



Transforming public services: A guide to modern communication

This guide explores the challenges facing public-sector organizations, along with the cloud communication solutions that support these needs while maintaining the highest standards of security, compliance and accountability.

Governments and other public-sector organizations are under pressure to modernize communications in a world that demands speed, efficiency, resilience and cost savings. But legacy systems are no longer sufficient to deliver secure, citizen-centric services while controlling costs and enabling hybrid work and inter-agency collaboration:

- Outdated legacy infrastructure can cost up to 4X more than modern equivalents to keep running¹
- Only 10% of the UK's public-facing services meet a "great" digital standard, mostly due to legacy systems²
- Three-quarters of federal executives in the U.S. say cloud technologies can help their organization solve its technology challenges³

Solution sheet

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Government communications: The challenges

Global events have exposed weaknesses in public sector communication infrastructure: In critical moments, governments have often relied on temporary fixes to stay operational. But in many cases these stopgap solutions are still in place. Others began modernizing but have stalled due to skills gaps, siloed operations or difficulties integrating new systems with existing infrastructure.

- Despite the U.K. government's cloud-first policy, 47% of central government and 45% of NHS services still lack a "digital pathway"⁴

But falling further behind in their digital transformation has real costs for government – from operational costs, to security, to speed of delivery and erosion of public trust:

Spiraling costs

- **50%:** The amount of local government IT budgets spent on maintaining legacy IT infrastructure⁵
- **£3B:** The amount spent by five major U.K. digital programs to keep aging systems running longer than planned⁶
- **80%:** Proportion of the more than \$100 billion spent by the U.S. federal government annually on operating and maintaining existing IT, such as legacy systems⁷

Speed/effectiveness of delivery

- **13 hours:** Length of 911 call center outage in Louisiana during Hurricane Ida in August 2021⁸

Security

- **7 of 11:** Number of U.S. federal legacy systems with known cyber vulnerabilities⁹

Effective communications

- **55%:** Proportion of Americans who prefer to have the option of online communications with state government¹⁰
- **90%:** Proportion of peak demand calls that went unanswered in 2020 by California's Employment Development Dept., thanks to the use of 60-year-old code¹¹

But there's a growing recognition that cloud can help: A recent survey shows that 93% of government IT respondents are already running some strategic workloads in private cloud.¹²

Modernizing government with cloud communications

Cloud-based communication and collaboration solutions help government organizations deliver fast, efficient, responsive and inclusive public services. By enabling seamless collaboration across departments, agencies and regions, these tools support smarter decisions and greater agility in daily operations:

- Advanced collaboration and multimedia tools boost communication, streamline tasks and improve productivity. Cloud video conferencing, for example, can improve collaboration and lower travel costs without the cost and burden of running your own infrastructure
- Connectors to business apps reduce tool switching to enhance the user experience
- Communications Platform as a Service (CPaaS) enables real-time voice, video and messaging to be embedded directly into public applications
 - CPaaS allows automated alerts, smoother workflows and better citizen interactions while letting citizens choose how they communicate and ensuring security, compliance and data sovereignty
- Security and compliance are strengthened, as public cloud services are continually updated with the latest patches and standards – ensuring systems remain protected and aligned with regulatory requirements

Legacy IT vs. cloud: Cost-benefit analysis

Dimension	Legacy IT (status/cost)	Cloud benefit
Communication and collaboration	Fragmented email/IM, limited remote access, costly upgrades, expensive and complex video conferencing	Unified and secure collaboration suites boost productivity, remote by default, less expensive upgrades and video conferencing
Cost structure (Capex > Opex)	Long refresh and procurement cycles, stranded capacity, technical expertise required	Pay as you go (only procure the resources you need), flexibility on pricing
Operational efficiency	Manual patching/updating, bespoke scripts	Managed services (auto scaling and auto-patching), infrastructure as code,
Speed/reliability of public cloud service delivery	Weeks to months to deploy new services, prone to single data center outages	Rapid deployment, global service-level agreements (SLAs), multi region high availability
Scalability/elasticity	Must overprovision or face service degradation at peaks, and unnecessary expense during slower periods	Elastic scale, can scale quickly up/down on demand
Security posture	Perimeter focused with legacy controls, slow and manual patching and updating	Zero trust architectures, enterprise-grade security features, managed (auto) patching and updating
Resilience, redundancy and DR	Expensive secondary sites, rarely tested	Cross region replication, DR as code, frequent testing
Compliance and auditability	Inconsistent logs, manual audits	Immutable centralized logs, automated evidence, supports frameworks like GDPR and ISO 27001

