FirstNet – Bringing 21st Century Communications Tools To Public Safety + First Responders

LOUISIANA
FirstNet

Building a nationwide wireless broadband network dedicated to public safety.

Public Safety + Broadband

As a **public safety professional,** when **responding** to a call, you want to know as much as possible before you go in.

If you are in **law enforcement** (LE), you might need to run a **license plate** or provide **situational awareness**, confirm **facts** on the ground or identify where other officers are **located**.

If you are **fire service personnel**, you and your department rely on **mobile applications** to provide **computer-aided dispatching, mapping tools, patient care reporting** and **hazardous materials** information.

If you are an **emergency medical services** (EMS) professional, you need **rapid** access to information such as **patient health databases** and information exchange with **emergency rooms**.

However, there are **challenges** to getting the information you need.

Communications systems used by responders in **different agencies** and **jurisdictions** often lack the ability to *seamlessly interoperate,* hindering incident response.

During **large-scale** events or emergency incidents, **high demand** for **broadband data** by the **general public** can lead to **congestion** on commercial wireless networks, communications **failures** and **disruptions**, leaving **public safety** without the connectivity needed to effectively manage the incident.

Emergency response in **rural areas** such as **search and rescue** operations, **manhunts** through remote locations, wildland **fires** and EMS teams that must travel **long distances** to hospitals, depend on **reliable connectivity**.

Having the **right tools** is critical to **improving response** and ensuring **successful outcomes**. Public safety needs a **"fast-lane" voice and data** network that is **highly secure** and works **when** and **where** you respond.

About FirstNet

Understanding the need for an **interoperable high-speed platform** for emergency and daily public safety communications, **Congress created** an independent organization – the **First Responder Network Authority** (FirstNet) – to deliver a **nationwide wireless broadband network dedicated to public safety**.

This network is called the **Nationwide Public Safety Broadband Network** – NPSBN – sometimes called the FirstNet core network or FirstNet network.

FirstNet Will Serve . . .

FIRST RESPONDERS
FIRE, POLICE, EMS

IN

COMMUNITIES
COUNTIES/PARISHES, CITIES, TRIBAL, RURAL

ACROSS

THE NATION
50 STATES, **5** TERRITORIES + DC

When complete, using a **dedicated spectrum**, the network will enable first responders and public safety personnel to respond more **quickly** and **effectively** to **accidents, disasters** and **other emergencies**.

FirstNet + AT&T Partnership

Congress intends for the NPSBN to be fully funded and self-sustaining, constructed and operated as a **public/private partnership**.

After a nationwide *Request for Proposals* (RFP) and **selection process**, FirstNet has entered into a **25-year public/private partnership** with **AT&T** to build out the NPSBN. AT&T is one of the **largest communications companies** in the **world** and has a **140-year** history of **innovation**.
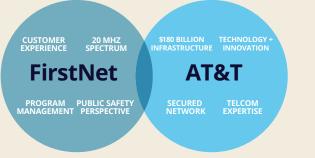
The partnership brings together the best of the private sector – **including commercial best practices**, **infrastructure** and **resources** – with **FirstNet's public safety expertise**.

FirstNet Provides . . .

› Initial funding of approximately **$7 BILLION**.
› **20 MHz** of spectrum.
› **Deep public safety experience**.

AT&T Provides . . .

› **$40 BILLION investment** over the life of the contract to build, operate, deploy and maintain the network.
› Proven **track record** and strong **commitment to public safety**.
› **Commercial expertise**.
› Nationwide **resources** to deploy, operate and maintain the network.

FirstNet
CUSTOMER EXPERIENCE
20 MHZ SPECTRUM
PROGRAM MANAGEMENT
PUBLIC SAFETY PERSPECTIVE

AT&T
$180 BILLION INFRASTRUCTURE
TECHNOLOGY + INNOVATION
SECURED NETWORK
TELCOM EXPERTISE

FirstNet + AT&T Together Will . . .

- Deploy **Band 14** (**758.00 - 763.00 MHz and 788.00 - 793.00 MHz frequencies**) to expand **reliable** coverage.
- Phase in **priority** and **preemptive** usage by public safety.
- Improve **voice** communications and **data exchange**.
- Enable transmission of **photos** and **video streaming**.
- Rely on more than **2,200 scientists** and **engineers on AT&T staff and 10,000 AT&T people** ready to support NPSBN operations today.
- Include **6,000** existing **Distributed Antenna Systems** (DAS) distributed across the FirstNet footprint and **40,000** additional **Wi-Fi hotspots**.
- Offer **world-class device** and **app ecosystems** and an **app console** for developers.
- Provide access to users to **existing in-building AT&T LTE network architecture**.
- Provide mobile units (**deployables**) that have **triple** redundant power for reliability, **60-foot cellular pneumatic masts** and can be operational within **45 minutes** after parking the unit.

