

Top Technology Trends 2023: Government

Led by Arthur Mickoleit, Director Analyst

Top Technology Trends in Government

Modernization



Adaptive Security



Cloud-Based Legacy Modernization



Sovereign Cloud

Insights



Hyperautomation



AI for Decision Intelligence



Data Sharing as a Program



Composable Government Applications

Transformation



Total Experience

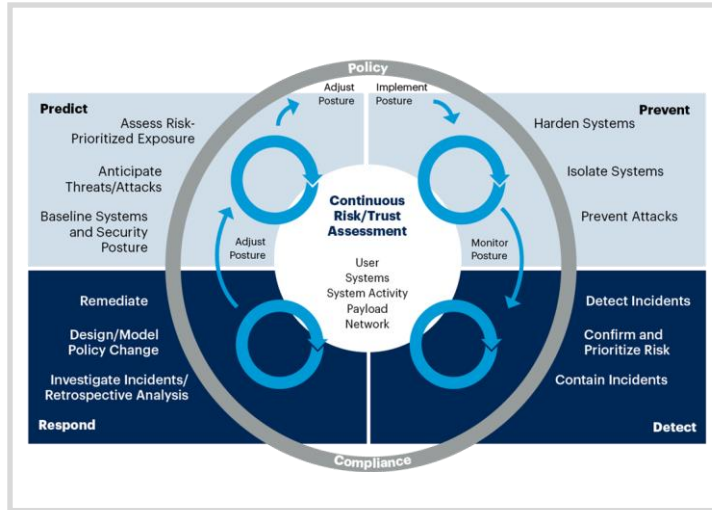


Digital Identity Ecosystems



Case Management as a Service

Adaptive Security



The adaptive security model is one in which cybersecurity tools, technique and talent merge to operate more like an autonomic biological immune system. Adaptive security must address risk not only from an IT vector, but also from domains, such as supply chain and cyber-physical systems.

Prediction:

By 2025, 75% of government CIOs will be directly responsible for security outside of IT, including operational and mission-critical technology environments.

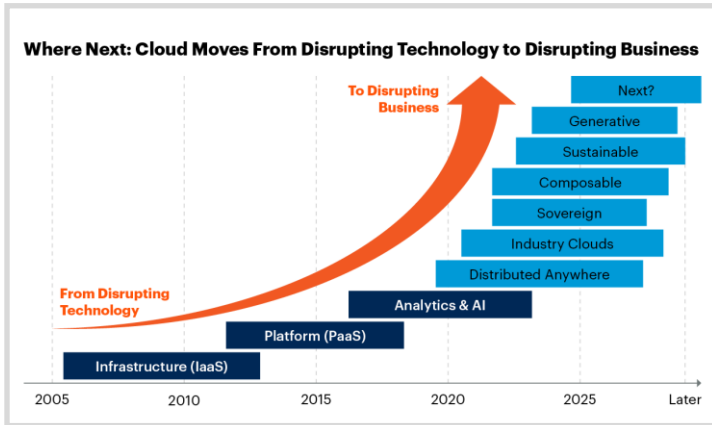
Opportunities:

- New investments will help shift from a compliance-based to a risk-based approach.
- Convergence of enterprise data, privacy, supply chain, cyber-physical systems requires integrated security.
- Organization culture is changing to widely embed cybersecurity practices.

Recommendations:

- Link adaptive security to broader digital innovation, transformation, national security and resilience objectives.
- Collaborate across physical, personnel, supply chain security and mission units for cyber-physical systems.
- Emphasize tools, techniques, response capabilities and talent over document-based compliance activities.

Cloud-Based Legacy Modernization



Many governments struggle to meet accelerated demands and opportunities due to legacy, siloed systems and data stores. Leading governments apply a composable architecture to break this mold. Modularity and modern design principles enable the transition toward composability.

Source: Gartner ([757977](#))

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Prediction:

By 2025, over 75% of governments will operate more than half of workloads using hyperscale cloud service providers.

