

# Transforming eGovernance for tomorrow: Building mission-critical digital capabilities for public sector transformations



## INTRODUCTION

As governments invest in building digital governance services, future-proofing their digital systems and processes will be essential for creating lasting impact. Here's how VDI can help governments realise this vision.

Alongside digital transformation initiatives in the private sector, governments across the globe are now pursuing digitisation at scale. This is evident in the consistently-rising e-Government Development Indices (EGDI) of nations since 2020.<sup>1</sup>

**India experienced a high number of cyber-attacks in the first half of 2024**, including 593 cases of data breaches, leaks, ransomware attacks, and illegal trading of access credentials, according to the India Breach Report by Falcon Feeds, a product of the cybersecurity firm Technisanct. **The government segment emerged as one of the primary targets.**<sup>5</sup>

Government digital transformations are driven by a number of factors – accountability, transparency, citizen convenience, and cost pressures. The latter is especially relevant, as in-person transactions typically cost governments over 40x more than online transactions.<sup>2</sup> Moreover, 9 in 10 citizens prefer to interact with governments online rather than commuting to public sector offices in person.<sup>3</sup>

However, unlike the private sector, the public sector has less experience in building lasting digital capabilities. Relatively new to the logic of digital orchestration, government agencies must get digitisation right on the first go despite budgetary limitations. This makes early breakeven a key financial outcome of public sector transformations.

Government agencies must therefore exploit every lever of cost-effectiveness as they build eGovernance capabilities while ensuring that their technology investments support their vision in the long run.

Infrastructure decisions are of special importance in this regard. While the public sector builds digital services for citizens, it must also modernise the underlying technology infrastructure to support digital governance.

In this white paper, understand how infrastructure decisions can help mitigate key challenges impeding public sector transformations, and why modern end-user computing solutions are inevitable and essential to support such transformations at scale.

## Public sector digital transformations: key challenges

In the process of digitising their services, public sector agencies face a number of unique challenges. While CIOs and CTOs of private sector organisations have a number of blueprints and success stories to learn from, such guidance is rather limited in the public sector. As a result, these hurdles become difficult to overcome for government organisations.

Here are a few challenges that are felt across nearly every eGovernance initiative:

### 1. Building secure and fool-proof systems

Security is typically the top consideration when building eGovernance services. In fact, some governance services can even pose national security risks if compromised. At the same time, government organisations are plagued with insider threats, credential attacks, and other sophisticated risks that are difficult to combat while ensuring transparency.

### 2. Operating with limited budgets

Budgetary constraints impede nearly half of eGovernance initiatives, even in developed nations like the UK. Investments in legacy infrastructure, expensive end-user computing solutions, and inefficient resource utilisation tend to drain budgets faster, making such services unsustainable.

### 3. Implementing future-proof solutions

As technology evolves, the expectations and requirements of stakeholders also change over time. eGovernance services should also be able to scale with growing demand. In such scenarios, suboptimal technical design and inefficient infrastructure lead to technical debt which can prove difficult to pay off.

### 4. Creating employee-friendly processes

Digital delivery of government services is typically supported by employees who orchestrate the underlying processes. Any friction in these processes – from repeat authentication to complex access-related workflows – will slow down service delivery to end users.

### 5. Managing a complex IT estate

Once government agencies digitise their operations, they are left with a massive and complex IT estate that must then be managed and maintained. This contributes to high operating costs. Poor management practices compromise service availability and can lead to public dissatisfaction and even disastrous outcomes in some cases.

These challenges are further amplified by a lack of technological strategy or vision, and in some scenarios, a disparity in the digital literacy of the public sector workforce.

## How infrastructure decisions affect eGovernance initiatives

Amongst all technology challenges faced in public sector digital transformations, infrastructure-related hurdles are arguably the easiest to overcome and have the widest-ranging consequences.

Government agencies are coming to realise this fact. Now, more and more organisations are aiming for agility and flexibility when making digital infrastructure decisions. According to the latest data,

**investment in physical devices and data centers is slowing down.**<sup>4</sup> This is an apt move because of the following reasons:

1. Data centers can be difficult to scale with growing demand. Cloud is being favoured where possible, as a result.
2. Slowing investment in devices indicates a growing propensity toward virtualisation solutions. Virtualisation drives cost efficiency and mitigates critical security challenges.
3. Owning end-user devices and data center hardware can make it expensive to upgrade and manage existing deployments with changing requirements.

Lastly, because the IT infrastructure of government organisations supports their digital services, it can strongly impact the efficacy, speed, quality, and availability of these services.

These factors make it crucial to thoroughly consider all options when making infrastructure decisions in eGovernance initiatives.

