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REVITALIZING THE CITIZEN EXPERIENCE THROUGH DIGITAL TRANSFORMATION IN THE PUBLIC SECTOR

HPE GreenLake

INTRODUCTION

The public sector plays an essential role in maintaining and improving the quality of citizens' lives. From education and healthcare to emergency and social services, the responsibilities of the public sector are immense, and so are the tacit expectations of the citizens who rely on them.

Evolving citizen expectations

Today's citizens want and need fast, efficient government; they want interactions with public sector entities to be simple and streamlined; they want it to be easy to access essential information, services, and resources. No less important, citizens demand and expect the same attention to data security from governmental entities that they see in their digital interactions with private companies. These are not outlandish expectations, but they put significant pressure on public sector IT.

These changes in citizen expectations run headlong into traditional mindsets in public sector IT. A historic focus on serving the needs of internal customers—IT users within agency walls—is challenged by the imperative to serve external

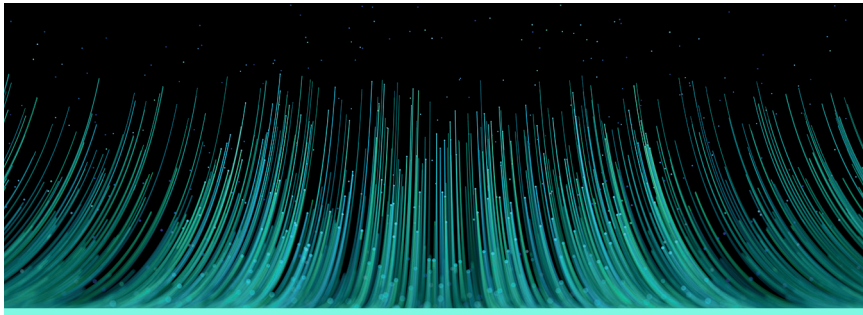
constituents: citizens. IT leadership in the public sector is faced with the need to refocus IT resources on the delivery of a seamless experience across numerous new and existing channels of communication and engagement: not merely websites and email, but also SMS text, chatbots, smart speakers, and more.¹

Worldwide National Government Predictions, 2021²

- By 2021, 90% of G20 countries will grow investments in monitoring and mitigation tools that address social engineering, social deception, fake news, and other digital propaganda.
- By 2021, 45% of governments will begin processing citizen services real-time, leveraging better customer intelligence and robotic process automation.
- By 2022, 60% of agencies will deploy AI-enabled technologies to recruit, train, and retain key personnel, enhancing their future of work capabilities.
- By 2023, 35% of governments globally will invest in containerization, cloud usage monitoring, federated identity management, and other tools to deploy services seamlessly in a multi-cloud environment.
- To ensure effective continuity of operations, by 2024, 30% of agencies will invest in intelligent and prescriptive intelligent digital workspaces supported by digital-led operating models.

¹ Post-COVID-19: A Recovery Guide for Government CIOs—Develop IT Strategies That Drive Enterprise Transformation

² IDC FutureScape: Worldwide National Government 2021 Predictions



Society-scale disruption

Citizen expectations aren't the only factor driving public sector IT transformation. Since at least 2015, stresses to public infrastructure and resources brought on by urban population growth and climate change have been driving demand for greater efficiency and resiliency.

The COVID-19 pandemic of 2020–21 is another example of severe disruption. As the novel coronavirus spread, it drove worldwide economic hardship, with governments needing to provide assistance and support to the populace even as they faced massive new challenges: a remote workforce, a vast increase in online engagement, an education system forced to adapt to remote learning, and overwhelmed public health and first-responder resources. In the wake of the pandemic, it is even more clear that the delivery of citizen services must be more efficient and more flexible—and digital transformation is even more imperative.

