Top Trends in Government for 2021: Hyperconnected Public Services

Published 7 April 2021 - ID G00745488 - 7 min read

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Initiatives: Government Digital Transformation and Innovation

Stay-at-home mandates and public health measures exposed vulnerabilities in government services and accelerated deployment of innovative digital initiatives. To strengthen community resilience, CIOs should plan for hyperconnected public services, which are based on hyperautomation principles.

Overview

Opportunities

- Vulnerabilities in government service continuity were exposed as a result of legacy applications, limited cross-agency application and business process interoperability, and legacy IT and communications infrastructures. The unprecedented emergency measures in 2020 further highlighted the importance of addressing long-standing business processes and technical gaps such as interoperability, collaboration and data exchange among multiple tiers of governments (national, regional and local levels).

- Creative use of commercial solutions such as chatbots, unified communications and collaboration, wireless broadband, and low-code platforms resulted in accelerated deployment of digital initiatives to address the pandemic. Many of these deployments occurred through heroic efforts between government and industry partners as a result of a unified vision of quickly responding to uncharted public health and safety threats.

- Strong political and senior executive support, due to their firsthand, shared experiences in remote work, provides impetus for government CIOs to take bolder actions to facilitate automation of end-to-end business and IT processes for public services and consistent employee experiences.

Recommendations

Government CIOs engaged in digital transformation and innovation must:

- Generate momentum and gain funding support for a "whole of government" automation of end-to-end business processes by proactively engaging and educating agency business leaders. Link initiative ideas to broader, overarching goals such as emergency preparedness and response, economic recovery and security, government transformation, digital equity, and resilience.

- Create or enhance the digital government strategy and roadmap to reflect hyperautomation principles (such as desired business outcomes and level of automation) by requesting input from cross-agency business leaders and CIOs, as well as industry partners. CIOs need to drive innovation that serves clear outcomes and delivers tangible benefits to constituents.

- Build a strong foundation for bolder actions and delivery success by assigning a program leader who can facilitate collaboration across agencies and with industry partners. Hyperconnected public services could be a program or set of initiatives in an overall digital strategy roadmap. Government CIOs should use the heightened urgency and momentum resulting from the pandemic to accelerate the digital maturity progress of their organizations.

Strategic Planning Assumption

By 2024, 75% of governments will have at least three enterprisewide hyperautomation initiatives launched or underway.

What You Need to Know

Hyperconnected public services is one type of a larger set of technology trends, as shown in Figure 1, that government CIOs should include in their strategic planning during the next 12 to 18 months (see Top Technology Trends in Government for 2021). Moreover, the technology trends we identify in this research relate directly to the business trends driving digital government initiatives and are described in accompanying research (see Top Business Trends in Government for 2021).

Figure 1. Top Trends in Government for 2021: Hyperconnected Public Services

Top Trends in Government for 2021: Hyperconnected Public Services

Trusted	Agile	Resilient
• Adaptive Security	• Anything as a Service	• **Hyperconnected Public Services**
• Citizen Digital Identity	• Accelerated Legacy Modernization	• Operationalized Analytics
• Multichannel Citizen Engagement	• Case Management as a Service	• Data Sharing as a Program

Composable Government Enterprise

Source: Gartner
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Hyperconnected public services is the "whole of government" use of multiple digital technologies, tools or platforms to automate as many business and IT processes as possible. These digital technologies integrate data and workflow processes across the government partner ecosystem in order to deliver increasingly interdependent and complex services. These services provide end-to-end access to government resources with minimal friction. Ideally, these services are available anywhere, anytime with high levels of automation consistent with constituent needs.

Government CIOs can use hyperautomation principles and practices to develop hyperconnected, highly automated end-to-end business processes and public services that require minimal human intervention.

Hyperautomation involves the orchestrated use of multiple technologies, tools or platforms. Examples of these include artificial intelligence (AI), machine learning (ML), robotic process automation (RPA), intelligent business process management suites (iBPMSs), integration platform as a service (iPaaS), low-code tools, and other types of decision, process and task automation tools. See Top Strategic Technology Trends for 2021: Hyperautomation and Digital Government in Action: Augmentation Using Robotic Process Automation for further details.

