

White paper

Eyes in the sky, confidence on the ground

Learn how drones are powering
public safety missions.

verizon
frontline



Every day, public safety teams face situations where seconds matter and clear communication can mean the difference between success and failure. Complex missions, such as hurricanes threatening coastal cities, multiagency security operations in the nation's capital or wildfires endangering rural communities, require first responders to stay connected smoothly across jurisdictions and disciplines.

For public safety teams, the mission is the same: Protect lives and safeguard communities. But that mission is getting more challenging to achieve. Emergencies are more dynamic, threats are more sophisticated and the need for near-real-time, multiagency coordination is more critical than ever.

The state of public safety communications

One of those new challenges is the growing role of drones and robotics in public safety. What was once experimental is now becoming essential. In fact, daily use of drones and robotics by first responders is expected to triple in the next five years.¹ And public safety professionals are increasingly relying on drones during emergency response operations, using them for rapid situational awareness, search and rescue, hazardous material assessment, and more.

Public safety drone operations demand robust, secure and highly accurate connectivity. Without reliable communication links, the near-real-time video, sensor data and control signals that make drones so valuable can be delayed, degraded or lost entirely.



Drone and robot adoption is accelerating: Daily use among first responders is expected to triple in five years, from 15% in 2025 to 48% in 2030.²



Drones are becoming essential: 30% of public safety professionals already use them during emergency response operations.³

Connectivity challenges in the field

For drones, robots and other advanced technologies to make a difference, they require strong, secure and precise connectivity. But public safety agencies face several key connectivity challenges:



Network resilience: Disasters can damage infrastructure or cause extreme network congestion.



Security: Mission-critical communications are prime targets for cyberthreats.



Accuracy and latency: Near-real-time control and video streaming demand low-latency, high-bandwidth connections.

That's where Verizon Frontline, powered by America's most reliable 5G network,⁴ comes in—to deliver the resilient connectivity needed to help first responders overcome these challenges and carry out their missions efficiently.



A new view for public safety

Across the public safety community, drones are moving from specialized tools to everyday assets. Their ability to provide rapid, flexible and detailed views of unfolding situations is helping evolve how agencies respond to emergencies and conduct routine operations. This aerial advantage can help improve situational awareness, enhance safety and extend their reach during routine or extreme situations.

Unlike a traditional manned aircraft, a drone can be deployed quickly, operated at a lower cost and equipped with a variety of sensors to gather critical information. They can reach areas that ground units struggle to access, relay live video and data to command centers, and support multiple mission types without the need for extensive infrastructure. As adoption grows, drones are becoming a force multiplier for agencies, helping them make fast, more informed decisions in the field.

Some of the key benefits include:



Improved situational awareness: Near-real-time aerial views of incidents such as fires, accidents and disasters help responders understand conditions before arriving on scene.



Increased safety: Observation from a safe distance helps reduce exposure to hazardous environments.



Rapid deployment and coverage of large or inaccessible areas: Quick launch capability allows drones to reach forests, rooftops, disaster zones and other hard-to-access locations.



Enhanced surveillance and intelligence gathering: High-resolution cameras, infrared sensors and chemical detectors provide detailed information about heat signatures, movement and hazardous conditions.

Drones in action: real-world applications for public safety

The true value of drones comes to life when they take flight. These aerial tools help give agencies new ways to gather information, cover more ground, and protect responders and the public. Their versatility means they can be deployed across a wide range of scenarios, each delivering unique benefits to mission success.

The following examples highlight how public safety teams are putting drones to work to help improve situational awareness, enhance safety and extend operational reach in ways that were once difficult or impossible.

Use case 01

Rapid response and on-scene awareness



Challenge

In the first moments of an emergency, information is often incomplete or delayed. First responders may arrive at an active scene without knowing a suspect's location, approach a fire without understanding its spread, or enter a hazardous materials incident without clear data on air quality or chemical exposure. These gaps in situational awareness can slow decision-making, increase risk to personnel and limit the ability to coordinate effectively across agencies.



Solution

Connected drones can be deployed within seconds of a call for service, even before ground units arrive. Equipped with high-resolution cameras, thermal imaging and environmental sensors, they can capture a comprehensive view of the incident from above. This live feed can be transmitted over secure networks to command centers, mobile devices and field units, helping enable decision-makers to see the situation unfold in near real time.



Benefit

By delivering a shared operational picture, connected drones help enable faster and more informed decisions. Police, fire and emergency medical services (EMS) teams can coordinate their actions before entering the scene, helping reduce risk to responders and civilians alike. This proactive intelligence helps agencies allocate resources more effectively, respond with greater precision and improve overall outcomes in critical incidents.



Case study:

[Learn how Verizon Frontline helped improve crowd safety with drone overwatch in New Orleans.](#)

Large-scale public events present unique challenges for law enforcement. The combination of dense crowds, multiple venues and constant movement can make it difficult for officers to maintain situational awareness and respond quickly to emerging incidents. During Mardi Gras and the French Quarter Festival, the New Orleans Police Department (NOPD) faced exactly this challenge with hundreds of thousands of attendees spread across the city's streets, parks and waterfront areas.

