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## Your Established Partner

TeleCommunication Systems, Inc. (TCS) (NASDAQ: TSYS) is a world leader in highly reliable and secure mobile communication technology. TCS infrastructure forms the foundation for market leading solutions in E9-1-1, text messaging, commercial location and deployable wireless communications. TCS is at the forefront of new mobile cloud computing services providing wireless applications for navigation, hyper-local search, asset tracking, social applications and telematics. Millions of consumers around the world use TCS wireless apps as a fundamental part of their daily lives. Government agencies utilize TCS' cyber security expertise, professional services, and highly secure deployable satellite solutions for mission-critical communications. Headquartered in Annapolis, Maryland, TCS maintains technical, service and sales offices around the world. To learn more about emerging and innovative wireless technologies, visit [www.telecomsys.com](http://www.telecomsys.com).

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 @TCS\_NG911

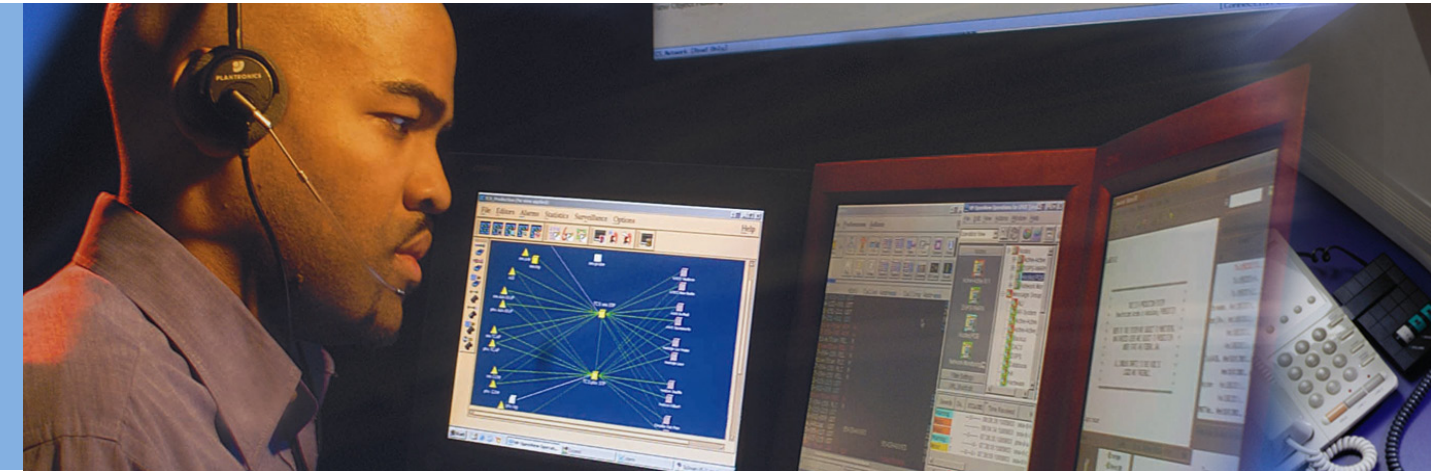
 Next Generation 9-1-1 Resources for the PSAP

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 1.800.557.5869

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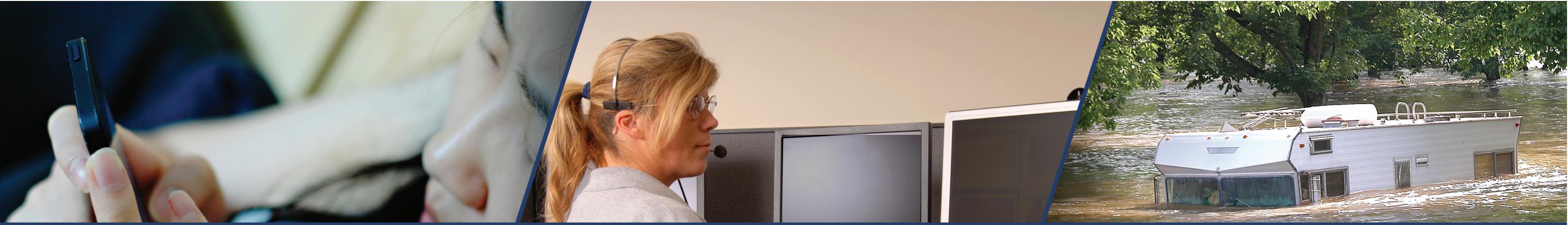
# TCS - Leading Public Safety Solutions



