

AT&T Consulting – Enhanced 911 Transformation Services



Address Employee Safety and Regulatory Compliance with Greater Location Accuracy

Safety and security has become top of mind for business, education, and government leaders across America. Emerging technologies in voice communications play an increasingly important role in addressing these concerns. Enhanced 911 (“E911”) solutions help ensure that calls are routed to the correct Public Safety Answering Point (PSAP) along with notifying internal personnel to ensure a swift response.

Due to evolving statewide regulations and potential corporate liabilities, E911 is a growing priority for all companies, regardless of public or private

status. Ensuring that an E911 solution architecture is tailored to each specific business is vital to the employees’ safety and security. This is best explained by comparing the vast differences between traditional 911 voice calling and E911.

In a residential emergency, a traditional 911 caller is easily located by first responders because the location record is associated with the caller’s address when the phone system is installed. For traditional 911 callers in an office building or multi-building complex, it is more difficult to pinpoint the actual location of the emergency caller.

E911 Service Benefits

- Provide dynamic and granular location identification of the 911 caller to dispatchers and first responders
- Generate internal notifications of the 911 call via:
 - Text & E-mail Alerts
 - Desktop Pop-up Screens
 - Three-Way Calls with Security Desk

Why AT&T Consulting?

- Turnkey experience from Planning and Discovery to Site Migration and Management
- Reduced project risk via technical and engineering expertise and availability
- Accelerated time to benefit

In situations where a phone system is shared between multiple buildings and locations, dispatchers and first responders have more difficulty in determining exactly which building, floor, or wing the emergency is occurring in. Enhanced 911 solutions provide the ability to automatically discover where the 911 caller is located even when devices move from floor, building, etc. This allows emergency personnel to accurately pinpoint the location of the caller.

Regarding compliance, being able to provide the appropriate level of location “granularity” specified by law is paramount. Unfortunately, while the Federal Communications Commission has increased their focus on E911 legislation, there is currently no single, national standard. Therefore, companies need to assess the current state level requirements that apply to them, as well as anticipate future requirements and risk tolerance when considering their appropriate level of E911 compliance.

To further complicate matters, 911 caller location information can change, therefore E911 solutions need to address the intrinsically dynamic nature of emergency caller locations in these business environments. This is especially relevant since companies often relocate, renovate office layouts, and have employee mobility across office buildings.

AT&T Consulting provides a life cycle of transformation services to help enterprises plan, design, and implement an appropriate E911 solution. We have extensive experience deploying technologies and implementing operational practices which enable enterprises to dynamically manage employee location thus helping ensure accurate location information when needed. Our E911 transformation can be implemented as an on premise Voice and Unified Communications (UC) solution or in conjunction with other Hosted UC solutions along with SIP trunking services.

E911 & SIP Transformation

Many organizations are migrating from TDM voice to SIP trunking in order to reduce telecommunications costs and support their digital transformation efforts. There are several advantages of coordinating E911 as part of a broader SIP Transformation, such as:

- **Identifying interdependencies** and minimizing the risks that typically arise when both programs are undertaken independently;

- **Realizing greater budget and resource utilization** from a unified program governance approach;
- **Benefitting from AT&T Consulting's comprehensive experience** across SIP and E911 projects, helping to accelerate program benefits.

Service Methodology

AT&T Consulting works with leading E911 service providers to deliver a comprehensive life cycle of services and approach from Planning and Discovery to Service Management. To remain as flexible as possible to unique customer needs, we build custom-tailored E911 transformation programs based on the following sequenced activities:

- E911 Planning and Discovery
- E911 Solution Design
- E911 Engineering & Implementation
- E911 Testing
- E911 Cutover and Deployment
- E911 Service Management
- E911 Planning and Discovery

The first phase of our E911 transformation program is Planning and Discovery. This phase entails a review of the customer requirements for E911 along with development of a project plan. Next, the physical building layouts and network infrastructure information for all sites and locations must be captured. This information will be used to begin the determination of Emergency Response Location (ERL) elements. At this stage, AT&T Consulting will determine if there will be a requirement to develop a Site Survey process. This is determined based on the initial capture of Network layer 2, layer 3 architecture, and the Wi-Fi environment information.

E911 Solution Design

AT&T Consulting provides solution design expertise to address the detailed design and architecture. This phase focuses on the development of the equipment configurations, test plans, and integration plans required to communicate to the telephony and network elements. The E911 solution design elements typically include:

- Emergency Response Locations (ERL)
- E911 Database Appliance
- Internal Notification
- Session Border Controller (SBC)
- Private Branch Exchange (PBX)
- Connectivity to the E911 service provider
- Network Infrastructure components

E911 Engineering & Implementation

Once the Solution Design phase is complete, the installation and configuration of the E911 database appliance commences. Also, integration with the IP Private Branch Exchange (PBX) platform, network infrastructure, and E911 service provider will be completed.

E911 Testing

System and initial functionality testing is performed to validate the integration of the platforms. In parallel to the Cutover and Deployment phase, individual site testing is performed to validate the tracking of phones that move within a building or across the campus to a different LAN switch or subnet. The tracking of a station location down to the switch port level or subnet verifies that 911 calls are routed based on the correct physical location and test internal notification applications. This functionality is part of our E911 solutions and helps address the “dynamic” nature of location tracking and ongoing database updates.

E911 Cutover and Deployment

Throughout Cutover and Deployment, each site's ERL information is defined in the E911 database appliance.

The network infrastructure including either Layer 3 subnets, LAN switches and ports, and/or Wi-Fi



Access Points (AP) Broadcast Service Set Identifier (BSSID) are discovered. A matrix of ERL information and network maps is performed. IP PBX dial plans are reviewed and modified as necessary to address 911 call routing, internal security calls, and test calls. The security or facility notification elements are configured for every ERL. Analog devices are defined as well as the implementation of software to address local office and remote soft clients.

E911 Service Management

Service Management focuses on developing the target state for the people, processes, and tools required to support the E911 environment. We combine our expertise in solution development and critical readiness assessment to help customers create a robust support model. We also develop new and augment existing IT service management (ITSM) operational processes specifically related to E911 Incident Management and E911 Service Request Management.

Whether implementing the Enhanced 911 solution with an on premise telephony, Unified Communications solution, or with another Hosted Voice or UC service, AT&T Consulting is a Trusted Advisor with a unique pedigree and proven approach. We leverage our skills and expertise so you can more efficiently integrate a unique E911 solution fit for your business requirements.

For more information, contact an AT&T Representative or visit www.business.att.com.

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