Opportunities:

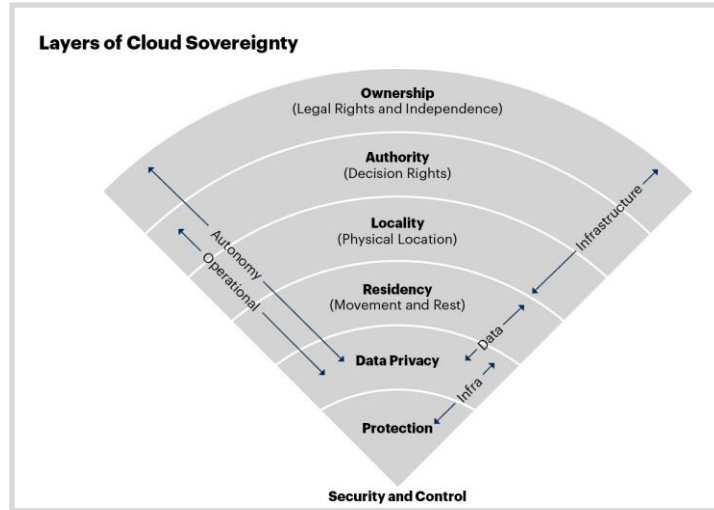
- Continuing global uncertainties and disruptions highlight the urgency to modernize IT infrastructure and applications to ensure more resilient government services.
- Governments need to proactively address technical debt and service risks through more scalable and robust architectures.

Recommendations:

- Use adaptive sourcing strategies to identify areas where “as-a-service” delivery models can augment internal resources and accelerate IT modernization.
- Establish a continuous modernization program by ensuring strong governance and sponsorship by business and IT leaders.

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Sovereign Cloud



Policymakers' concerns regarding data privacy and potential government overreach alongside global uncertainty have resulted in demands for Sovereign Clouds. Governments stipulate greater control over data sovereignty mandating data residency.

Source: Gartner ([769931](#))

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Prediction:

By 2025, over 35% of government legacy applications will be replaced by solutions developed on low-code application platforms and maintained by fusion teams.

Opportunities:

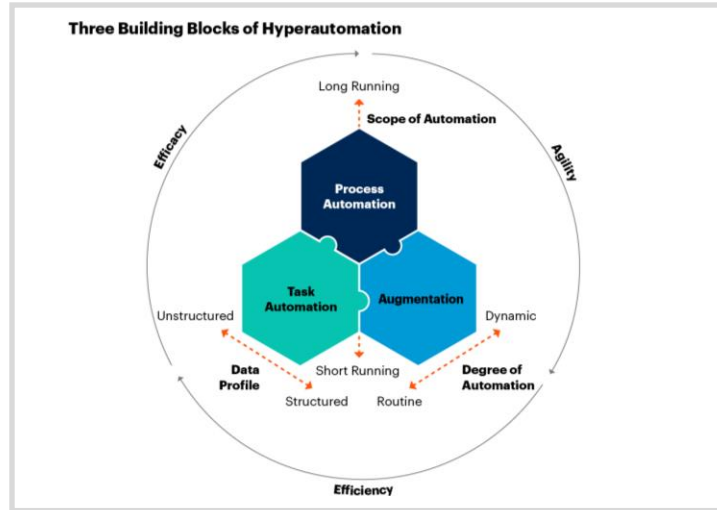
- Governments globally seek to limit exposure of data and infrastructure to control by external jurisdictions and foreign government access.
- U.S. sovereign cloud needs are largely addressed by government community cloud services. This is not necessarily the case in other regions (e.g., EMEA).

Recommendations:

- Evaluate your business needs for cloud functionality and compare commercial hyperscaler offerings to government community cloud services (where they exist) and to other, sometimes geographically focused cloud providers.
- Monitor how hyperscalers are addressing evolving government requirements, such as in the form of joint ventures that offer concessions regarding data locality and residency.

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Hyperautomation



Governments are continuing to use multiple technologies to support automation of business and IT processes. Hyperautomation initiatives in government can support end-to-end business and IT processes to deliver citizen/constituent services.

