



Enabling the Human Network in Government Administration

Abstract

Accustomed to 24-hour online access and automated voice services from private-sector organizations such as financial institutions and retailers, citizens and government employees now expect the same from their government. Administration agencies in state and local governments around the world are striving to increase their responsiveness and service effectiveness through a number of innovations:

- Citizen empowerment: Interactive Web portals and single-number contact centers enable citizens to access information and submit forms at any time. Self-service applications increase citizen satisfaction while freeing up staff to serve citizens and businesses with unusual needs.
- Enhanced collaboration: Service effectiveness improves when employees can reach each other on the right device, on the first try, and establish conferences combining voice, video, and Web collaboration.
- Employee self-service: Governments increase productivity and decrease costs when employees can securely enter personal information, such as health plan updates and expense reports, directly into administration systems.
- Enhanced mobility: Public works personnel and inspectors provide more effective service when they can wirelessly access work orders and building-code information from the field. Citizen satisfaction improves when complaints about potholes and other problems are resolved more quickly because the contact center agent can immediately locate nearby field personnel using an outdoor wireless network and geographic information system (GIS).
- More effective project management: With high-performance, reliable networks, governments can deploy advanced project management applications and collaboration tools that help teams operate more efficiently and stay within budgets. And when issues arise that can affect the schedule, such as broken pipes, project teams can often resolve them from the field by using the outdoor wireless network to send video to experts in other locations.
- Support for remote workers: In the event of an emergency that prevents employees from working in government buildings, agencies can help ensure continuity of government by enabling employees to use the department's voice and data services from home or other facilities. The option to work from home can also help attract new workers to replace the growing ranks of retirees.

- Secure sharing of information and services: Governments can improve service effectiveness and reduce costs when different departments share the same network infrastructure and can selectively share information according to their security policies.
- Smart buildings: When building systems are monitored and managed over the network used for voice and data, governments can implement intelligent controls that reduce costs and conserve energy.

Read on to discover how administration agencies around the world are meeting these goals using solutions from Cisco®.

Citizen Empowerment Through Web Portals and Single-Number Contact Centers

The vision: Enable citizens and businesses to conveniently obtain information and submit forms.

Making it easier for citizens to obtain information and services is one of government's top priorities. Ideally, a citizen should be able to find event information, submit a form, pay a parking ticket, or watch streaming video of a council meeting from any location, at any time, even at 2:00 a.m.

With a reliable, secure Cisco network, governments can provide secure Web portals that offer convenient, 24-hour access to forms, appointment requests, and information such as job opportunities and events. Using Cisco security technologies, governments can even allow citizens to submit online payments for fees, licenses, parking tickets, and more. Online access also helps government meet its goal of inclusion for citizens who are disabled or who live far from government offices.

For citizens who prefer to interact by phone, Cisco Unified Communications solutions enable governments to establish a single phone number—either n-1-1 or a seven-digit number—that citizens can call for any nonemergency service. These might include submitting requests to fix potholes and broken streetlights, arranging sanitation pickup, requesting birth certificates, and making nonemergency complaints to the police department. Cisco Unified Contact Center provides intelligent call routing and interactive voice response. If agents need to escalate a call, they can use Cisco presence technology to identify an available employee with the expertise to answer the citizen's question, and then transfer the call simply by selecting that employee's name.

Enhanced Collaboration

The vision: Improve service effectiveness by facilitating collaboration among employees in different departments and agencies.

Today, obtaining information from employees in other departments typically requires finding an available employee with the needed expertise and then scheduling a meeting. It is not unusual to dial both an office phone and a mobile phone, leaving voicemail on each, write an e-mail, and send an instant message before finally reaching the other employee—or not.

Cisco Unified Communications facilitates interdepartmental collaboration. Cisco presence technology enables employees to view each other's availability and preferred method of communication—office phone, cell phone, e-mail, instant message, or other—right on their Cisco Unified IP Phone or PC screen. Employees can spontaneously initiate a voice, video, and Web conference with Cisco Unified MeetingPlace by dragging the names of available participants into a window.

Increased Productivity Through Employee Self-Service

The vision: Increase productivity by enabling employees to update their own records.

In many government offices, employees use paper forms to submit updates to their personnel records, changes to benefits, vacation requests, and expense reimbursements. The paperwork burden increases administrative expense and diverts resources from

City of New York

In the city of New York, citizens can report problems such as potholes by calling a 3-1-1 contact center. The agent uses Cisco presence technology in conjunction with GIS to identify the work crew nearest the location. The agent can immediately send the new work order to the crew, whose vehicle is equipped with a Cisco mobile access router that can connect wirelessly to the government network. Potholes and other problems are fixed more quickly, and citizen satisfaction has increased.

More Efficient Land Management and Permitting

When a new business wants to move into a community and requests an inspection certificate, the land management and permitting solution from Cisco and its partners makes the process faster and more business-friendly. The inspector uses a wireless device to submit the report from the field, either over a wireless mesh network or from a nearby wireless hotspot. The report can be processed immediately, rather than when the inspector returns to the office at the end of the shift. The inspector can also use the wireless network to look up building codes and other information and to retrieve or submit photos from the work site.

delivering citizen service. In addition, errors are not discovered at the time the information is submitted, leading to processing delays and higher costs.

