

Whitepaper

SD-WAN Use Cases in SASE for Local and Regional Government

Uncover the SD-WAN and wider SASE use cases and options available to you and your government workforce, and how they can impact your organisation.





Introduction

Local and regional governments are moving fast toward cloud services, hybrid working, and distributed teams. That shift creates three simultaneous demands for IT teams:

1. Internet First Strategy.
2. Connect workers reliably wherever they are.
3. Protect data and services from modern threats.

Secure Access Service Edge (SASE) provides the answer: combining cloud-delivered security with software-defined connectivity.

Alongside this shift, many public sector organisations are looking to adopt an Internet-First strategy – prioritising direct, secure internet access for staff wherever they work, instead of routing all traffic through central data centres.

SD-WAN within SASE makes this achievable, providing both the flexibility and protection required by these organisations. This Internet-first approach supports cloud adoption, reduces network congestion, and enables more responsive digital services, making it the ideal approach for this sector.

Within SASE, SD-WAN is the connectivity backbone (replacing or reducing reliance on MPLS), and SSE (Security Service Edge) handles secure, consistent access to the Internet and SaaS.

For councils, regional government, and other public sector organisations, we understand that the primary IT focus today is replacing costly MPLS with SD-WAN to enhance connectivity, which SD-WAN addresses. But for secure connectivity, you also need the SSE security layer. This is why a combined solution through SASE is the answer. Put together, SASE delivers the performance, worker flexibility, and security modern public services require.



SD-WAN explained

A Wide Area Network (WAN) connects offices, data centres, and users across multiple sites, enabling collaboration and access to applications. Traditionally, these networks relied on MPLS (Multiprotocol Label Switching) circuits. There are dedicated, private connections that provide reliability but come at a high cost, with limited flexibility and slow scalability.

Software-Defined Wide Area Networking (SD-WAN) is the evolution of this model. Instead of being tied to fixed, hardware-heavy infrastructure, SD-WAN uses software to intelligently manage and route traffic across multiple types of connections, including broadband and 4G/5G. This makes networks faster to deploy, easier to manage, and more cost-effective without compromising performance or reliability.

SD-WAN is a foundational part of a wider SASE solution. While SD-WAN optimizes connectivity, the other components of SASE provide robust security for these connections, introducing aspects like Zero Trust Network Access (ZTNA) and Firewall-as-a-Service.

Key definitions

SD-WAN: Software-Defined Wide Area Network. Controls the routing of network traffic across multiple links like broadband, fibre, 4G/5G, and MPLS. It provides secure connectivity over a public network, allowing you to use any connection from any provider, untethering you from your MPLS provider.

SSE: Security Service Edge. This encompasses the different cloud solutions used to secure internet access, encompassing things like ZTNA, CASB functions, cloud firewalls, and malware protection.

SASE: Secure Access Service Edge: A Combination of SD-WAN & SSE into an integrated, centralised framework. It unifies your connectivity and security.

Why SD-WAN vs Traditional WAN?

As local and regional government, why is now the time to upgrade your connectivity solution, and why do you need to move to a software-defined WAN? Simply, SD-WAN provides a way to boost performance, reduce costs, and ensure that your government services can easily scale.

Feature	Traditional WAN (MPLS)	SD-WAN
Cost	High (dedicated MPLS circuits)	Lower (leverages broadband, Direct Internet Access (DIA), 4G/5G, and existing links)
Flexibility & Scalability	Limited; You're tied to a single provider	Highly flexible; new sites and services deployed rapidly
Performance	Backhauls traffic through data centre, adding latency	Direct internet Access improves user experience and reduces latency for cloud services.
Visibility & Control	Minimal; reliant on manual configuration	Centralised, software-driven visibility and management
Security	Separate point solutions required	Integrated into SASE with ZTNA, FWaaS, and cloud security

Traditional MPLS WANs rely heavily on centralised data centre firewalls, meaning that as bandwidth and remote usage grow, so too does the cost and complexity of maintaining those appliances.