Source: Gartner ([734894](#))

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Prediction:

By 2026, 60% of government organizations will prioritize business process automation, up from 35% in 2022.

Opportunities:

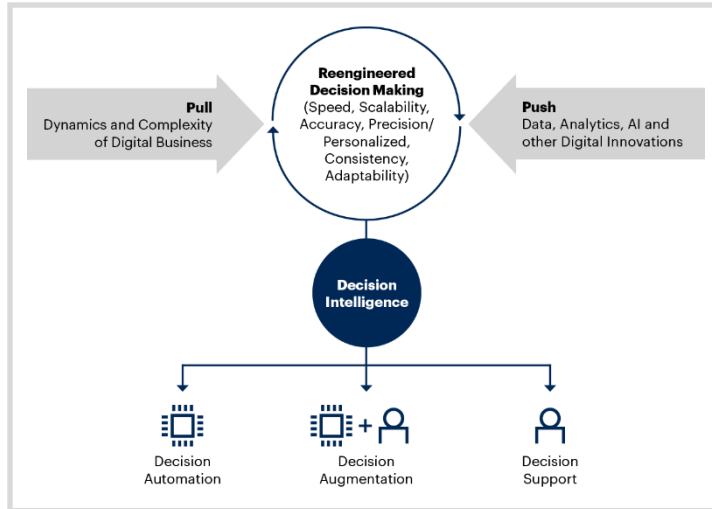
- Automation is a promising solution to address government priorities for operational efficiencies and digital transformation in the context of ongoing economic and geopolitical concerns.
- Legacy application modernization, digital workplace needs and government services redesign open up funding opportunities for further automation.

Recommendations:

- Align automation initiatives with current government priorities to pursue digital transformation while optimizing operational costs.
- Consolidate technology capabilities that support government needs for end-to-end process automation.
- Seek enterprisewide sponsorship to automate across agency/department boundaries.

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AI for Decision Intelligence



AI for Decision Intelligence is the measured, systematic use of AI as a component of improving government mission achievement faster, more accurately and with sustainable resource use.

Prediction:

By 2024, 60% of government AI and data analytics investments will directly impact real-time operational decisions and outcomes.

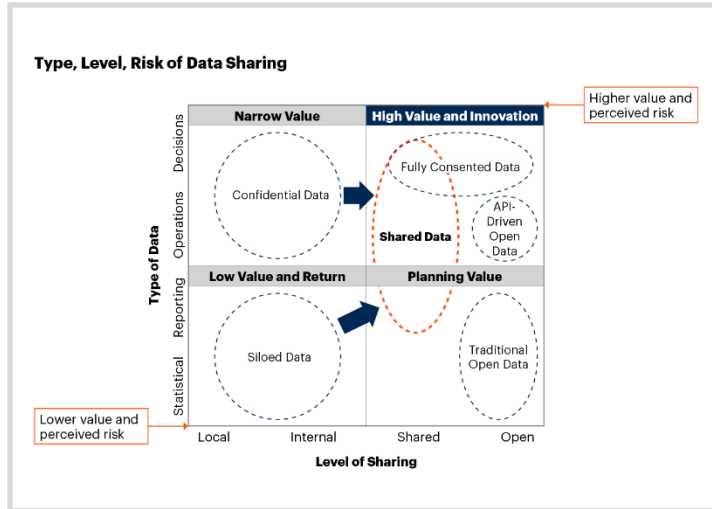
Opportunities:

- Governments seek rapid, accurate and early decision-making capabilities — using AI for decision intelligence at scale can enable this.
- AI tools are becoming available to business technologists outside specialist IT areas, raising the expectation that they can be used for service delivery and policy processes.

Recommendations:

- Prepare the ground for rapid scaling of AI and analytics by ensuring current and accurate data is available at points of decision.
- Ensure that capabilities can scale by designing effective governance principles and quality assurance mechanisms.

Data Sharing as a Program



Data sharing as an ad hoc effort is no longer sufficient given the demands to drive value from data and analytics. Instead, data sharing as a program accelerates access to advanced technologies and strategic data reuse while driving innovation and improved outcomes.