Growing security threats

Another global-scale challenge to public sector organizations is cybercrime. And as the arms race between threat and defense continues to heat up, the public sector's responsibility for the security of citizen and government data will only increase—while the stakes continue to rise. A recent example of hackers posting confidential documents regarding COVID-19 medicines and vaccines on the Internet after a data breach last year at the European Medicines Agency shows to what extremes hackers will go to secure economic advantage, conduct espionage,

or even create disruption for its own sake.³ Ransomware attacks, in which cybercriminals lock systems and essential data until a ransom is paid, are another growing international threat. Even schools are seeing an increase in organized and cartel-style ransomware attempts, resulting in a prediction that in 2021, 70% of schools will fortify their cybersecurity and data encryption defenses.⁴

In the face of this threat environment, public sector IT struggles to secure appropriate resources. Data repositories are difficult to store, protect, and manage in a manner that is cost effective, and the shift from a centrally controlled infrastructure to one that allows endpoint devices to download applications creates new vulnerability. And fragmented government structures and the lack of clear lines of authority within governmental IT organizations leads to disparate systems and an easier footprint for cybercriminals to exploit.⁵

Financial challenges

For the public sector, funding can be a major roadblock to enabling adequate digital transformation. Budgets are strained, often requiring continuous spending reviews. Disruptions in government—even cyclical ones such as elections—can complicate the budgeting process even further and pose a challenge to maintaining strategic continuity, both of which can limit the potential for transformation. The public sector must also adhere to a range of organizational mandates and constituencies, and longer appropriations timelines.⁶

With HPE GreenLake, South Korea's Hanyang University adopts the first university cloud

In 2013, the Hanyang University in South Korea developed a next-generation comprehensive information system to promote innovation and support of advanced IT resources at each of its institutions. Now, that development is a key part of the New Hanyang 2020 project to push the university forward. With a limited budget, the university needed to create an IT infrastructure that would support this push while avoiding huge initial capital outlay. They decided on a cloud solution through HPE GreenLake. [Learn more.](#)

³ Cyber Attackers Leaked Covid-19 Vaccine Data After EU Hack

⁴ IDC FutureScape: Worldwide Education 2021 Predictions

⁵ The Public Sector Cybersecurity Challenge: 3 Things to Consider (dymtek.com)

⁶ Catapult Public Sector Digital Workplace eGuide.pdf (catapultsystems.com)

Legacy technology

Legacy technology in the public sector restricts the digitization of services, with aging equipment hampering the adoption of new applications and the delivery of new services, while allowing security threats to persist. These legacy systems need to be replaced to meet the changing expectations of constituents and the digital workforce, and the avoidance of downtime is critically important, especially for frontline services like law enforcement and medical emergency agencies.

The digital transformation of the public sector is no small task. Evolving expectations, new demand, and new threats are all drivers; inherent operational and financial challenges—not to mention aging infrastructure—all present substantial barriers to success. But with the right strategy, the right technology, and the right partners, the public sector can rise to the challenge and deliver.

With help from HPE GreenLake, Australia's Cenitex is elevating customer experiences

In 2008, Australia's Cenitex was tasked with delivering mandated IT and communications services to seven government departments in Victoria. A recent policy change is now allowing agencies to seek their own service providers on the free market. After a decade in business, the core IT infrastructure at Cenitex needed a refresh, and the business model needed a rethink. Cenitex made a bold move in a risk-averse industry by launching a strategy to get out of the infrastructure procurement business. With virtualization tools and composable infrastructure from HPE Synergy via HPE GreenLake, the team at Cenitex radically evolved its business and its value to customers. [Learn more.](#)



CREATING AN EFFICIENT AND RESILIENT PUBLIC SECTOR

The rapid adoption of digital technology in the commercial world is changing citizens' expectations of how they should interact with their government and is driving agencies to fundamentally rethink how they deliver services to their internal users and external constituents. Across the globe, "smart cities" have emerged where advanced technology is being used to connect, protect, and enhance the lives of citizens. By focusing on digital transformation, these cities can better support sustainable development, improve resilience, and meet the rising expectations of their citizens, and they are also able to attract investment, new business, and new talent.