In contrast, SASE's distributed Firewall-as-a-Service (FWaaS) model decouples security from physical locations — scaling protection with your users, not your hardware. This capability is key to enabling an Internet-First approach, allowing secure, direct Internet access without backhauling traffic through the data centre.

The benefits of SD-WAN for local and regional government

SD-WAN is the natural evolution of traditional WAN, delivering improvements in cost, flexibility, security, and performance.

While these advantages apply across industries, there are specific benefits for local and regional government, where budgets are tight, networks are distributed, and public expectations for digital services are higher than ever.

Here's how adopting SD-WAN can enhance your government organisation and how introducing it as part of a wider SASE solution can compound the benefits.

1. More productive remote workers

With SD-WAN, intelligent routing and resilient links give staff working away from the office reliable access to internal apps and data from any location. This creates fewer dropped sessions and faster reconnection.

How SASE improves this:

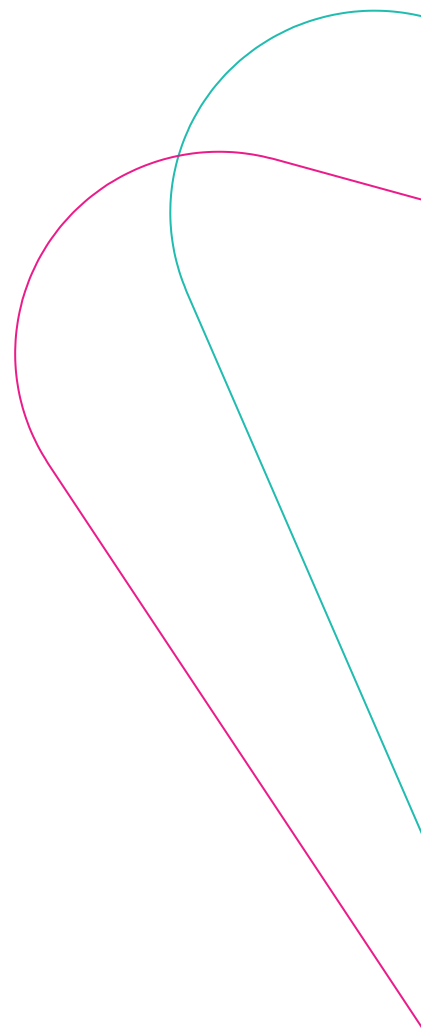
Adding in SSE through a SASE solution provides secure direct access to cloud apps and enforces per-user policies (ZTNA). Workers get the performance of direct cloud access and the same security posture as when they're in the office. Fewer VPN headaches, faster app logins, and consistent access controls to reduce security risks.

2. Faster, more consistent access to cloud apps

SD-WAN manages local breakout and traffic steering to the best path for connecting to SaaS systems, be it Microsoft 365, finance/HR systems, or Project Management tools, reducing latency and improving responsiveness.

How SASE improves this:

SSE's cloud-delivered protections (CASB / SWG / FWaaS) secure that direct path, so staff can use cloud tools quickly without exposing sensitive data. Your productivity increases without sacrificing compliance.





3. Less time spent by IT supporting connectivity

SD-WAN delivers a centralised orchestration and zero-touch provisioning, which cuts repetitive onsite configuration, so IT spends less time on routine deployments, allowing the team to focus on more pressing tasks.

How SASE improves this:

With SASE, not only is your connectivity centralised in one solution, but the security around this is unified too. By combining management across networking and security, you can reduce incident resolution time. IT can fix worker access issues faster, roll out policy changes centrally, and proactively prevent problems that would otherwise interrupt staff workflows.

4. Consistent, role-based access that's simple and safe

SD-WAN intelligently routes and isolates traffic by type, whether it's voice, CCTV, or administrative applications, ensuring each service performs efficiently and reliably. Network-level segmentation also helps prevent one type of traffic from impacting another. However, SD-WAN alone does not control who can access which applications or data.

