Next-gen public safety: Innovative technologies for a safer future

Safety and security are major concerns of most people around the world. For cities and territories that want to attract people and investment, a safe and secure environment isn't just their first line of defence—it's also an opportunity to improve their global reputation.

Even though the primary focus isn't to attract investment—rather, it's to secure people—a strong reputation and improved business activity are the ultimate outcomes of a safe and secure environment. Unfortunately, social, geopolitical, and environmental risks are continuously increasing, while urbanization and social media amplify those risk probabilities. There is also an incredibly wide range of potential risks to people and assets: Attacks, vandalism, abduction, accident, intrusion, pollution-related risks, and industrial incidents, for example. These risks can have strong impacts on the financial viability and image of a territory, particularly when lives are at stake.

But new technology can help, including drones, internet of things (IoT) devices with sensors and monitoring, audio/video surveillance, smart streetlights, and AI to support risk detection, problem identification, and resolution.

Incident or crisis management can't exist without secure network infrastructure enabling access to IoT, applications, and people. This allows for secure, reliable, and resilient communications during a crisis, enabling emergency call dispatch, contextual information sharing, and collaboration to accelerate problem resolution. This secure communication infrastructure can integrate with a complex ecosystem of teams, applications (command and control), and new technologies such as IoT and AI.

To address public safety challenges, Alcatel-Lucent Enterprise's value proposition is built upon three pillars: Emergency communications, crisis management and hazard prevention.

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Emergency communications

Mission-critical communications are key to public safety. It starts with the ability to manage emergency calls, whatever your Public Safety Answering Point (PSAP) organization for taking calls, situational analysis, call dispatch and incident awareness and handling. Artificial intelligence can help enhance response efficiency through hoax detection and multi-language capabilities, while integration capabilities facilitate call-taking in command-and-control business applications.

Hybrid solutions (cloud and on prem) and the ability to smoothly transition to the cloud with adapted commercial models (such as moving from a CapEx to OpEx model) helps with budget management and technology priorities.

ALE's OmniPCX Enterprise provides a call center (OTCC SE and Call Connect), dispatch console, call recording, adapted desk phone and mobile phones (DECT, VoWIFI), embedded multiparty conferencing, and the ability to integrate within applications as well as to connect AI for sentiment analysis, translation, or transcription. Calls can be end-to-end encrypted.

Solution sheet
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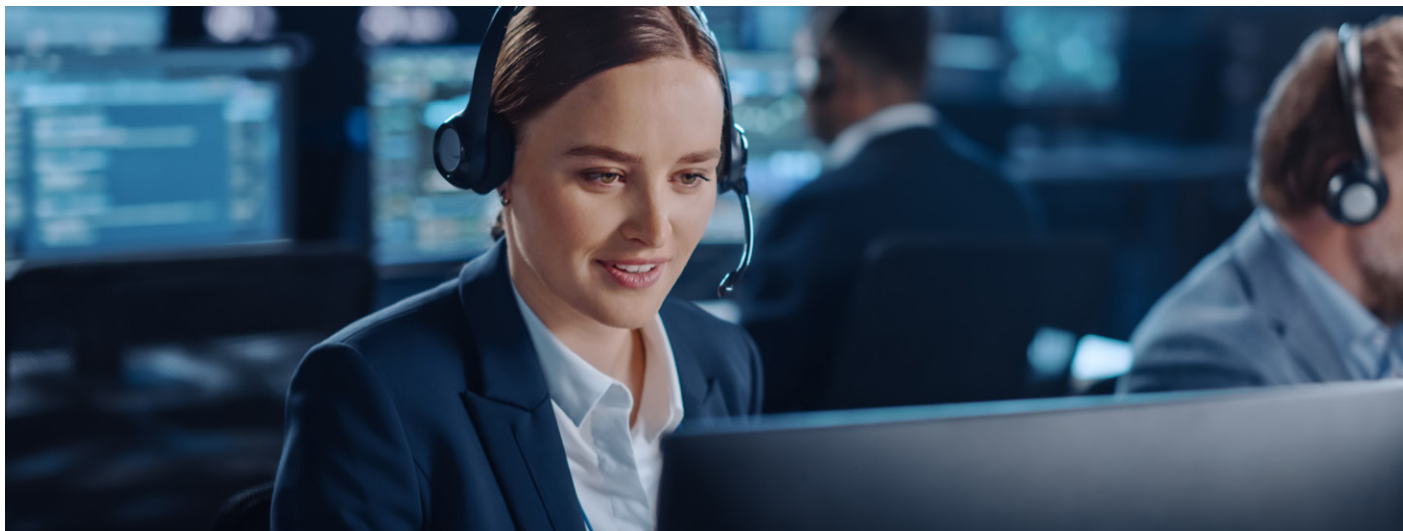
Crisis management

Strong coordination and multimedia (text, audio, and video) collaboration between different teams, both in the field and centrally, is critical. The ability to share images and video allows for greater situational awareness. Staying in contact with field agents or citizens with mobile applications is key to receiving accurate contextual information that can be cross-checked with IoT data flow and AI analysis.

ALE's collaboration platform, Rainbow, connects IoT, AI and other applications using an embeddable and easily configurable workflow, and enables the creation of innovative services and applications. For example, remote visual assistance using body-worn cameras, headsets, and smartphones to easily collaborate in two-way exchanges between field agents and central offices.

Hazard prevention

Implementing a mix of IoT and AI helps organizations anticipate risks, which in turns helps them move from a reactive to a proactive stance. That means primary stakeholders are notified in advance to organize support teams, send orders, warn the population, and help support teams by using workflow and collaborative tools that support operation coordination and contextual information sharing.

Contextual collaboration doesn't exist without IoT; ALE provides easy IoT onboarding and ruggedized OmniSwitches that can be deployed across various geographies. IoT containment and separated LAN secure the network from cyberattacks (IoT devices can be used as attack entry points). ALE's partnerships with VMS solution providers, such as Milestone, streamline operations and enhance security.

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Conclusion and vision

ALE's end-to-end connectivity solution is tailored to the needs of organizations responsible for public safety. With a portfolio encompassing LAN (OmniSwitch), WLAN (OmniAccess Stellar access point), private wireless (4G/5G) and resilient fixed and mobile communications with end-to-end encryption and adapted devices and applications, ALE delivers seamless, secure and scalable networking and communications solutions designed for public safety.

This portfolio ensures simplified IoT onboarding, while ALE's zero trust network access strategy ensures all devices are securely authenticated. IoT is also fully integrated in the communications and information flow, ensuring vital contextual awareness.

ALE's ability to customize our solutions, integrate within organizations and deployed solutions, and our ability to evolve at the pace of the organization—both in terms of technology and budget—makes ALE a trusted and compliant provider of highly secured solutions for governments and other organizations responsible for public safety.

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