For public sector organizations in smart cities, embracing digital transformation has the potential to reduce the administrative burden on staff and provide higher-quality services delivered with greater efficiency, thereby reducing operational costs. In fact, capturing the full potential of government digitization could free up to \$1 trillion annually in economic value worldwide.⁷

⁷ Public-sector digitization: The trillion-dollar challenge | McKinsey

The shift toward a digital workplace

COVID-19 has put extreme pressure on the public sector worldwide to immediately improve the speed and resilience of delivering critical services. Early in the pandemic, this was most apparent when employees were forced home, creating the sudden need for digital workplaces, and in the process, exposing the global imbalance in preparedness for such an event. Organizations that had previously relied heavily on in-person interaction were suddenly left behind by those that already had the flexibility to interact digitally or that were able to adapt quickly.

What is a smart city?

Smart cities use IoT sensors, video cameras, social media, and other inputs to act as a digital “nervous system,” providing the city operator and citizens with constant feedback so they can make informed decisions to help solve real problems they face every day. In smart cities, higher quality services are delivered more efficiently, reducing operational costs and improving resiliency and continuity of services to the public. For governments around the world, the need to adopt the smart city concept is a reality, but the pressure to embrace a full transformation to digital public services has never been so overt.

As the shift to working from home has evolved from a reaction to a strategic decision, many organizations are embracing the remote digital workplace for the longer term. This mindset, which puts employees at the center of the workplace vision, has the potential to empower employees to be more engaged and efficient, and provide better services. Virtual Desktop Infrastructure (VDI) has been a key approach for employers needing to provide workers with remote access to shared resources. It combines inherent data security with simplified device management—supporting productivity even with a partially or wholly remote workforce.



Data-driven government for the people

The massive amounts of data produced and stored by public sector organizations represent an extraordinary story of value and the potential to power more effective, more efficient operations. Public sector organizations are increasingly embracing artificial intelligence (AI) and machine learning (ML) technologies to explore these volumes of data and define insights that can help enhance operations and achieve greater cost efficiencies. They have also used AI to manage budgets, detect fraud, and forecast and limit energy consumption.

For the public sector, AI and machine learning provide access to more accurate information, forecasts, and predictions that in turn help solve some of the world’s most challenging social problems. With AI, complex systems can be simulated to experiment with different policy options, making it possible to spot unintended consequences before measures are enacted. Utilizing AI technology can also improve public services by personalizing them to adapt to individual circumstances. And leveraging its most basic function of automating simple, manual tasks allows employees to focus on more productive work.

In addition to solving challenging problems, these AI solutions have the added benefit of providing data for evidence-based policymaking, which strengthens support for additional use cases and enables data-driven decision making.⁸ And by implementing AI when tapping into the vast volumes of data available to them, public sector organizations can gain access to real-time information and sophisticated insights, helping them to deliver services that meet the needs and wants of citizens.

⁸ [Now Is the Time for AI-Powered Governments \(bcg.com\)](https://www.bcg.com)

In education, data powered by AI can change how schools find, teach, and support students, and by using AI systems, software, and support, students can learn from anywhere in the world at any time. In 2020, the COVID-19 pandemic brought about the swift rollout of nationwide digital education ecosystems in mere weeks. By 2025, it is predicted that 20% of K-12s and 40% of higher education institutions will leverage AI and robotic process automation (RPA) to automate various campus tasks that drive efficient administration and operations for enhanced learning outcomes.⁹

While the benefits of AI are plenty, there are challenges to public sector IT in adopting the technology. Data from a variety of different sources and lines of business needs to be integrated, and public sector agencies struggle to unlock the value of their data due to outdated legacy systems and limited analytics capabilities. Fortunately, the solution to their data challenges has arrived: accessible, fast storage and innovative data management solutions that can scale at speed and take advantage of today's hybrid architecture and AI revolution.

Bringing the public sector together with centralized IT

Due to budget pressures, changing work habits, and citizens' expectations, public sector organizations are being pressured to be more mobile, adaptable, and capable. IT centralization—in which a single IT organization provides IT services across multiple different functions and geographies—can not only simplify administrative tasks, it can improve security, make data management easier, and reduce costs.