About   LOUISIANA FirstNet

NPSBN design will be based on **input** from **public safety stakeholders**.

It is intended that seamless interoperable **data-sharing requirements** are met and that **local, State**, **Tribal**, **Territorial and regional needs** are identified through a **partnership of planning, development** and **deployment**, between individual States and **FirstNet**.

The 2012 Federal law that created FirstNet also established the *State and Local Implementation Grant Program* (SLIGP). **SLIGP** paved the way for **Louisiana FirstNet**.

SLIGP provides **resources** to **engage Louisiana** stakeholders through **Louisiana FirstNet** in **identifying** interoperability wireless data **needs**, **gaps** and **priorities**, and **planning** for build-out of the NPSBN. **Louisiana FirstNet** is committed to **reaching out** to public safety stakeholders to ensure **concerns** are identified and addressed, **questions** are raised and answered, and Louisiana **needs** are met.

The Louisiana recipient of the SLIGP grant is the **Louisiana Department of Public Safety and Corrections** (DPS&C), **Office of the State Police** (OSP).

The grant is administered by the **Governor's Office of Homeland Security and Emergency Preparedness** (GOHSEP). The **Director** of GOHSEP is the **single point of contact** (SPOC) between FirstNet and Louisiana.
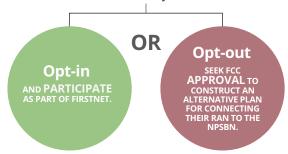
To Create Customized State Plans, FirstNet Consulted With . . .

140,000+
PUBLIC SAFETY STAKEHOLDERS NATIONWIDE

50 STATES

5 TERRITORIES + DC

2 MILLION PUBLIC SAFETY PERSONNEL

THROUGH A **12,000** AGENCY DATA COLLECTION EFFORT

Connecting to the NPSBN

Success of the network build-out depends, in part, on all **56** U.S. States and Territories having a **radio access network** (RAN) that connects to the **FirstNet core network** – NPSBN.

Two (2) Ways RANs Can Connect.
Each State or Territory Can Choose To . . .

OR

Opt-in AND **PARTICIPATE** AS PART OF FIRSTNET.

Opt-out SEEK FCC **APPROVAL** TO CONSTRUCT AN ALTERNATIVE PLAN FOR CONNECTING THEIR RAN TO THE NPSBN.

The decision to **opt-in** or **opt-out** identifies who takes on the **responsibility** to **fund** and **deploy**, **operate** and **maintain** the State RAN. **If the State or Territory opts-in, FirstNet and AT&T are responsible to deploy, maintain and operate the State's or Territory's RAN at NO COST to the State for the 25-year contract period with AT&T.**

If the opt-out decision is made, those responsibilities, including costs and risks remain with the State or Territory.

For both options, **subscriber rate fees** support the system.

State and Territorial **Governors choose** which option they think best benefits their State or Territory.

Why Connect? Discipline-specific Solutions Through NPSBN

Law Enforcement (LE)

- › **Situational Awareness**
- › **Video Surveillance**
- › **Access To Arrest Records**
- › **Records Management System**
- › **Wearable Devices + GPS**
- › **Computer Aided Dispatch (CAD)**

Fire Services

- › **Situational Awareness**
- › **Mapping/Location/Floorplans**
- › **Wearable Devices + Sensors**
- › **Computer Aided Dispatch (CAD)**

Emergency Medical Services (EMS)

- › **Telemetry + Telemedicine**
- › **Records Management System**
- › **Real-Time Patient Medical Information**
- › **Wearable Devices + Sensors**
- › **Computer Aided Dispatch (CAD)**

Bringing 21st Century Communications Tools to Public Safety + First Responders

Using the FirstNet network, first responders and public safety professionals will be able to **share video**, **photos** and **text messaging in near real-time**.

They will have access to **databases** from the field, be able to **share information** with each other and between **disciplines** – **law enforcement**, **fire services** and **emergency medical services** (EMS) – and service providers like **hospitals** and others. They will have access to the **newest communications technologies**, including **mapping tools**, **wearables**, **patient care reporting**, **hazardous materials information** and **camera-equipped drones**. Congestion from **high-demand** large events will be overcome; connectivity will be **reliable** regardless of where you are.

