



# The Call for IP-Based Convergence

The power of end-to-end solutions from Alcatel.

The mission of government, by and large, is to protect and serve the citizenry. In the Information Age, that goal is accomplished using modern technology and creating intelligently designed networks that adapt as times and needs change. IP-based convergence, which brings together all forms of communication onto a single infrastructure, is a critical concept in modern telecommunications. The days of legacy technology and siloed operations are ending.

From police and fire departments to transportation departments and other areas of city and state government, the ability to move an array of services onto one infrastructure can transform an underfunded agency into a streamlined, efficient dynamo — one that responds with agility to needs and crises, rather than simply reacts.

Such is the mission of Alcatel, to build and deliver end-to-end network solutions that merge voice, video and data — with the reliability, scalability and security today's governments require.

"It's about efficiency of the way governments do business," said Walt Paskowski, Alcatel's vice president of Government Solutions and Business Development. "Whether that's public safety or government administration, IP-based convergence can be beneficial."

## Disparate Difficulties

To ensure the safety and security of citizens, collaboration between agencies and governmental entities is essential. Unfortunately, traditional communications networks were built to serve specific agencies and designed to handle voice or data, but not both. In 21st-century government,

where voice, video and data are part of daily operations, traditional networks become obsolete.

The challenge always has been how to merge technologies as different as land mobile radios (LMRs), wireless phones, analog phones, voice over IP (VoIP), Wi-Fi, video and other diverse technologies. In times of crisis, emergency personnel must communicate regardless of what technology their particular agency employs. Through IP convergence, Alcatel provides solutions that enable public safety, first responder and other government agencies to share all types of data, no matter what communications platform they use.

"In a crisis with multiple responders in various locations, with collaboration we can bring all of these parties together on a voice, video, data bridge," said Alcatel solution expert Kamal Ballout. "Now whether they are mobile or stationary, whether on VoIP or traditional phones — or even LMR — we can bring them all to the same conference bridge where they can share voice, video and data instantaneously."

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The ability to access IP video surveillance — as easily as you would answer a phone call — is a huge boon for public safety. Video's emergence as a viable form of data allows it to be used in new ways for surveillance, service and security. But more application areas are emerging, such as school safety and departments of transportation (DOTs). School safety can be enhanced with IP video surveillance while toll roads and traffic conditions can be managed more effectively with IP video cameras.

"In public safety, it's about the reliability of mission-critical networks as well as the ability to collaborate through voice and video," said Paskowski. "Departments of transportation are areas where a lot of our convergence has been a big benefit because we can provide voice, video and data connectivity running through a toll road, which is transmitting images to first responders. It's transmitting toll information to the agencies that need to get it. It's transmitting video data for traffic control in cities and towns."

## Infrastructure and Applications

Alcatel is a proven leader when it comes to the business of providing end-to-end IP-based convergence solutions for government. While others offer pieces of a solution, Alcatel provides everything, literally, from highly secure and reliable IP devices to microwave backhaul with 99.999 percent availability.

On top of that infrastructure is an application layer where applications that were once disparate can be integrated for a truly collaborative experience. Network security and reliability is further bolstered by the power of technologies like multiprotocol label switching (MPLS) and label switch pathways. This highly reliable packeted infrastructure technology, coupled with highly reliable,

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highly available wireless microwave technology, allows public safety and DOT agencies to use existing hardware and combine data, voice and video while dramatically enhancing their bandwidth — all as part of a low-cost solution that includes Alcatel's unrivaled support.

Solutions such as Alcatel's collaboration engine MyTeamwork and IP PBX network, the gateway for all communications technologies, come together to allow any user to connect regardless of technology. In a crisis, when mission-critical traffic must get where it needs to go, no matter what the network conditions, Alcatel IP-based convergence network solutions make it a reality.

"It's critical that first responders communicate," said Paskowski. "Through MPLS or IP-based convergence, there are multiple paths. There are rerouting mechanisms to make sure communications get to where they need to go. It's important the networks we deploy not only meet today's needs but future needs as well. Alcatel provides a network that can grow with the needs of an agency — a network that is reliable, cost-effective and easy to manage."



For more information on Alcatel solutions for state and local governments and public safety agencies, visit: [www.usa.alcatel.com/industries/stateandlocal](http://www.usa.alcatel.com/industries/stateandlocal).