In addition to hyperautomation tools, high-speed, low-latency technologies enable hyperconnected public services. These include wireless broadband (LTE and/or 5G), cloud services and edge computing.

As illustrated in Figure 2, hyperconnected public services can support varying government programs.

Figure 2. Whole of Government Use of Multiple Technologies

Whole of Government Use of Multiple Technologies
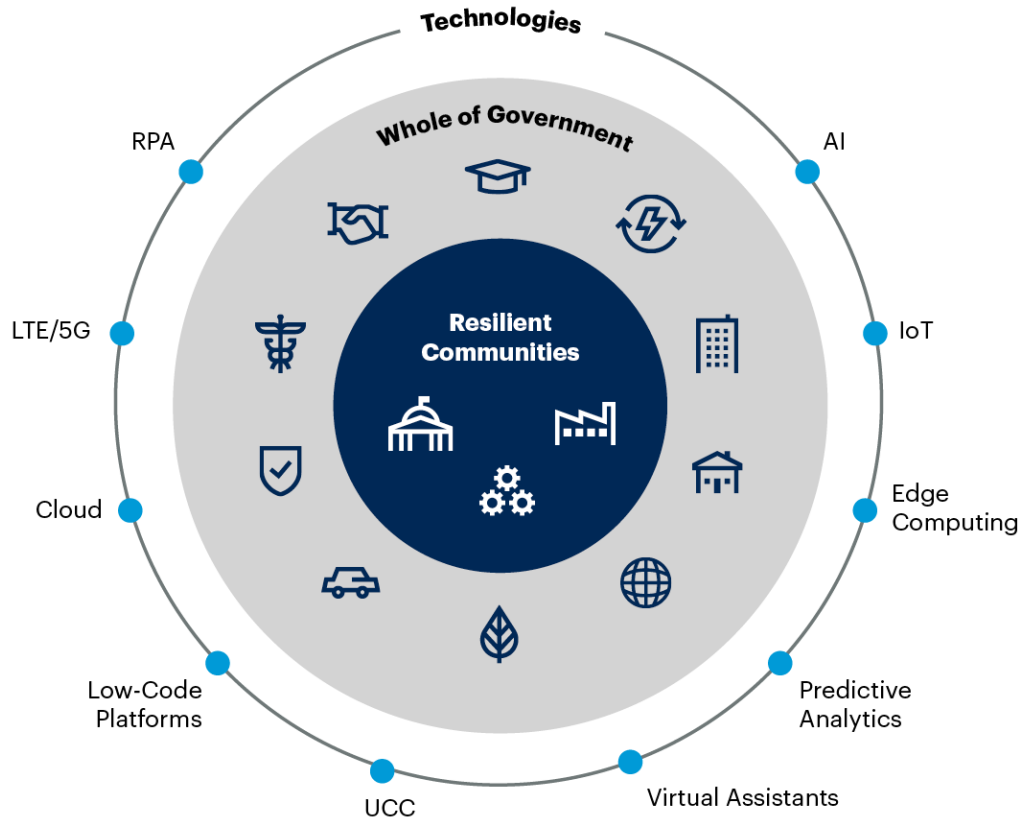
Source: Gartner

Note: AI = artificial intelligence; IoT = Internet of Things; LTE = Long Term Evolution (3GPP project); RPA = robotic process automation; UCC = unified communications and collaboration

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Several government organizations have embarked on further automation of business and IT processes. The examples below illustrate starting points for envisioning the potential for hyperconnected public services:

- Public health (for example, LifeSG) [1]

- Social welfare (for example, Case Study: Swedish Government's Rapid Response to Social Service Demands (Försäkringskassan)) [2]

- Public safety (for example, National Institute of Standards and Technology) [3]

- Criminal Justice (for example, U.K. Ministry of Justice Prison Leavers Systems Mapping and Transforming the End-to-End Criminal Justice System)

Why Trending:

The COVID-19 pandemic exposed vulnerabilities and limitations of siloed, vertical service models of government. To address public health and safety emergency measures, government organizations quickly shifted to digital channels and deployed digital solutions. The emergence and availability of commercial hyperautomation tools such as AI, ML, RPA, platform as a service (PaaS), and high-speed, low-latency communications solutions, such as 5G, enable government organizations to provide essential end-to-end "contactless" services to constituents and employees.