FirstNet also offers . . .

› Public safety-grade **reliability** and extensive **coverage** public safety personnel can count on.
› Coverage that lets public safety personnel "**take-the-network-along**" to their destination.
› **Local control** so that local individual departments and agencies determine those who can use the system.
› **Standards**. FirstNet is involved in working closely with public safety organizations to develop **national** and **international standards** and **functionality** that meet the **needs** of **public safety users**.
› **Mission-critical voice** (MCV) – based on **international** standards so that they work across all standards-based equipment and networks **worldwide**.
› Mobile units (**deployables**) and satellite service to ensure coverage in **rural areas**.

What's Next – Governor's Decision

The Governor of each State and Territory is the point of contact (POC) responsible for the "opt-in" or "opt-out" decision.

☑ **State** and **Territorial jurisdictions** have received a copy of the **DRAFT State Plan** to implement the FirstNet network.
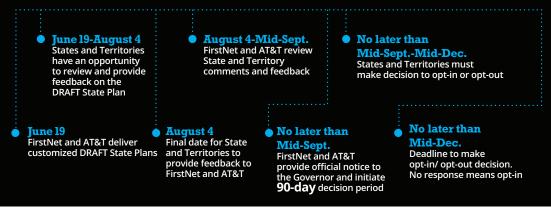
☑ States have **45 days** to comment on the DRAFT Plan.

☑ **FirstNet** will have **45 days** to review comments submitted by the States and Territories.

☑ **State and Territorial Governors** have **90 days** to decide if they want "**opt-in**" or "**opt-out**" of the network.

If a State or Territory opts-in, **local**, **State and Tribal** agencies **choose** to subscribe to the network or not.

FirstNet State Plan Timeline

June 19-August 4
States and Territories have an opportunity to review and provide feedback on the DRAFT State Plan

August 4-Mid-Sept.
FirstNet and AT&T review State and Territory comments and feedback

No later than Mid-Sept.-Mid-Dec.
States and Territories must make decision to opt-in or opt-out

June 19
FirstNet and AT&T deliver customized DRAFT State Plans

August 4
Final date for State and Territories to provide feedback to FirstNet and AT&T

No later than Mid-Sept.
FirstNet and AT&T provide official notice to the Governor and initiate **90-day** decision period

No later than Mid-Dec.
Deadline to make opt-in/ opt-out decision. No response means opt-in

8 Things You Need To Know NOW About FirstNet

FirstNet

1. Why is the construction of the FirstNet network initiative important to public safety?

By providing **reliable interoperable high-speed data** and **voice transmission**, the FirstNet network will enable first responders and public safety personnel to respond more **quickly** and **effectively** to accidents, disasters and other emergencies, **saving lives** and offering **better protection** for our citizens.

2. Who pays for the FirstNet network?

Congress initially appropriated **$7 BILLION** for construction of the network. Funding was a result of a **Federal Communications Commission** (FCC) **spectrum auction**. The build out will **leverage** existing infrastructure to save money. **The network will not be taxpayer funded**. **Subscriber rate fees** will **sustain** and **support**
development of the network and will be competitive with commercial carriers.

3. When will the FirstNet network be operational?

The FirstNet network became operational **July 2017**, for **priority** access by public safety personnel and offering **preemption December 2017**. **Full operational capability** is anticipated by **2022**.

FirstNet Priority + Preemption Overview	
Quality of Service Priority + Preemption (QPP) Phase 1 AT&T Evolved Packet Core 3rd Quarter 2017	• QPP Phase 1 priority access available on all AT&T LTE bands • Variable QoS • Included with *Primary First Responder Rate Plan*
QPP Phase 2 AT&T Evolved Packet Core 4th Quarter 2017	• QPP Phase 1+ • Preemption (estimated by 12/31/17)
QPP Phase 3 FirstNet Evolved Packet Core 1st Quarter 2018	• QPP Phase 2+ • Additional priority levels • Ability to elevate priority for situational response

4. What are priority and preemptive services?

NPSBN relies in part on both **dedicated spectrum** (also called **Band 14**) and the use of **AT&T's existing LTE network**. AT&T can also use the FirstNet dedicated spectrum (Band 14) for its **other customers** when the dedicated spectrum is **not in use by public safety**.

