transactional security for citizens and businesses.

The way forward: committing to continuous cloud reinvention

During the past year, several public service organisations have demonstrated how fast they can pivot in the face of a crisis. They must maintain this momentum and continue to transform, powered by the needs of their own organisations and the citizens they serve.

As citizen preferences and their digital behaviours continue to evolve, leading public service organisations should harness the benefits of cloud technologies to service communities more effectively, and surpass citizens' rising expectations while retaining top talent. Public service organisations must envision cloud as an integral part of the transformation journey—from on-premise to cloud migration to growing and innovating with the cloud.

The way forward is clear. It's time to press ahead—commitment to continuous reinvention in the cloud will enable delivery of next-generation experiences for citizens and workforce alike.

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