Source: Gartner ([717603](#))

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Prediction:

By end 2023, 50% of government organizations will establish formal accountability structures for data sharing, including standards for data structure, quality and timeliness.

Opportunities:

- The continuing advance of powerful AI and ML techniques provides mission-relevant opportunities — if data sharing and reuse happen at scale.
- Accurate operational decision-making usually depends on information to be corroborated with information held by other government agencies.

Recommendations:

- Focus on value-added and mission objectives when developing data-sharing initiatives.
- Accept exposure of data quality issues as a necessary side effect in return for improved mission impact or efficiencies at scale.

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Total Experience (TX)



Governments are using technologies to empower citizens and employees across multiple channels and modes of interactions. Total experience aims for more comprehensive transformation of services in support of mission priorities.

Prediction:

By 2026, government total experience (TX) approaches will reduce process ambiguity by 90% while increasing satisfaction metrics for both CX and EX by 50%.

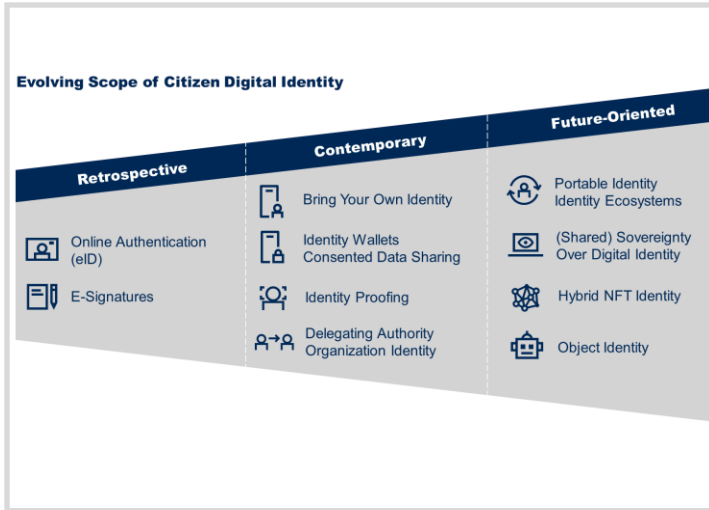
Opportunities:

- TX creates synergies and coherence among siloed experience disciplines in support of government digital transformation.
- Synergies are needed to sustain funding for digital investments and resources across traditionally disjointed CX, EX, MX and UX initiatives.

Recommendations:

- Empower citizens by providing diverse options for engaging with the wider ecosystem of public service providers.
- Empower employees through tools and approaches that result in meaningful service experiences, including catering for tech-savvy and tech-novice users.
- Reduce user and multichannel experience friction points by mapping, visualizing and redesigning citizen and employee journeys.

Digital Identity Ecosystems



Digital identity investments are accelerating across public and private sectors. Governments are facing new responsibilities in emerging digital identity ecosystems, with expectations to ensure trust, innovation and adoption across sectors and borders.

Prediction:

By 2024, over a third of national governments — and half of U.S. states — will offer citizens mobile-based identity wallets. Only a minority will be interoperable across sectors and jurisdictions.

Opportunities:

- Digital identity is critical for modern and resilient services in most sectors, but adoption suffers from patchwork approaches.
- Historically siloed identity domains (government, commercial, healthcare, education, etc.) are starting to collaborate toward portable and interoperable identities.
- Perceptions of digital identity are highly context-dependent and can provoke contentious public debates.

Recommendations:

- Seek continuous balance between the needs of your organization and societal, commercial and individual interests around digital identity.
- Raise trust and adoption by making high-assurance digital identity easy to obtain and relevant for diverse target groups.