Through hyperautomation of government business processes and public service models, government organizations will be able to balance digital investments for resiliency and flexibility, while at the same time optimize costs. In addition, digital workplace solutions, such as unified communications and collaboration, will enable consistent employee experiences and engagement with constituents.

According to Gartner's annual CIO Agenda survey, 41% of government CIOs indicate they plan to increase investments in process automation in 2021 (see 2021 CIO Agenda: Government CIOs Step Up to Action for Digital Acceleration).

Recent government digital solutions to support emergency measures provide examples of opportunities for further automation. These include:

- Virtual assistants or chatbots for addressing unemployment insurance claims and questions

- Low-code digital platforms to automate COVID-19 contact tracing and vaccine management

As a result of firsthand experiences in heroic actions, as well as many lessons learned from the COVID-19 response, government organizations plan to further enable more responsive and resilient public services through integrated technology and business solutions.

Some examples of these planned initiatives and investments for further automation of public services include:

- Korea Government Digital Innovation

- U.K. Local Government Association Report on Adult Social Care

- New Zealand Ministry of Business Innovation and Employment COVID-19 Innovation Acceleration Fund

- U.S. National Science Foundation Smart and Connected Communities Grants

Implications:

Hyperconnected public services hold the promise of seamless, proactive and almost "contactless" access to government resources. Given the complexity and diversity of internal and external business process workflows involved in public services, following are key implications of this trend:

- **Business-driven outcomes and leadership collaboration.** These are tough, business-driven undertakings requiring unified vision on constituent needs and service outcomes. Success will depend on collaboration among an ecosystem of stakeholders across multiple government agencies, and potentially, tiers of government.

- **Investments in digital solutions and partnerships with technology service providers.** Existing commercial technology products and services need to be woven together. Current market offerings are unlikely to provide a complete end-to-end solution. Digital government technology platforms are essential to deliver public services in more efficient and effective ways by making it easier to reuse data, services and capabilities across different organizations.

- **Ongoing iterative processes and sustained momentum.** Government organizations have various priorities that might derail energy and resources to act quickly. Hyperautomation initiatives need to be sustained. While COVID-19 has highlighted the need for hyperautomation, there are several examples where the benefits of remote, automated access to critical government resources can be justified. An ongoing sense of urgency focused on human-centered needs, such as social programs and public safety, is essential to sustain momentum.

Actions:

- Solicit executive leadership commitments by linking hyperconnected public services initiatives with emergency readiness and preparedness, economic recovery and broader digital government transformation goals. Government CIOs need to drive innovation that serves clear outcomes and delivers tangible benefits to constituents. Strong governance, aggressive prioritization of initiatives and laser focus on breaking down organizational silos are critical.

- Generate and sustain momentum by leveraging business and technical foundations from quick wins in COVID-19 automation. Develop conceptual business and technical architectures to convey overall vision. Iterate on automation needs based on human-centered design. Better government services start with users and their needs.

- Gain support from stakeholders by assigning a program leader who can facilitate collaboration across agencies and with industry partners. Government CIOs need to use the heightened urgency and momentum surrounding COVID-19 to accelerate the digital maturity progress of their organizations.

Evidence

2021 CIO Agenda: Government CIOs Step Up to Action for Digital Acceleration

[1] LifeSG, Government of Singapore.

[2] Case Study: Swedish Government's Rapid Response to Social Service Demands (Försäkringskassan)

[3] SAFE-NET: An Integrated Connected Vehicle & Computing Platform, National Institute of Standards and Technology (NIST).

Recommended by the Authors

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