While a transition to centralized IT can be complex—and requires significant changes in structure and human resources—it can create new efficiencies, provide higher levels of service to end users, and even increase morale. And seen through a purely operational lens, centralized IT can enable public sector organizations to reduce their technology footprint and power use while at the same time reducing costs associated with data storage and hardware and software licensing.



Leveraging HPE GreenLake, Kern County in California shifts to centralized IT

Kern County, home to almost one million California residents and with a local government comprising over 40 different departments, turned to HPE GreenLake cloud services to overcome its department-specific IT challenges. Previously, every department had its own agreement with an OEM, and this created an enormously complex and costly system to manage. Kern County's vision was simple: Establish a central IT platform managed by the office of the CIO that acts as a service provider and broker of IT resources for all county departments. The county leveraged HPE GreenLake to create one unified framework so that all county departments could benefit from the same platform and economies of scale. [Learn more.](#)

HPE GREENLAKE: EMPOWERING DIGITAL TRANSFORMATION IN PUBLIC SECTOR

One of the most important recent trends in IT has been the turn to as-a-service models for IT resources. The ability to secure storage, compute, and networking via a pay-per-use model on premises is offering organizations new flexibility, agility, and scalability.

Public sector organizations are no exception. Anything-as-a-service (XaaS) models such as HPE GreenLake provide the flexibility, manageability, and uncompromising data security needed for today—and for an uncertain tomorrow. With a pay-per-use model that eliminates upfront capital expenditures, HPE GreenLake offers the agility and innovation of the cloud experience while preserving control for applications and workloads that need to run on premises. It can help accelerate IT modernization, reduce costs, and harness the power of data to operate and serve citizens.

PUBLIC SECTOR I.T. AS-A-SERVICE



Secure your data and workloads with on-premises cloud services

HPE GreenLake offers on-premises solutions that help support requirements for data sovereignty and security. You can also enhance your governance, control, and visibility with optional comprehensive compliance capabilities that provide real-time monitoring and remediation recommendations, as well as insights and analytics to help optimize costs. Achieve the cloud experience for your apps and data, wherever they reside, and modernize your backup and recovery—and gain value from your data—without data egress costs or lock-in. And with on-premises control of your IT environment, from core to edge, you can maintain peak performance as well as data security and control.

Streamline and simplify IT procurement processes

The financial flexibility of a pay-per-use model eliminates the need for major up-front capital investment and lets you align your costs to business outcomes. Pre-configured HPE GreenLake solutions with transparent predictable costs and scale-up-and-down freedom make it easy to quickly get the capacity you need today. And with a simple change order, you can add more later. Pay-as-you-go also provides flexibility and the ability to support research pilot programs without upfront investment. With solutions that evolve ahead of your needs, HPE GreenLake accelerates your deployment of value-added public services.

Anticipate costs with transparent metering and billing

Up-front pricing and monthly charges based on simplified, accurate, and transparent metered usage allows IT departments to have visibility, predictability, and centralized management of operations and spending. Costs by service type, location, or other metrics are available from HPE GreenLake Central, a single, intuitive self-service platform. HPE GreenLake Central provides detailed dashboard views of resource consumption, system performance, compliance status, and cost, giving IT managers visibility and control across their entire hybrid IT estate for public and private clouds.

Free IT staff from routine tasks

Focus your teams on more productive work by offloading monitoring and management of your HPE GreenLake environment. With the services built into our solutions, you can simplify IT operations across your data centers and your clouds.



WANT TO LEARN MORE ABOUT HOW HPE GREENLAKE CAN DELIVER EXCEPTIONAL OUTCOMES?

[View the HPE GreenLake overview](#)

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Unlock value from your existing IT infrastructure assets

Making the transition to a new business model may seem daunting, but HPE Financial Services can help. We offer solutions to help fund your business transformation—recovering value from your current assets and streamlining the IT asset retirement process as you transition to HPE GreenLake. We also prioritize reuse over recycling, keeping technology in use for as long as possible, and leverage our world-class asset management capabilities to maximize recovery. With revenue sharing capabilities, this circular-economy approach delivers tangible benefits to the environment as well as your organization's bottom line.

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