

# AT&T Consulting – Next Generation 9-1-1 Transformation



## Modernize Emergency Services with Emerging Technology in an Effort to Save Lives

Due to ever-growing access to technology, people now have an expectation to always remain connected, no matter which mode of communication they choose. This is especially true in the event of an emergency. Traditional 9-1-1 services do not incorporate new and existing technology, such as precise location information, text, and multimedia messages. Next Generation 9-1-1 (NG9-1-1) was developed to support these as well as future features into emergency service communications.

NG9-1-1 is a technological shift in how an emergency 9-1-1 call is directed to and processed by a Public Service Answering Point (PSAP). By converting analog network technologies to a digital or IP-based network, emergency services organizations are able to collect and analyze information, such as non-voice messages, as well as administer more detailed information, such as location information, to PSAPs and first responders.

## NG9-1-1 Service Benefits

- Update analog systems to IP-based network
- Ability to transmit text, videos, and multimedia messages to PSAPs
- Unify multi-state, state, region, and/or county public safety services to increase effectiveness
- Ease of integration with future forms of broadband data

A traditional 9-1-1 caller from a fixed location is not difficult for responders to find since a location record is associated with the address when the phone is installed. However, the rise of mobile and other technologies pose new challenges to emergency responders, since most callers often do not have a fixed address or static location. In situations where a mobile user dials 9-1-1, dispatchers and first responders may not be able to determine an exact location. The Department of Homeland Security reported that approximately 240 million 9-1-1 calls are made annually with 70% originating from mobile devices. While the Federal Communications Commission has not enacted any nationwide regulations, state and regional governments have passed legislation requiring the adoption of NG9-1-1 technologies at a rapid pace.

The overall goal of NG9-1-1 is to pinpoint a location of the 9-1-1 caller, route the call to the correct Public Safety Answering Point (PSAP) for dispatch, and to have the ability to transfer calls to other Emergency Services IP Network (ESInet) PSAP's. Additionally, Public Safety services with NG9-1-1 are able to activate a temporary 9-1-1 center for major events such as football games, parades, etc. This grants flexibility to address issues that could erupt due to large mass gatherings.

States, regions and counties have siloed, independent PSAPs in traditional 9-1-1 solutions. NG9-1-1 consolidates this and the once separated PSAPs are able to work together to help resolve issues for the community. In addition, NG9-1-1 provides more descriptive incident information and increased access to 9-1-1 services.

AT&T Consulting provides a life cycle of transformation services to help government agencies plan, design and implement an appropriate NG9-1-1 solution. Organizations have a Trusted Advisor in AT&T Consulting, due to our extensive experience and expertise. We guide you to efficiently adopt new technologies whether standalone or combined.

An important additional benefit of AT&T Consulting's NG-9-1-1 program is the acceleration of FirstNet adoption. FirstNet's goal is to provide a unified, nationwide broadband network that connects local, state, and national responders. FirstNet will also interoperate with NG9-1-1, which includes messaging (text & multimedia), Voice over Internet Protocol (VoIP), video streaming, and geographic information systems (GIS).

Through a holistic and programmatic approach, AT&T Consulting can incorporate your FirstNet objectives into a NG-9-1-1 program.

## NG9-1-1 Consulting Services

AT&T Consulting works with leading NG9-1-1 service providers and solutions to implement a comprehensive approach and full life cycle methodology to a NG9-1-1 conversion. To be flexible for unique customer needs, we build custom NG9-1-1 conversion programs based on the following service offerings:

- NG9-1-1 Program Management
- NG9-1-1 Planning and Discovery
- NG9-1-1 Solution Design
- NG9-1-1 Engineering & Implementation
- NG9-1-1 Testing
- NG9-1-1 Cutover and Deployment
- NG9-1-1 Security Services

## NG9-1-1 Program Management

Program Management focuses on coordinating and leading all aspects of the NG9-1-1 engagement for the client. AT&T Consulting provides deep expertise in NG9-1-1 solution development to aid customers in assessing, implementing, and/or operating NG9-1-1 programs. We also develop and lead the implementation of IT Service Management (ITSM) operational processes specifically related to NG9-1-1 Incident Management and NG9-1-1 Service Request Management.

## NG9-1-1 Planning and Discovery

The first step for a NG9-1-1 conversion is Planning and Discovery. During this phase, we review customer requirements for NG9-1-1 and develop a project plan. Next, the physical host locations, building layouts, and network infrastructure information for all PSAP locations are captured. This information will be used to determine the emergency call routing elements and failover locations. AT&T Consulting will also determine if there is a requirement to develop a Site Survey process.



## NG9-1-1 Solution Design

AT&T Consulting's solution design expertise addresses the detailed design and integration aspects of the NG9-1-1 solution architecture. This phase focuses on the development of equipment configurations, features, test plans, and integration plans required to communicate with the telephony, AT&T ESInet™ and network elements. The NG9-1-1 solution design elements include:

- Network Infrastructure Integration
- Geospatial Data
- SMS Solution Design
- Network Security
- Connectivity to 9-1-1 Service Providers

## NG9-1-1 Engineering & Implementation

During this project phase, AT&T Consulting configures and implements the NG9-1-1 hardware, databases, and network elements. In addition, integration with network infrastructure and NG9-1-1 service providers will be completed.

## NG9-1-1 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 NG9-1-1 network,

host, local PSAP configurations, network connectivity, call flows, and failover settings. Each test verifies that 9-1-1 calls are processed and routed to the correct PSAP based on the caller's Geospatial location or civic address.

## NG9-1-1 Cutover and Deployment

Throughout Cutover and Deployment, each PSAP's routing information defined in the NG9-1-1 database is re-verified utilizing test calls before and during the cutover.

## NG9-1-1 Security Services

AT&T Consulting provides comprehensive security services which are custom tailored to the NG9-1-1 lifecycle. Service areas of assessment, solution development and remediation per PSAP or overall implementation can include:

- Cyber Security Consulting
- Telephony Denial of Service (TDoS)
- Distributed Denial of Service (DDoS)

## About AT&T ESInet™

Integrating NG9-1-1 with AT&T ESInet™ is an effective joint solution with numerous benefits. AT&T ESInet™ is a nationally distributed, geographically diverse and redundant service architecture. ESInet™ supports the i3 compliance standards, has 99.999% availability, and

## AT&T Consulting Services NG9-1-1 Transformation Services



is interoperable with neighboring PSAPs. The advantages to combining NG9-1-1 with ESInet™ include:

- Initial call processing capacity more than twice the current US E9-1-1 call volumes
- NG9-1-1 Location Database Proxy
- AVPN Consistent Network Solution
- PSAP Abandon & Alternate Routing
- On-Time Provisioning
- Complete End-To-End Monitoring

### First Responder Network Authority (FirstNet)

The adoption of our robust program for NG-9-1-1 can help accelerate your First Responder Network Authority (FirstNet) program objectives. While FirstNet connects local, state, and national responders through its' unified, nationwide broadband network, it also interoperates with the capabilities of NG9-1-1. Implementing both FirstNet and NG9-1-1 can be an effective joint solution.

Whether implementing NG9-1-1 in a state wide hosted solution, individual PSAP solution, or a combination of both, **AT&T Consulting is a Trusted Advisor with a unique pedigree and proven approach.** We leverage our 9-1-1 Industry leadership skills and expertise to develop and implement a strategic NG9-1-1 plan to help address the safety and security of your citizens.



For more information, contact an AT&T Representative or visit [www.business.att.com](http://www.business.att.com).

To learn more about AT&T Consulting services, visit [www.business.att.com](http://www.business.att.com) or [have us contact you](#).

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