Quality of Service (QoS) is needed to **ensure** public safety users have **access** to mission critical network services and applications at the required level of quality to meet individual needs. **Priority** and **preemption** are components of QoS (QPP).

Priority is when certain users or groups of users take **precedence** over other users. For example, during an emergency or disaster or when there is **high network user congestion**, AT&T will prioritize **first responders** over other users of either or both of the dedicated spectrum or AT&T's LTE network.

Preemption removes users of a **lower priority** so that allocation of resources can be provided to **higher priority** users. For example, when network resources are **scarce** or **fully occupied**, first responders and public safety will **preempt** the users of either or both Band 14 or AT&T's existing LTE network.

5. Will the FirstNet network replace LMR systems?

First responders currently use land mobile radio (LMR) networks for **mission-critical voice** communications. When the NPSBN is launched, it **will not replace LMR systems**. The network is expected to initially transmit **data and video** and other **high-speed features** such as **location** information and **streaming video** as well as **non-mission critical voice**. Public safety entities will *continue* to use LMR networks for their mission-critical voice needs.

6. What happens if a State or Territory decides to opt-out of FirstNet?

The decision to **opt-in** or **opt-out** identifies **who** takes on the **responsibility** to **fund**, **deploy**, **operate** and **maintain** the State RAN connectivity to NPSBN – FirstNet **OR** the State or Territory.

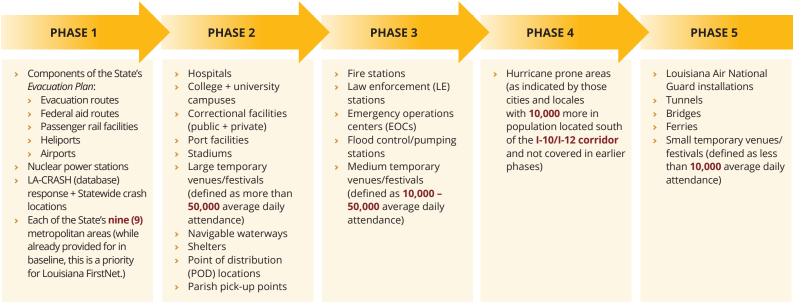For jurisdictions that **opt-out** they must:

› **Submit** and receive FCC **approval** for an **alternative plan** to connect their RAN to the NPSBN.
› Fund the **build out of RAN** connectivity to the network. [There may be National Telecommunications and Information Administration (NTIA) grants for some portion of this cost.]
› **Fund deployment**, **operations** and **maintenance** of the network compliant with national network policy.
› Establish **user fees** to be funded by individuals/agencies.

7. What is Band 14?

Band 14 is a range of frequencies: **758.00** - **763.00 MHz** and **788.00** - **793.00 MHz**. These frequencies have been **licensed** to FirstNet through the FCC to establish the **development**, **deployment** and **operation** of the NPSBN.

8. Coverage is everything. If the Governor decides to opt-in, what coverage can we expect from the FirstNet footprint in Louisiana?

FirstNet, in consultation with the States, was very clear in requesting **coverage objectives** from the State, not **specific coverage maps**. Louisiana has submitted the following phased coverage **priorities**.

PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5

› Components of the State's *Evacuation Plan*:
  › Evacuation routes
  › Federal aid routes
  › Passenger rail facilities
  › Heliports
  › Airports
› Nuclear power stations
› LA-CRASH (database) response + Statewide crash locations
› Each of the State's **nine (9)** metropolitan areas (while already provided for in baseline, this is a priority for Louisiana FirstNet.)
	› Hospitals
	› College + university campuses
	› Correctional facilities (public + private)
	› Port facilities
	› Stadiums
	› Large temporary venues/festivals (defined as more than **50,000** average daily attendance)
	› Navigable waterways
	› Shelters
	› Point of distribution (POD) locations
	› Parish pick-up points
		› Fire stations
		› Law enforcement (LE) stations
		› Emergency operations centers (EOCs)
		› Flood control/pumping stations
		› Medium temporary venues/festivals (defined as **10,000 – 50,000** average daily attendance)
			› Hurricane prone areas (as indicated by those cities and locales with **10,000** more in population located south of the **I-10/I-12 corridor** and not covered in earlier phases)	› Louisiana Air National Guard installations
				› Tunnels
				› Bridges
				› Ferries
				› Small temporary venues/ festivals (defined as less than **10,000** average daily attendance)