## Adopting a smarter approach to government IT infrastructure with VDI

In the current technology landscape, government organisations have an important lever to make their digital foundations agile, flexible, and secure – Virtual Cloud Desktop (VCD) solution. Setting up Virtual Desktops in Public, Private, or Hybrid Cloud deploying VDI for applications used by eGovernance services along with 24\*7\*365 days support can unlock significant benefits for government organisations.

This means that public sector organisations have an important opportunity waiting to be exploited. By adopting Virtual Desktop Infrastructure, government agencies can not only mitigate some of the critical challenges of digitisation, but also make their eGovernance services more sustainable, reliable, and secure.

### How VDI mitigates eGovernance challenges: 5 key use cases

Read how VDI can support large-scale transformations in the public sector in the following sections.

#### Fortifying sensitive data and applications with centralised access

In traditional computing environments, data is stored on individual devices and accessed by users locally. This makes it difficult to control access patterns, prevent leakage of sensitive information, and mitigate security risks. VDI ensures that all data and applications that are to be accessed by users are located in a controlled environment. When users access these applications, they perform operations in the app environment which is only reflected on the employee's device.

VDI reduces the risk of data breaches and unauthorised access, as data never leaves secure servers which may be located on the cloud, on-prem, or in hybrid environments. In addition to centralised access, VDI also facilitates the enforcement of security policies in a reliable manner. As a result, IT administrators can achieve consistent security results across all virtual desktops, including encryption, multi-factor authentication (MFA), and regular security patching. With this uniformity, insider threats and credential attacks are eliminated.

Lastly, homegrown VDI solutions can also ease compliance with national regulatory requirements. For instance, VDI solutions from Accops can support access audits and adherence to RBI's new guidelines on MFA deployment. This security and compliance empower public trust and ensure the integrity of eGovernance services.

#### Achieving cost-effectiveness and resource efficiency at scale

One of the immediate benefits of VDI is the reduction in hardware expenses. When government agencies adopt VDI, their users are able to access virtual apps and desktop environments from older hardware. This reduces the need for frequent and costly hardware upgrades and extends the life cycle of existing devices.

Digital identity in government is expanding into larger ecosystems that include user authentication, unique citizen or organization identifiers, and credential verification, such as smartphone-based identity wallets. Gartner predicts at least 500 million smartphone users will regularly make verifiable claims using a digital identity wallet built on distributed ledger technology by 2026.

According to Gartner, government CIOs can strengthen their digital identity strategy by building on use cases and partnerships that break out of traditional sector silos to add greater value for citizens, government and businesses. They have an opportunity to shape these emerging ecosystems by asserting government's role as a potential federator, facilitator and regulator of digital identity.<sup>6</sup>

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## 500 Million Smartphone Users

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In the long run, VDI also lowers the operating costs associated with the management and maintenance of end-user computing solutions. As VDI centralises the management and maintenance of virtual desktops, it reduces the workload on your IT teams. Advanced VDI solutions can run automated checks to ensure that all virtual desktops are up-to-date with the latest security patches. This reduces manual back-and-forth between individual users and IT admins. Ultimately, government organisations are able to work with a smaller IT team even as they orchestrate eGovernance services at scale.

Lastly, VDI can facilitate the dynamic allocation of computing resources on demand. This ensures that every computing resource is used efficiently, which prevents over-provisioning or underutilisation. Organisations are also able to scale their desktop farms up or down without incurring repeated costs. This can prove particularly beneficial to agencies with periodic or project-based workloads where resource requirements vary significantly – like tax departments or investigation agencies.

### Avoiding lock-in and future-proofing digital investments

As VDI offers flexibility of scale and independence from specific hardware or software, it offers a tactical advantage over physical endpoints. Moreover, some VDI solutions are widely (and almost universally) compatible which enables organisations to choose best-case solutions that meet their specific needs at a given time without committing to a single vendor, stack, or ecosystem.

Moreover, when their technological requirements change, government agencies can seamlessly upgrade their virtual desktop infrastructure without replacing their existing hardware. VDI is inherently flexible as it allows for seamless integration of new technologies. As a result, digital investments remain relevant and effective over time. In eGovernance initiatives, this ability to pivot to new advancements can drive success in the long run.

Additionally, VDI also supports hybrid, multi-cloud, and on-prem environments. Because on-prem systems may be necessary in cases where users handle extremely sensitive data, VDI enables governments to leverage the benefits of both. This hybrid approach drives unprecedented resilience and scalability.

## Making eGovernance initiatives employee-friendly

One of the key advantages of VDI is its impact on the employee experience. VDI enables organisations to provide a consistent digital workspace to all users regardless of their location or device. VDI deployments can also be optimised for latency, ensuring a frictionless experience for users that are located far on the network. For organisations that want to offer the flexibility of remote work, VDI offers one of the fastest ways to make it possible. With VDI, employees can access their virtual desktop from any device with an internet connection, enabling them to work from home, in the field, or at different office locations with consistent productivity.

