



A Solacom Case Study

SUCCESS STORY

Solacom Provides Advanced Mobile Location (AML) Capabilities to Australia's Triple Zero (000) Service

How Telstra and Solacom Partnered to Deliver an Enhanced Public Safety Response Solution for Australia

Before 1969, Australia had separate local emergency numbers for police, fire, and ambulance, until the nationwide introduction of the 000 number by the Postmaster General in the 1960s.

Australia, despite being the largest country in the Oceanic region, is one of the most sparsely populated countries in the world. Much of the population of 26 million is concentrated in the south-eastern region between Queensland and Adelaide, and 67% live within the highly urbanized greater capital areas.

The country's national emergency number service, Triple Zero (000), is operated by Telstra Corporation Ltd. under a contract with the Australian government. Telstra is the largest wireless carrier in the country, with 18.8 million subscribers. The full-service telecommunications company employs more than 40,000 people, builds and operates telecommunications networks, and provides voice, mobile, internet, and television products and services across Australia.

Telstra was contracted to deliver the nation's Triple Zero call management service and needed to replace a system that had become outdated and difficult to maintain, requiring constant technical interventions to operate. To modernize operations, Telstra needed a purpose-built solution from a single vendor. The goal was to create a fully integrated Emergency Communications platform capable of evolving with next-generation standards and functionality without requiring a complete system replacement. This solution needed to offer advanced location capabilities that would allow Emergency Service Organizations (ESOs) to pinpoint the location of wireless emergency callers.



Australian Government



According to Triple Zero, around 78% of calls originate from a mobile phone, significantly enhancing their ability to quickly locate a person in an emergency situation.



The Challenge

In a vast country like Australia, where the population is geographically dispersed, accurately pinpointing a caller's location during an emergency is critical. With an average population density of just 3.3 persons per square kilometer, quickly locating callers supporting the need for first response emergency personnel can be dispatched without delay.

Mobile location information is traditionally delivered through cell tower triangulation. However this method is limited, producing an average area of certainty of approximately 9.6 square kilometers. "While this is an improvement over relying solely on verbal descriptions, it still means we have a huge area to try to find our caller in," says Jane Elkington, principal at Triple Zero, Telstra.

Recognizing the critical need for improvement, Telstra sought to enhance Australia's public safety network by developing a solution to overcome the challenges of locating wireless callers. Having successfully collaborated with Solacom to upgrade the Triple Zero Emergency Call Service in 2019 with Solacom's Guardian call management solution, Telstra selected Solacom as their prefer partner.



The Solution

Advanced Mobile Location (AML) technology uses a mobile device's GPS data and signal strength to provide accurate location tracking for emergency calls. Android devices running version 4.1 and higher, iPhones from the 6s onward with iOS 14.3 and later, and Apple Watch GPS + Cellular models with WatchOS 7.2 or above are all equipped with AML capabilities. These devices transmit AML data via SMS when an emergency call is placed, ensuring functionality even in areas with weak mobile signals or poor call quality.

In emergencies, where every second counts, AML technology provides critical benefits. Real-time, precise location data is invaluable for public safety authorities. A study by the Federal Communications Commission (FCC) in the U.S. found that reducing response times by just one minute could save over 10,000 lives annually. Ambulance services, for example, report saving an average of 30 seconds per call with AML — a small yet significant difference that can save lives.

The AML service was launched in December 2020, following Solacom's deployment of Australia's nationwide Guardian Solution. With nearly 85% of Triple Zero calls originating from mobile phones, the adoption of AML technology aligned the capabilities of Australia's emergency call management system with the emergency response expectations of Australian citizens. It also positioned Australia alongside nations like New Zealand, the UAE, and over 20 European countries in adopting AML to enhance emergency response capabilities.

Delivered in under a year, the solution complies fully with all Australian government regulations and industry standards for emergency call services, and has significantly boosted the capabilities of Telstra, Triple Zero, and Australian emergency services.

"By adopting AML, we've modernized Australia's emergency call system, setting a global benchmark for public safety technology. With improved accuracy, speed, and reliability, this system is saving lives and ensuring a safer future for all Australians," Elkington says.



93% of people agree that Triple Zero should automatically provide their location coordinates.

- Australian Government, Department of Communication

The Benefits

By leveraging Solacom's expertise in emergency call management, Telstra enhanced its existing infrastructure with a solution specifically designed for accurate and comprehensive location mapping. The combination of Solacom's Guardian Call Handling Solution and the latest AML technology has established a next-generation public safety platform for Telstra and the Triple Zero Emergency Call Service. This advanced system not only meets but exceeds Telstra's objectives, delivering precise caller location data to first responders.

"The AML technology has transformed emergency response in Australia, improving location accuracy by up to 4,000 times compared to older systems. Now, 77% of wireless calls are located within 5 to 50 meters, drastically enhancing response efficiency, especially in rural and remote areas," Elkington explains.

By selecting Solacom, Telstra didn't just purchase a next-generation emergency call-handling solution product — they chose a trusted Triple Zero technology partner. Solacom products support public safety agencies worldwide, impacting millions of lives each year.

"Working closely with Solacom to upgrade and implement new public safety advancements ensures the Triple Zero program remains flexible and stable for all requirements," says Elkington. "And partnering with an organization at the forefront of emergency call handling research and development provides a solid foundation for a secure future."

With over eight years of proven success in Australia, Solacom's Guardian NENA i3 compliant, next-generation emergency call management solution, supporting multimedia and text messaging, is the perfect fit for emergency services in Australia.



DID YOU KNOW?

Approximately 92.2% of Australians use a smartphone on a daily basis.

- [RedSearch.com.au](https://www.redsearch.com.au)





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ENABLING THE FUTURE OF EMERGENCY CALL HANDLING

Comtech Solacom Headquarters
80 Rue Jean-Proulx,
Gatineau, QC J8Z 1W1

1 (819) 205-8100
cst-sales@comtech.com