Advanced connectivity transforming **Europe's public safety**

5G and Europe's public safety
5G-based Public Protection and Disaster Relief (PPDR) services can play a key role in building the EU´s resilience by ensuring mission-critical connectivity for public safety and emergency services.

Advanced mobile connectivity will support next-generation PPDR services, enabling video surveillance, drones and advanced data analytics. It will provide a unified, scalable communication system instead of having individual agencies operating separate solutions.

The EU Civil Protection Mechanism (EUCPM) is increasingly integrating 5G technology to enhance its disaster response capabilities. Its operational hub – the Emergency Response Coordination Centre (ERCC) – can receive high-definition video feeds, drone footage, and sensor data from disaster sites almost instantly.

To realize the full potential of 5G to support PPDR and underpin the region's security, safety and resilience, Europe must prioritize advanced and trusted connectivity and promote policies that incentivize investment, drive adoption and enable innovation.[1]

"New realities require a new level of preparedness in Europe. Our citizens, our Member States, and our businesses need the right tools to act, both to prevent crises and to react swiftly when a disaster hits. Families living in flood zones should know what to do when the waters rise. Early warning systems can prevent regions hit by wildfires from losing precious time."
Ursula von der Leyen, President of the European Commission[2]

5G use cases in public safety

Real-time monitoring and critical communications
Allows medical responders to report real-time patient data and fire crews to precisely locate squad positioning and movements at the incident site. Network slicing provides emergency services with critical communications, even at times of heavy network traffic, to ensure seamless voice, video and messaging.

Augmented and Virtual Reality (AR/VR)
Enables AR applications that overlay critical information such as building plans onto a first responder´s display for improved operational clarity. Provides AR/VR applications to recreate incident scenarios for more emergency service training.

Drone and sensor integration
Enables drone dispatch and remote control to assess incidents and relay critical data and visuals in real time. Provides a bird's-eye view without putting fire crews, first responders or police teams at unnecessary risk. Facilitates search and rescue.

[1] Ericsson, "Ericsson in Europe: 5G, innovation and collaboration".
[2] European Commission, EU Preparedness Union Strategy to prevent and react to emerging threats and crises (2025).

10% increase in ambulance patient recovery success
The response time of the Madrid SAMUR (Servicio de Asistencia Municipal de Urgencia y Rescate) was approximately 9 minutes and 19 seconds. 5G tools cut the response time by 3 minutes, meaning patients who recover without aftereffects increased by 10 percent, from 23 percent to 33 percent.[3]

57% reduction in transport accidents
The Xiamen Public Transport Group utilizes 5G to enable smart safety systems to reduce accidents by an average of 57 percent.[4]

A next-generation PPDR network **Erillisverkot, Finland**

About the program
Ericsson and Erillisverkot Group are developing Virve 2.0, Finland's next-generation Public Protection and Disaster Relief (PPDR) network, using 4G/5G technology. This critical ICT project ensures secure, real-time communications for emergency responders. Ericsson provides dual-mode 5G Core solutions, cloud-native platforms, security management and deployment services.

Benefits of 5G
- **Mission-critical communications:** Provides ultra-reliable, low-latency communication (URLLC) for emergency services, ensuring seamless voice, video and messaging.
- **Real-time data sharing:** Enables instant transmission of critical data, images, and video between first responders, improving situational awareness.
- **Dedicated network resources:** Network slicing provides bespoke, high-priority resources for public safety agencies, ensuring availability.
  Enhanced positioning and tracking: Enables precise geolocation services for emergency teams, improving response coordination.
- **IoT and sensor connectivity:** Supports smart devices like drones, body cameras, and environmental sensors, for better crisis management.
- **Resilient and secure connectivity:** Ensures encrypted, uninterrupted communication even in disasters or amid cyber threats.
- **Remote operations and AR/VR:** Enables remote medical consultations, training, and situational simulations using AR/VR.

Impact of 5G
Virve 2.0 is a critical infrastructure project, ensuring Finland's public safety agencies operate with maximum efficiency and security.
- **Reliable and secure communication:** Ensures uninterrupted, encrypted connectivity for emergency responders, even in crises.
- **Faster response times:** Real-time data sharing, video streaming, and precise positioning improves situational awareness and decision making.
- **Improved coordination:** Seamless communication between multiple public safety agencies enhances collaboration in emergencies.
- **Scalability and future proofing:** 5G's advanced capabilities support evolving needs, such as AI, IoT and next-gen applications.
- **Cost efficiency:** A cloud-native, dual-mode core network reduces operational costs while increasing efficiency.
- **Resilience and availability:** Network slicing and redundancy ensure priority access and service continuity during high-traffic events or disasters.
- **Support for advanced technologies:** Enables drones, AR/VR for training, IoT sensors and remote diagnostics for enhanced emergency response.

5G´s capabilities

5G's transformational impact
Advanced mobile connectivity is critical infrastructure that will underpin electrification, automation and digitalization. It is pivotal to scaling cloud and AI innovation, driving industrial competitiveness, and supporting digital inclusion.

High-performing networks
The foundation for advanced mobile connectivity is the deployment of transformative 5G, with mid-band spectrum to boost capacity and 5G standalone (SA) for new functionality. This delivers high-performing, programmable networks with increased capabilities and performance.

Differentiated connectivity
While "one-size-fits-all, best-effort" mobile broadband powered the consumer app economy, the full digital transformation requires differentiated connectivity. Transformative 5G provides an innovation platform that unlocks network capabilities and tailored connectivity.

In Finland, 80 percent of emergency workers want access to mobile broadband services.[5]

80%

[3] 5TONIC laboratory, SAMUR-PC, UC3M: a revolutionary system for health emergencies based on 5G (2019).
[4] ABI research: Review of The 5G Ecosystem, Adoption, and Industrial Use Cases in Asia (2023).
[5] Erillisverkot, ve Virve 2.0 mobile strategy (2023).