VDI also reduces the friction that arises from repeat authentication and complex access-related workflows. Some VDI providers offer Single sign-on (SSO) capabilities and integrations with other SSO providers. This enables users to log in to all apps with a single set of credentials. Moreover, by adopting MFA solutions, government agencies can employ passwordless authentication, which not only offers convenience but also eliminates the risk of credential-based attacks.

Lastly, VDI facilitates the quick onboarding of new employees. IT administrators can quickly provision and configure new virtual desktops for users, ensuring immediate access to the necessary tools for new hires. With expedited onboarding, new employees become productive early on, increasing the overall efficiency of eGovernance initiatives.

## Minimising IT overheads with simplified management

In legacy IT environments, admins are able to manage a limited number of desktops and laptops. Some organisations with branches in remote locations may also require employees to travel to hubs with IT admins, which is time-consuming and contributes to operating costs. Moreover, each physical device requires maintenance, repair, and troubleshooting, which leads to high operational costs. VDI consolidates these tasks by centralising desktop and end-user experience management.

This allows IT administrators to oversee all virtual desktops from a single console. Automated tools and scripts are used to perform routine tasks, reducing the manual effort required from IT staff. As a result, each IT personnel can manage a wider pool of end-user environments, thus significantly reducing operating costs.

Some VDI providers like Accops can also enable government agencies to consolidate the vendors in their VDI stack. This lowers the number of licences to be purchased and managed, and reduces the complexity underpinning VDI deployments. Lastly, VDI also improves disaster recovery and continuity planning. With centralised data storage and backup processes, organisations can ensure that critical data and apps can be quickly restored in the event of a disaster. This builds reliability and trust in digital governance services while reducing the cost of failover.

## Advancing sustainability for government organisations

Amidst rising climate change concerns, government agencies are under pressure to live up to their sustainability commitments. VDI can prove a valuable lever in reducing the carbon and material footprint of technology at government organisations – more so as government agencies employ a greater degree of digitization.

With VCDs, government organisations can render endpoint machines irrelevant, which frees them from frequent upgrade cycles. This lowers the materials footprint of IT, whereas applying energy-efficient practices in VDI management lowers the power consumption of end-user computing. In addition, remote access capabilities eliminate the need to commute to the workplace, which makes a significant positive impact on Scope-3 emissions.

## Building eGovernance capabilities for tomorrow with Accops VDI

Virtualisation proves as a key lever for building future-proof eGovernance services. But that said, government organisations must choose the right app and desktop virtualisation provider to reap the above benefits of virtualisation. Moreover, homegrown virtualisation providers are likely to offer contextual capabilities that help organisations meet the compliance requirements posed by local laws and regulations.

Accops VDI is a comprehensive virtual app and desktop delivery solution that is built to power large-scale eGovernance initiatives involving secure and highly sensitive data. It offers near-universal compatibility with various architectural patterns, hardware and software vendors, hypervisors, and other technology in your stack. With Accops VDI, government organisations can achieve water-tight security and deliver intuitive and responsive digital workspaces to their end-users. In addition, Accops VDI brings faster ROI and quicker payback compared to other providers – which makes it the ideal choice for government agencies with strained budgets.

Public sector organisations looking to build future-proof eGovernance services should strongly consider bringing Accops to their organisations. Get in touch with us to learn about the benefits and tactical advantages that Accops VDI can bring to your eGovernance initiative.

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- <sup>1</sup> <https://digital.intosairussia.org/docs/Digital-Transformation-of-Public-Sector-Cases-and-Best-Practices.pdf>
  - <sup>2,3</sup> [https://static.carahsoft.com/concrete/files/8214/9340/0928/Digital\\_Transformation\\_in\\_the\\_Public\\_Sector\\_eBook\\_2.pdf](https://static.carahsoft.com/concrete/files/8214/9340/0928/Digital_Transformation_in_the_Public_Sector_eBook_2.pdf)
  - <sup>4</sup> <https://digital.intosairussia.org/docs/Digital-Transformation-of-Public-Sector-Cases-and-Best-Practices.pdf>
  - <sup>5</sup> <https://www.thehindubusinessline.com/info-tech/593-cyber-attack-cases-reported-in-h1-of-2024-india-breach-report/article68463278.ece>
  - <sup>6</sup> <https://www.gartner.com/en/newsroom/press-releases/2024-04-16-gartner-announces-the-top-government-technology-trends-for-2024>

Accops enables secure and instant remote access to business applications from any device and network, ensuring compliant enterprise mobility for business users while keeping governance with the organization.

For further details, feel free to reach out to our dedicated team at [contact@accops.com](mailto:contact@accops.com).