Productivity improves when governments use their networks to offer employee self-service applications. Cisco security technologies authenticate and authorize employees so that they can update their own records from work or home. The network supports applications that detect errors during information entry, saving time for the person who submits the information as well as the person who processes it. Costs decrease and employee satisfaction increases.

Enhanced Mobility for Public Works, Building Maintenance, and Inspection Personnel

The vision: Enable field workers to send reports and receive updated work orders throughout the day, improving productivity and responsiveness.

Public works and inspections departments typically provide personnel with work orders only at the beginning of a shift. If the contact center receives a new report about a pothole, a missing manhole cover, or a burst water pipe, the agent typically cannot determine if there is a crew in the vicinity. Without the flexibility to dynamically change workers' schedules as new needs arise, government loses an opportunity for efficiency and responsiveness.

Cisco Unified Communications and Cisco outdoor wireless solutions improve the effectiveness of public works, building maintenance, and inspection personnel by extending communications to the field. New work orders can be issued to workers' wireless devices throughout the day, leading to faster problem resolution. Similarly, parks and recreations departments can quickly inform maintenance staff of issues such as broken playground equipment that could pose a safety threat and create liability exposure. Workers can also use the wireless network to retrieve the information they need to make informed decisions, such as building code manuals or previous photos of job sites.

More Efficient Project Management

The vision: Expedite problem resolution by enabling personnel in the field to retrieve and transmit data and video to their colleagues without returning to the office.

In a survey commissioned by Cisco and conducted by Crimson Consulting, state and local government managers ranked more efficient project management as a top priority for administration agencies. One aspect of successful project management is the ability to respond quickly to unexpected events, which can otherwise disrupt schedules and increase costs. Another is the ability to quickly make adjustments to day-to-day project activities.

Cisco wired and wireless networks provide the bandwidth and performance to run applications for project management, benchmarking and performance management, GIS, code enforcement, permit management, and licensing. In addition, Cisco Unified Communications solutions give distributed project teams the flexibility to quickly resolve unexpected issues that can lead to missed milestones. If a field crew discovers a cracked pipe, for instance, a worker can use a laptop and Cisco presence technology over a WiFi network to identify an available engineer and supply chain partner. The worker can then quickly establish a conference using Cisco Unified MeetingPlace, by dragging the names of the experts into a window. This avoids the delays of waiting for multiple experts to travel to the site. The work crew can even capture video of the pipe or other problem area and send it over the outdoor wireless network so that all conference participants have the information they need to make an informed decision.

Support for Remote Workers

The vision: Give all employees the capability to work from home, helping to ensure government continuity and increasing employee satisfaction.

Government continuity during natural and man-made disasters—adverse weather, pandemic, and outages—requires a resilient network, applications, and communications. It also requires a resilient workforce. If employees cannot work in the office for any reason, they still need to be able to deliver vital services to employees and citizens.

Governments can help ensure continuity of operations by providing employees with Cisco VPN solutions and Cisco Unified IP Phones at home. Using a PC and broadband connection, employees can access their department's voice and data services on a secure connection. Calls to an employee's office phone number ring on the home phone. The same solution works for day-to-day operations as well as emergencies, avoiding the unreliability of infrequently used solutions and processes. The option to work from home when a child is sick also increases employee satisfaction and can help government compete with the private sector for new employees.

Secure Sharing of Information and Services

The vision: Enable departments to securely share infrastructure, information, and services, for lower costs and easier collaboration.

Today, each government department typically uses and manages its own network and its own applications for supply chain management, payroll, finance, and human resources. These isolated departmental networks make it difficult for government to centralize administrative activities such as purchasing. They also prevent underutilized staff from temporarily assisting staff that need help in other departments. Some governments have attempted to integrate various departments' applications into a unified user interface, but these efforts are often time-consuming, costly, and not entirely successful.

Cisco network solutions accomplish the same goal as application integration, without the time, expense, and risk. All government departments can share the same secure network infrastructure as readily as they share buildings. Departments can share information with each other when needed, while keeping other information private, in compliance with regulations. A secure, shared infrastructure also gives governments the flexibility to centralize purchasing and other back-office functions for greater service effectiveness and economies of scale.

Smart Buildings

The vision: Design smart buildings that reduce costs and are environmentally friendly.

The traditional approach to designing government buildings is to deploy multiple proprietary networks for voice, video, data, security and access, energy, lighting, fire and safety, and heating, ventilation, and air conditioning. Assigning resources to manage all these networks increases an agency's operational expense and siphons resources that could be assigned to improve service effectiveness and citizen satisfaction.