Choosing the right architecture

Government organizations face diverse needs and regulatory demands, especially around sensitive data. That means a one-size-fits-all cloud model doesn't work. The right architecture depends on your data sensitivity, legal statutes and transformation goals:

Public cloud enables rapid deployment, minimal IT overhead, automatic updates and pay-as-you-go scalability	Private cloud offers full control over data, meeting strict security and compliance needs	Hybrid cloud blends both, supporting modernization while preserving existing infrastructure investments
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Private cloud also offers advanced security protocols and can meet sector-specific regulatory standards, making these models ideal for government environments.

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Alcatel-Lucent Enterprise: Cloud communications and collaboration tools for the public sector

France-based Alcatel-Lucent Enterprise is one of the world's leading networking, communications and cloud solutions providers. With flexible business models in the cloud, on premises and in hybrid environments, ALE provides the highest level of built-in security and follows global data protection requirements.

Rainbow™ by Alcatel-Lucent Enterprise

A sovereign Communications Platform as a Service (CPaaS) cloud solution offering comprehensive communication and collaboration capabilities. Hosted for the E.U. in France and Germany, with regional centers in APAC and the Americas, [Rainbow](#) meets the functionality, security and resilience needs of government and public sector organizations by enabling secure real-time data exchange through instant messaging, audio and video conferencing, webinars, alarm notifications and file sharing. Rainbow ensures high availability, fault tolerance and disaster recovery through a robust, geo-redundant architecture.

- Rainbow's APIs and SDKs make it easy to embed communication features such as voice, video, messaging and alerts into business applications, websites, mobile apps or workflows to enhance citizen engagement
- Additional functionalities such as [Rainbow Webinar](#) (for more formal events where citizens can listen and participate), Rainbow Room (high-quality audio and video for multiple attendees) and Connectors (to integrate communications into key business tools like Google, Microsoft and CRM systems) can further improve citizen-government communication
- Ensures data confidentiality in [compliance with local and global standards](#); ALE is ISO 27001, ENS, HIPAA, CSPN, ANSSI and FERPA certified
- Supports public cloud (Rainbow Hub), private cloud (Rainbow Edge) and hybrid deployments

Geo-redundant cloud architecture

- Hosted in Tier III+ distributed data centers across Europe, North America and Asia, with automatic failover to ensure uninterrupted service
- Active-active and active-passive modes available to suit performance and cost requirements



- Automatic failover and disaster recovery; real-time replication
- Core services like voice, messaging and storage are fully redundant; failures trigger automatic rerouting with no user action needed
- Session and configuration data synced across zones to support fast recovery and minimize data loss

Hybrid deployment

- Rainbow Hybrid
- On-prem hardware keeps SIP/VoIP calls and directory access running during cloud outages – vital for remote and emergency sites
- OmniPCX PBXs support high-availability clustering and PSTN fallback to maintain local voice services when cloud access is lost

Monitoring and maintenance

- 24/7 monitoring
- Round-the-clock monitoring, anomaly detection and built-in self-healing for reliable performance

If you would like to know more about Alcatel-Lucent Enterprise solutions for government and the public sector, visit our government pages at [al-enterprise.com/en/industries/government](https://www.al-enterprise.com/en/industries/government).

1 "UK government admits over 25% of its digital systems are outdated." Tech Monitor, Jan. 20 2025.

2 "Digital transformation and government: addressing the barriers to efficiency." U.K. National Audit Office, March 2023.

3 "Technology in government today." KPMG, 2024.

4 "State of digital government review." U.K. Dept. of Science, Innovation & Technology, 2025.

5 "Overcoming legacy tech challenges to unlock public sector productivity." Open Access Government, April 2 2025.

6 "Government's approach to technology suppliers: addressing the challenges." U.K. National Audit Office, Jan. 16 2025.

7 "Meet the technology modernization fund." U.S. Technology Modernization Fund.

8 "Gaps in disaster communications are failing first responders and citizens." The Hill, Sept. 2021.

9 "Agencies Need to Plan for Modernizing Critical Decades-Old Legacy Systems." U.S. Government Accountability Office, July 17 2025.

10 "Most people prefer to access government online, but don't actually do it, survey finds." Statescoop, April 19 2023.

11 "FDD systemic failure timeline." California Senate, September 2022.

12 "2025 sees inflection point for government: a shift to private cloud." Broadcom, July 24 2025.