How SASE improves this:

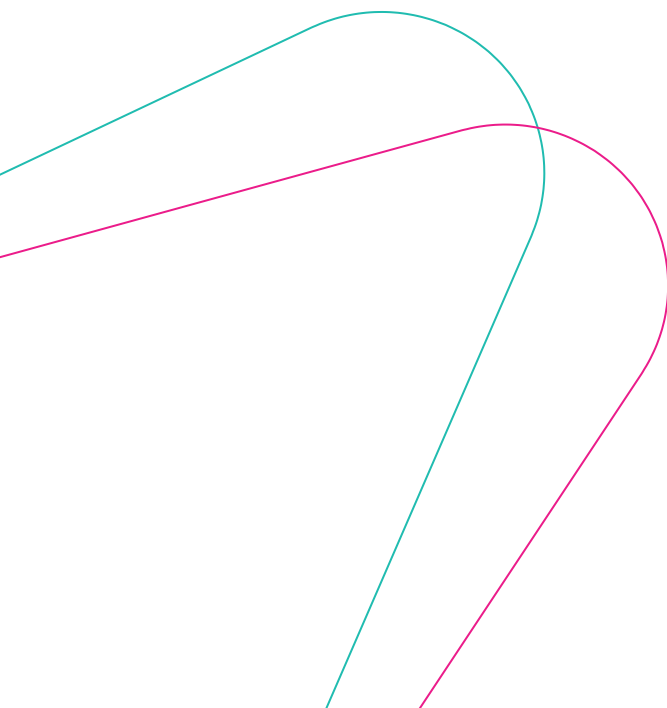
ZTNA and identity-aware controls within SSE mean access is granted by user and device posture rather than broad network/VPN access. Employees get the minimum-necessary access automatically and securely, reducing friction for the worker and risk for the organisation.

5. Resilience in crises - employees keep working when it matters

With a software-defined connection, your team has access to dynamic failover and multi-link resilience so staff remain connected during outages or peaks, and the ability to continue with their work.

How SASE improves this:

By combining SD-WAN with cloud security at the edge, you continue to protect connections even if central gateways fail, enabling staff to maintain secure access to critical services during incidents.





Specific SD-WAN Use Cases for Local Government

We've explored the benefits of SD-WAN delivered through a SASE framework, but what does this look like in practice for local and regional government?

Here are three practical ways you can deploy SD-WAN, SSE, and SASE to improve performance.

1. Connecting schools, libraries, and council offices for file sharing

Local and regional government is often responsible for hundreds of distributed sites - from town halls and libraries to schools and satellite offices. Historically, each location relied on separate circuits, inconsistent equipment, and complex MPLS contracts, creating a patchwork network that was both expensive and fragile. Staff moving between sites frequently faced inconsistent access, IT teams struggled to enforce standard security policies, and small offices often became the weak link in the chain.

With SD-WAN, authorities can replace this fragmented infrastructure with a standardised, software-defined fabric that connects every site into one centrally managed network. This means schools, libraries, and offices can all share files and resources securely and efficiently, without the need for costly dedicated circuits. Staff working across multiple locations gain the confidence that wherever they log in, they will have the same reliable access to the tools and data they need.

When extended into a full SASE model, the benefits go even further. Cloud-delivered security services ensure that every site, whether a small library or a large secondary school, is governed by the same consistent security policies. Unified firewalls, identity-driven access controls, and web filtering all operate at the edge, reducing the risk of breaches without adding complexity. For IT teams, this consistency translates into less firefighting and more time spent supporting workers; for staff, it means uninterrupted productivity across every site they serve.



2. Boosting connectivity for field workers, inspectors, and contractors

Not every government employee works from a desk. Social workers travel between family visits, building inspectors conduct on-site assessments, and contractors deliver community projects in the field. These staff depend on access to case management tools, reporting systems, and scheduling platforms, yet traditional VPN-based connectivity often slows them down. VPNs can be brittle, introduce latency, and force traffic through central gateways, frustrating employees who are already balancing demanding workloads.