When government incorporates the Cisco Connected Real Estate framework into buildings, it can converge all building and IT systems onto a single, intelligent Cisco network. Operational and maintenance costs decrease, and the government IT group can deliver innovative services that improve employee productivity and comfort. For example, energy control can be simplified using IP-based control and monitoring points that automatically adjust room temperature, air quality, and humidity throughout the building. Maintenance staff can observe the impact of changes in temperature and adjust settings remotely, reducing energy costs. Smart buildings can also reduce office space requirements by enabling office sharing. Mobile employees who occasionally need to work in the building can log into the Cisco Unified IP Phone in any available office and personalize it with their own phone number and preferences. The login can also automatically turn on heating for that office, eliminating energy costs incurred when the office is unoccupied.

The Cisco Solutions Behind the Human Network

Cisco Service-Oriented Network Architecture forms the basis of a human network designed to serve, protect, and foster thriving communities while reducing costs.

Administration and other government departments can share the costs of a network infrastructure and also share services such as benefits enrollment, expense reimbursement requests, and business management applications. Cisco Self-Defending Network technologies protect the network from infections and data theft, helping to ensure continuity of operations for vital government agencies. Other Cisco security technologies enable departments to share information with other departments when appropriate, keeping it private otherwise. The network has the intelligence to enforce each agency's policies for access control and data protection.

The benefits of Cisco core foundation technologies include:

- Network simplification and increased responsiveness: With a secure Cisco core foundation, governments can deliver voice, video, and data services over a single unified network. Eliminating the need to maintain multiple networks reduces capital and operational expense and enables rapid adaptation to changing business requirements. A Cisco core foundation also provides the basis for unified communications and wireless services.
- Secure information sharing between departments: By enabling authorized employees to access data in multiple departmental systems from their office, home, or hotel, Cisco secure access technologies improve productivity and increase service effectiveness.
- Ability to deliver rich content: Cisco networks provide the quality of service to support voice, video, and data on the same network.
- Security: Cisco access technologies protect employee and citizen privacy and help ensure compliance with legislative mandates.

Cisco Unified Communications

Cisco Unified Communications solutions address a broad spectrum of government communications requirements. IP telephony, voicemail, and collaboration solutions help improve communication and teamwork while reducing costs. Advanced call processing and contact center solutions provide innovative, integrated contact management and self-service capabilities, which facilitate interaction between government employees and citizens. Cisco video telephony and Cisco TelePresence solutions integrate video into communications, which increases meeting effectiveness and reduces the need for travel. Low-cost, IP-based video surveillance makes real-time video feeds available from any location with a Web browser, which increases safety and security on government property and in the community. Cisco mobile voice solutions enable government agencies to rapidly establish voice and data communications anywhere, connecting to the government network through an existing wired or wireless network or by satellite.

The benefits of Cisco Unified Communications for government administration include:

- Reduced costs: Voice over IP reduces total cost of ownership compared to private branch exchange systems or Centrex.
- Greater responsiveness: Features such as four-digit call transferring and online directories improve productivity. Cisco presence technology can show you which experts in a particular department or the supply chain are available right now and how to reach them. An employee can drag the name of available resources into a window to initiate a recorded voice, video, and Web conference (Figure 1).
- Rich media: A government department can use its network for digital video as well as for voice and data. Training becomes more cost-effective when supervisors can train remote employees using Cisco Unified MeetingPlace, which combines voice, video, and Web collaboration.
- Improved citizen services through single-number contact centers: With Cisco Unified Contact Center, state and local governments can provide a single nonemergency number—either a seven-digit number or n-1-1—that citizens can call to get a referral to any government service they need.

Figure 1 Cisco Presence Technology Enables Employees to Quickly Conference in an Available Employee with the Needed Skills.



Cisco Wireless Solutions

Government administration agencies can take advantage of indoor and outdoor wireless hotspots as well as regional outdoor wireless mesh networks from Cisco:

- Indoor wireless solutions provide a secure, convenient way for employees and contractors to access important government resources from any indoor location or adjacent outdoor area. Giving people flexible access to information and applications improves their productivity and service effectiveness.
- Hotspots and building-to-building connectivity extend wireless access to parking lots, walkways, and other areas adjacent to buildings. Instead of having to return to a precinct or office to access drivers' license information, mug shots, and criminal databases, law enforcement and other public safety personnel can access this information from the parking lot of any government building, which increases their presence on the street.
- Outdoor wireless mesh solutions deliver broadband connections to metropolitan-area environments. Law enforcement, fire, and emergency medical services personnel can spend more time in the field when they can access information from their vehicles. Inspectors and other field employees can use the same network to access work orders and issue permits from the field, eliminating time spent driving to and from the office. During emergencies, administration personnel can use their wireless devices in the field to remain connected, helping to ensure continuity of government.

Conclusion

As the business manager for state and local government, administration agencies can increase service effectiveness, enhance citizen satisfaction, and decrease costs by delivering services more efficiently. By making it easier for government employees to communicate among themselves and with citizens, Cisco secure networks, unified communications, and outdoor wireless solutions help foster a connected community that enjoys effective services, inclusion, and citizen self-service.

For more information on Cisco solutions for state and local government, visit: <http://www.cisco.com/go/localgov>



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