TCS has demonstrated its dedication to public safety by helping to build the foundation for E9-1-1 and NG9-1-1. We completed the first wireless E9-1-1 call, and from that point led the industry as innovators. TCS' mission is to make sure our solutions grow to meet the needs of the public safety community and its emergency responders. TCS led the industry in bringing Phase 1 and Phase 2 wireless E9-1-1 to the U.S., and played a similar role in delivering VoIP E9-1-1. Our additional leadership with SMS and cybersecurity has prepared us well to meet the challenges of NG9-1-1.

## Capabilities and Services

- Operator and Carrier Solutions
- Business Continuity Services
- ESInet
- Enhanced 9-1-1 Solutions
- Mobile Public Alerting
- Call Handling
- Professional Services
- Government Solutions
- Cybersecurity Training and Services
- Navigation and Telematics



## SOLUTIONS FOR THE PSAP

### NG9-1-1

TCS NG9-1-1 is an end-to-end, standards-compliant NENA i3 system that combines TCS' ESInet and call handling solutions with powerful GIS tools and related system components and services.

### Multimedia Delivery

EMedia™ provides your PSAP with a reliable, single-source foundation for multimedia communication. EMedia delivers 9-1-1 text messages from any carrier to any choice of PSAP interface (TTY, Web or text-enabled CPE) enables PSAP transfer capabilities for text, and integrates with CAD and recording systems.

### Call Handling

The X-Solution™ ensures your agency meets today's needs. Two powerful technologies—IP and GIS—combine to transform the PSAP into a feature-rich, map-centric™ operation. Combine this with ALI and GIS databases validating against each other, sharing information over an i3 aligned ESInet, and your agency is now ready to handle all 9-1-1 calls from today's technology-based sources—IM, wireless and video.

### ESInet

Intrepid9-1-1™ from TCS is a replacement for legacy solutions that reliably and accurately routes 9-1-1 voice calls and multimedia messages (including SMS Text-to-9-1-1) to Public Safety Answering Points (PSAPs), emergency responders and call takers. This scalable solution can be implemented at the state, regional or county-wide level.

### Portable PSAP Solution

Ready9-1-1™ is a portable, deployable satellite communications solution that restores 9-1-1 call-taking services and makes sure you remain operational throughout any emergency. The ease of set-up and configuration of this compact, scalable solution allows trained call-takers to stay focused on serving the community and ensuring public safety.

### Text to 9-1-1

SMS9-1-1, an award-winning, browser-based graphical user interface for managing multiple SMS9-1-1 sessions, is a feature-rich, easy-to-deploy service that enables PSAPs with IP connectivity to receive and respond to text messages from the public.

### Mapped ALI

The xTrakker™ customizable and intuitive user interface enables your agency to locate callers with ease. While xTrakker™ integrates with most current call handling and CAD systems, when integrated with TCS' x9GIS™, a powerful Esri GIS database system can be realized.

### GIS Services

An agency's map is constantly changing, yet managing the GIS data behind the map requires expertise and resources like a GIS DBMS. It also calls for a streamlined map data update process. TCS' team of GIS technicians can manage the data for your agency in our x9GIS™ database management solution.

### Cybersecurity

An integrated, end-to-end portfolio of mission-critical cybersecurity services and training, Cyber9-1-1™ protects your public safety organization of any type or size from ever-evolving, persistent with capabilities to assess, validate, and train the systems and teams supporting the public safety infrastructure.