SD-WAN transforms this experience by providing intelligent, application-aware routing that keeps field workers securely connected wherever they are. Instead of battling with unreliable VPN sessions, inspectors can upload reports directly from their tablets, social workers can access case files in real time during visits, and contractors can stay synced with project management systems while on-site. Reliable connectivity reduces friction, helping staff spend more time delivering services and less time wrestling with IT.

Layered with SSE and delivered as part of a broader SASE framework, these connections also remain secure. Identity-based policies, zero trust access, and cloud-delivered protections ensure that sensitive information - from child welfare records to building compliance documents - is shielded from risk, even over public Internet links. Employees get the best of both worlds: fast, reliable access to the tools they rely on, and the assurance that security is applied consistently without adding extra steps to their day.



3. Enabling comprehensive public services through the cloud

Cloud adoption is accelerating across government. Payroll and HR systems, finance platforms, citizen portals, and education services are increasingly delivered as SaaS applications. For employees, this promises faster access to modern tools and the ability to collaborate seamlessly across departments. But for networks built on traditional WAN, cloud often becomes a source of bottlenecks. Routing all traffic back through central data centres before reaching the cloud introduces latency, drives up bandwidth costs, and leaves staff frustrated with slow application performance.

By deploying SD-WAN, local and regional governments can give their employees direct, optimised connections to cloud services. Applications such as Microsoft 365, Teams, or online learning platforms can be accessed at speed from any office or remote location, without the inefficiencies of central backhaul. This translates directly into better working conditions: finance officers can process claims more quickly, teachers can run digital lessons without disruption, and back-office staff can collaborate in real time.

Today, many local and regional government employees still connect to internal systems via VPNs that tunnel traffic back through a data centre firewall. As bandwidth demand increases, so does firewall load - driving up cost and introducing latency. An Internet-First model changes this.

By securely connecting users directly to the Internet through SD-WAN and SASE, traffic no longer needs to detour through the data centre. Each user or device can be profiled for identity-based access to only the services they need, maintaining security while significantly reducing the volume of traffic reliant on central firewalls. The result is a more agile, scalable, and cost-efficient network that keeps pace with modern working.

Wrapped in a SASE framework, cloud-delivered security becomes the foundation of this Internet-First model. CASB (Cloud Access Security Broker) capabilities, cloud-based firewalls, and malware protection ensure that sensitive information stays secure, even as employees move more and more of their daily work into the cloud. Instead of relying on data centre firewalls and VPNs, security is enforced at the edge, closer to the user, maintaining control without compromising performance.

This not only improves the staff experience but also creates opportunities for authorities to extend services - such as enabling specialists to work remotely from outside the region, or consolidating citizen information into shared portals accessible to staff from multiple agencies. In short, SD-WAN and SASE together give employees the secure, high-performance access they need to power the next generation of cloud-enabled government services.



Getting started with SD-WAN and SASE

At CAE, we understand that adopting SD-WAN isn't just a network upgrade; it's a strategic shift that reduces costs, improves flexibility, and strengthens security.

As specialists in software-defined infrastructure, we help local and regional governments modernise their networks with confidence, enabling better public services and future-ready operations with not just SD-WAN, but the full suite of SASE solutions. Adopting an Internet-First approach through SD-WAN and SASE helps local and regional governments modernise faster, reduce dependence on legacy data centres, and future-proof their network for cloud-first delivery of public services.

Why CAE should be your SASE implementation partner

We've partnered with public sector organisations across the UK to deliver complex networking transformations, combining technical depth with proven delivery expertise. As a Cisco Gold Partner – and Cisco Partner of the Year – we bring unrivalled access to best-in-class SD-WAN solutions, ensuring your network is built on trusted, scalable technology.

Our approach is end-to-end: from initial discovery and design, through rapid deployment and training, and into ongoing optimisation. With co-managed services and a customer-first ethos, we ensure your teams see value quickly, while minimising disruption and risk.

Deliver cost-effective connectivity to every site in your community

Take the next step towards a smarter digital infrastructure.
Speak to one of our SASE experts today.

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