To support NOPD's mission, the Verizon Frontline Crisis Response Team deployed connected drones to provide overwatch capabilities throughout the events. Working alongside law enforcement, the team integrated aerial monitoring into daily operations, giving officers a continual view of activity across key locations. These drones delivered:

- **Aerial monitoring:** Drones delivered near-real-time aerial views of Mardi Gras parades, festival stages and high-traffic pedestrian areas.
- **Operational coverage:** Over the course of the events, more than 140 drone flights were conducted across multiple sites.

Use case 02

Disaster response and recovery



Challenge

Natural disasters such as hurricanes, floods, wildfires and earthquakes can cause extensive damage to communities and critical infrastructure. In these situations, ground teams may struggle to assess the full scope of damage, locate survivors or direct resources efficiently, especially when large areas are inaccessible due to debris, flooding or unstable terrain.



Solution

Drones offer a fast, flexible solution to these challenges. Equipped with portable network equipment, tethered drones can provide temporary coverage for voice, data and video communications, helping restore vital links between command centers and field units. By transmitting live visuals and sensor data to emergency command centers, drones give decision-makers a clear, near-real-time picture of conditions on the ground.



Benefit

By restoring communication and providing comprehensive situational awareness, drones help agencies coordinate across jurisdictions, allocate resources more effectively and accelerate recovery operations.

Tech spotlight: Skydio X10 drone

- Artificial intelligence-powered autonomous flight with NightSense for obstacle avoidance in darkness
- Telephoto, narrow and thermal cameras
- Deployable in less than 40 seconds
- 5G connectivity
- IP55 dust/water resistance
- Modular architecture for custom payloads and integrations



Case study:

Explore how Verizon partnered with the U.S. military in extreme training to prepare for natural disaster response.

With hurricane season approaching, Verizon partnered with the Mississippi National Guard and Mississippi Emergency Management Agency in PATRIOT 24, a six-day training exercise focused on strengthening recovery capabilities when critical communications are disrupted during natural disasters.

The drills simulated complex crisis scenarios, including a Category 4 hurricane affecting hospital networks and a tornado causing a nuclear radiation release that required network restoration in hazardous conditions. Verizon's specialized response teams, including the Major Emergency Response Incident Team, the Dedicated Impact Response Team, the Emergency Response Team and the Verizon Frontline Crisis Response Team, practiced deploying portable cell sites, Wi-Fi hotspots, satellite-based assets, drones and other tools to restore connectivity in challenging environments.

This training supports Verizon's ability to collaborate with emergency agencies during real-world disaster situations, helping communities reconnect more quickly after severe events.

Use case 03

Security and surveillance



Challenge

Agencies tasked with protecting borders, monitoring remote terrain or securing critical infrastructure often operate in areas with limited connectivity. These environments can make it difficult to maintain persistent surveillance, especially over large distances or in challenging conditions such as rugged landscapes, extreme weather or low-light settings. Traditional crewed patrols in these areas can be resource-intensive, time-consuming and potentially hazardous for personnel.



Solution

Drones equipped with secure data links and high-precision location systems can provide continual aerial surveillance, even in low-signal or hard-to-reach environments. These systems can capture and transmit high-resolution video, infrared imagery and sensor data over extended distances, day or night, to command centers and mobile units. Their ability to operate quietly and remain airborne for extended periods allows agencies to maintain a watchful presence without the logistical demands of constant crewed patrols.



Benefit

Persistent aerial surveillance expands visibility for things like border patrol, law enforcement and multiagency operations, helping enable fast detection and response to potential threats. By reducing reliance on crewed patrols in high-risk or hard-to-access areas, drones help agencies allocate resources more efficiently, improve safety for personnel, and maintain operational awareness across vast or complex environments.





Why Verizon Frontline

There's a reason that more first responders choose Verizon Frontline than any other network.⁵ Just ask the more than 45,000 agencies that rely on us for mission-critical communications. Our support and solutions are built to power the full potential of drones in public safety missions and help keep public safety teams connected, protected and ready.

With over 3,000 assets ready to deploy, from rugged deployables to portable generators, no matter what you're up against, we've got you covered.

Learn more

Contact your Verizon representative today to learn more about Verizon Frontline and how it can support your drone missions.

Taking public safety to new heights

As drones become a trusted tool in public safety operations, agencies will increasingly rely on drones for mission-critical operations. Success will depend on having the right connectivity, security and precision to support these tools in any environment. That's where the right partner can make all the difference.

Verizon Frontline is the advanced network and technology for first responders that can deliver live drone feeds from a disaster zone, provide encrypted control channels for staffed systems and support multiagency team connectivity so teams can have a better view of the missions ahead.



Verizon has a team of **200+ dedicated drone pilots.**

The network trusted by first responders for 30 years and counting.



verizon frontline

1. "Verizon Frontline 2025 Public Safety Communications Survey," Verizon, Sep 17, 2025.

<https://www.verizon.com/about/news/frontline-public-safety-communications-2025>

2. Ibid.

3. Ibid.

4. **Based on RootMetrics® United States RootScore® Report: 2H 2025. Tested with best commercially available smartphones on three national mobile networks across all available network types. Your experiences may vary. RootMetrics rankings are not an endorsement of Verizon.**

5. Based on quarterly third-party wireless voice market share data, Q1 2026

© 2026 Verizon. OGWP2810425