

# SMART COMMUNITIES PLAN FOR MOBILE

## Personal and Public Safety is a Key Consideration

### 330 Million Americans Rely on Enhanced 911 Services

Mobile phones play an important role in personal and public safety, allowing people to easily reach out to emergency services, family or friends. Mobile connectivity can be a lifeline for people and first responders when reacting to natural and man-made disasters, as well as accidents and threats to communities.

Enhanced 911 (also called E911) is a federally-mandated program that seeks to improve the accuracy and reliability of wireless 911 by providing dispatchers with additional location information. E911 is regulated by the Federal Communications Commission and is initiated by jurisdictional request.

The deployment of E911 requires network upgrades and coordination among public safety agencies, wireless carriers, technology vendors, equipment manufacturers, and local wireline carriers.

240 million calls are made to 911 in the U.S. each year, and in many areas 80% or more are from wireless devices. (National Emergency Number Association, NENA)

### Looking to the Future

According to 911.gov:

*For more than 40 years, the 911 system has served the needs of the public in emergencies. Next Generation 911 (NG911) will enhance the 911 system to create a faster, more flexible, resilient, and scalable system that allows 911 to keep up with communication technology used by the public.*

*While the technology to implement NG911 systems is available now, the transition to NG911 involves much more than just new computers. Implementing NG911 will include activities of many people, who will coordinate efforts to plan and deploy a continually evolving system of hardware, software, standards, policies, protocols and training.*

*The National 911 Program supports the effort of jurisdictions at all levels of government as they consider the transition to NG911.*

New technologies and policies will continue to enhance these capabilities. In fact, a roadmap agreement reached by the wireless industry and public safety advocates in late 2014 will lead to more accurately locating indoor 911 callers, as well as providing a vertical estimate for callers in high-rise buildings.



## Tools for Public and Personal Safety

In addition to 911 calls, mobile device users can receive emergency alerts or use the many mobile apps and services designed to help improve safety for individuals and our communities. More of these services are being developed every day.

- **Wireless Emergency Alerts** – America's Wireless Emergency Alerts (WEA) public safety system notifies mobile device users of dangerous situations in their area, and lets them know when the threat has passed. This voluntary system supported by wireless carriers increases safety for Americans. Officially sanctioned alerts include:
  - **Presidential Alerts** – issued by the U.S. President or a designee
  - **Imminent Threat Alerts** – about man-made or natural disasters where there is an imminent threat to life or property
  - **AMBER Alerts** – help law enforcement search for and locate a missing child
  - **Silver Alerts** – help law enforcement search for and locate missing persons, especially senior citizens with dementia or mental disabilities
- **National Wireless Priority System** – This system supports national leadership, federal, state, local, tribal and other authorized national security and emergency responders to have prioritized processing of their calls in an emergency or crisis when wireless networks are congested.
- **Social Media** – Twitter, Facebook, walkie-talkie apps and other social media platforms are regularly used to alert people to danger, or call for help. These platforms are also used by a majority of public safety agencies to collect and share information.
- **FirstNet** – FirstNet is a forthcoming federally-sponsored initiative that is envisioned to be a single, interoperable network for public safety agencies and personnel. When operational, it will be a nationwide broadband network tailored specifically to the needs of the public safety community

## Learn More

For more information, check out [HowMobileWorks.com](http://HowMobileWorks.com), or contact us at: [SitingRelations@T-Mobile.com](mailto:SitingRelations@T-Mobile.com)

## Radio Frequency

Wireless communication is based on radio frequency (RF), the same technology that has been used for radio broadcasts since the 1800s. It is the same technology that enables wireless routers, baby monitors, and cordless telephones to work – as well as radio and television broadcasting.

The Federal Communications Commission (FCC) is responsible for evaluating the effect of radio frequency emissions. Also, the American National Standards Institute (ANSI), the Institute of Electrical and Electronics Engineers (IEEE) and the National Council on Radiation Protection and Measurements (NCRP) have issued recommendations for human exposure to RF electromagnetic fields.

## According to the FCC:

Measurements made near typical cellular and PCS cell sites have shown that ground-level power densities are well below the exposure limits recommended by RF/microwave safety standards used by the FCC.

While it is theoretically possible for cell sites to radiate at very high power levels, the maximum power radiated in any direction usually does not exceed 50 watts.

## Working Together

T-Mobile is licensed by the Federal Communications Commission and must comply with all federal licensing, operational and safety regulations. We partner with local jurisdictions and local Public Safety Answering Points to support E911 requirements. Because wireless infrastructure is essential to making mobile networks, services and applications function, T-Mobile works closely with local governments to ensure that our networks are providing adequate coverage and capacity.