### ALI DBMS

TCS' custom 9-1-1 DBMS software solution includes two levels of interface with 9-1-1 data: xALI DBMS™ for administrators, and xALI Web™ for service providers. xALI DBMS provides the administrator with access to and oversight of all the records in the local 9-1-1 database. xALI Web™ is the interface through which service providers can manage their records and process service orders.

### Indoor Location Accuracy

TCS offers a solution that leverages multiple location technologies, including Wi-Fi and BLE, to deliver greater indoor location accuracy via TCS's LocatE9-1-1™ solution. As a cell phone moves through an indoor area (e.g., a mall, a high-rise) equipped with WiFi, when that phone calls 9-1-1, the dispatchable location of the associated WiFi access point(s) can be relayed to the PSAP and displayed to the 9-1-1 call taker.

## SOLUTIONS FOR VOICE SERVICE PROVIDERS

### Wireless E9-1-1

TCS' Wireless E9-1-1 solution enables wireless carriers to meet Phase I and II of the FCC mandate while providing the life-saving emergency services and security that wireless consumers expect. Using the unique architecture of the Xypoint® Location Platform and existing networks, TCS allows wireless carriers to handle wireless E9-1-1 calls by delivering the 10-digit callback number and originating location information to the appropriate PSAP. Where Phase II 9-1-1 has been deployed, TCS integrates with an agency's selected location vendor to provide a caller's location coordinates to the PSAP.

### VoIP E9-1-1 Service

LiveWirE9-1-1™ is NENA standards-compliant i2 9-1-1 platform that enables VoIP service providers (VSPs) to provide reliable emergency services to their subscribers. LiveWirE911 provides call routing and ensures the identity and location of the subscriber.

### VoLTE E9-1-1 Service

As the public embraces LTE networks, carriers must ensure that 9-1-1 services reliably support public safety requirements without interruption. Built upon the single largest VOIP emergency call processing platform in the nation, the TCS VoLTE 9-1-1 solution is cost-effective, highly flexible, standards-based and is fully customizable according to the carrier's LTE infrastructure. TCS VoLTE9-1-1 enables 4G/LTE carriers to provide both 9-1-1 call routing and originating coarse/precise location information, including the 10-digit callback number, in an all-LTE environment to public safety access points (PSAPs), allowing them to potentially reclaim or reuse 3G spectrum.

### Text to 9-1-1

TCS provides SMS9-1-1 service to its carrier customers seven days a week, 365 days a year. TCS designs, builds, and provisions its services to be reliable, highly available, auto-aware, and fault-resilient. TCS delivers text-to-911 service to more than 500 public safety answering points across 33 states.

### Address Validation

TCS' RAVE911™ is a real-time address validation service that meets 9-1-1 requirements for any provider offering nomadic or fixed-line voice service. RAVE911's revolutionary process of dynamically matching the subscriber's location (service address) to E9-1-1 Master Street Address Guide (MSAG) data ensures that validated E9-1-1 MSAG data will be provided to the PSAP, that you are safe to provision the subscriber, and that the subscriber can be added to your network.

### ALI Steering

The TCS ALI Link™ service provides nationwide connectivity between ALI Link customers and more than 230 ALI databases used for E9-1-1. By providing access to standardized ALI databases through a single steering port, ALI Link saves the expense of building your own data circuits.

### Indoor Location Accuracy

TCS' LocatE9-1-1™ solution leverages multiple location technologies, including Wi-Fi and BLE, to help VSPs meet the latest FCC mandate to deliver greater indoor location accuracy during emergency calls. When a cell phone moving through an indoor area equipped with WiFi or BLE beacons (e.g., a mall, a high-rise) dials 9-1-1, the dispatchable location of the associated WiFi access point(s) can be relayed to the PSAP and displayed to the 9-1-1 call taker.

### TCS Response Center

Staffed by professionals trained and certified by APCO, the TCS Response Center (TRC™) is an emergency call center service offered to VSPs that need an added level of call delivery backup. The TRC takes calls for emergency assistance that do not successfully route through the normal call flow, ensuring that every 9-1-1 call is answered.