Case Management as a Service (CMaaS)

Prediction:

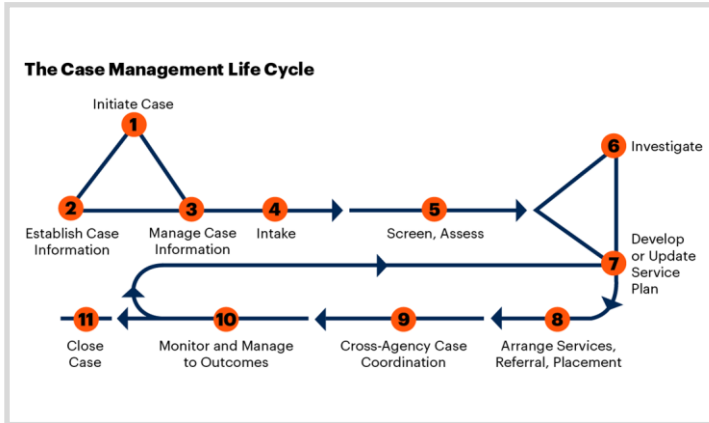
By 2024, agencies using composable case management will implement new features 80% faster than peers.

Opportunities:

- Case work is the predominant workstyle of governments.
- Government adoption of low-code application platforms can enable composable and modular interoperable applications.
- Business technologists and fusion teams can act as “force multipliers” to accelerate digital innovation in government.

Recommendations:

- Gain support from program executives by demonstrating how better outcomes, improved collaboration or program integration can be attained with the flexibility of composable applications.
- Develop a modular CMaaS application strategy by adopting a composable business architecture and using packaged business capabilities and low-code application platforms.
- Harness the power of self-service, automation and collaboration by forming CMaaS fusion teams that include case workers and business technologists.

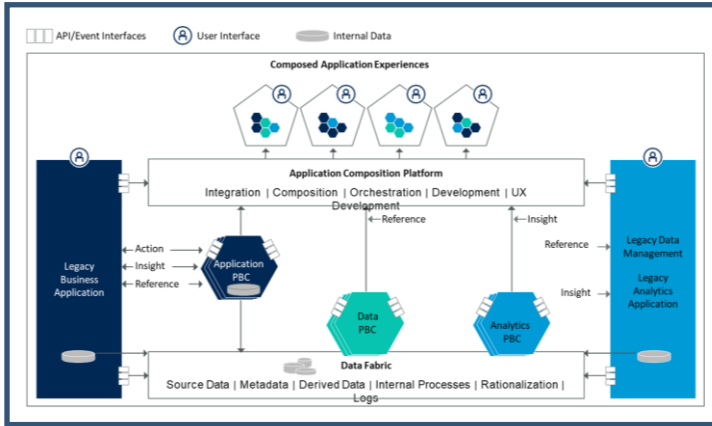


The integration of government services depends on designing and developing case management solutions as composable products and services that can be shared across the programs, verticals and levels of government.

Source: Gartner ([744876](#))

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Composable Government Applications



Many governments struggle to meet accelerated demands and opportunities due to legacy, siloed systems and data stores. Leading governments apply a composable architecture to break this mold. Modularity and modern design principles enable the transition toward composability.

Source: Gartner ([720701](#))

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Prediction:

By 2025, over 35% of government legacy applications will be replaced by solutions developed on low-code application platforms and maintained by fusion teams.

Opportunities:

- A modular approach to application architecture provides an opportunity for governments to create an adaptive approach to regulatory and legislative changes and to drive continuous improvement and modernization.
- Governments can exploit rapid advancements in automation and machine learning by replacing or enhancing components.

Recommendations:

- Establish an application portfolio that supports continuous improvement and modernization by challenging vendors to support both a modular architecture and licensing model.
- Leverage business capability models and risk and opportunity maps to prioritize technical capabilities to be replaced.

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Recommended Gartner Research

- [Enduring Mission Impact, Not Just Scaling, Will Shape the Future of Digital Government](#)
Dean Lachecca (G00768458)
- [Predicts 2023: Governments Heighten Focus on Mission Impact Amid Global Uncertainties](#)
Apeksha Kaushik, Neville Cannon, Irma Fabular and others (G00767441)
- [Hype Cycle for Digital Government Services, 2022](#)
Arthur Mickoleit, Alia Mendonsa and Daniel Snyder (G00767440)
- [End the Confusion About Who Is Accountable for Digital Government](#)
John Kost (G00755738)



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