FirstNet: Our Nation's Public Safety Network

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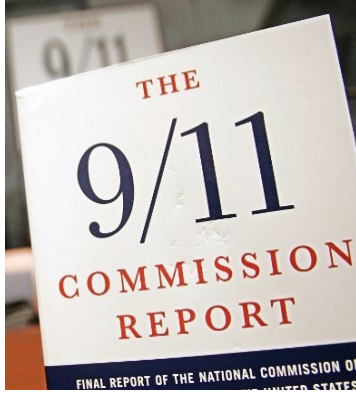
Thursday, September 26, 2019

FirstNet 101

The FirstNet Journey

2001
9/11 attacks

Radio communication challenges affect first responders

2004
9/11 Commission

- Recommends national radio spectrum for public safety purposes
- Public safety unites to advocate for nationwide broadband network

2012
The First Responder Network Authority

Independent agency to deploy Nationwide Public Safety Broadband Network

2012-16
Outreach and Consultation

- Governors identify FirstNet single points of contact
- Consultation in all 56 states/territories
- FirstNet works with states to collect and validate users and coverage data

2016-17
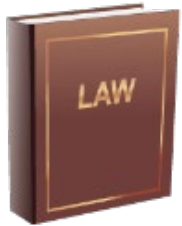**Partnership and State Plans**

- Network RFP released
- Award to AT&T
- Delivery of 56 state/territory plans
- 56 Governors Opt-In decisions
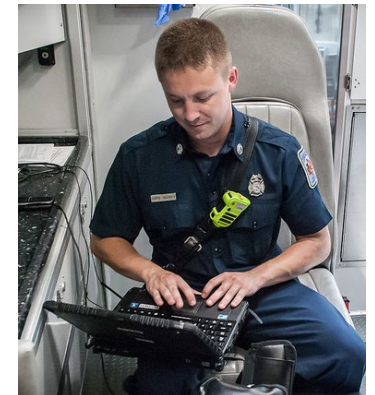
2018-beyond
Advancing the FirstNet Experience

- Engage and collaborate with public safety and industry
- Develop and promote Public Safety Communications roadmap
- Invest in the network

Implementing the Vision

THE LAW

2.22.12
FirstNet becomes law
(Public Law 112-96)

FUNDING

**$7B** authorized to the FirstNet network – all funded via spectrum auctions

GOVERNANCE

FirstNet **Board** has **15 members**, including those with telecommunications and public safety backgrounds.

Each Governor appoints **1 Single Point of Contact (SPOC)** and governing body to represent the State's interests to FirstNet.

43 member **Public Safety Advisory Committee (PSAC)** advises FirstNet on public safety intergovernmental matters.

NATIONWIDE SPECTRUM

20MHz of bandwidth dedicated to public safety in prime **700MHz** frequency range (**BAND 14**).
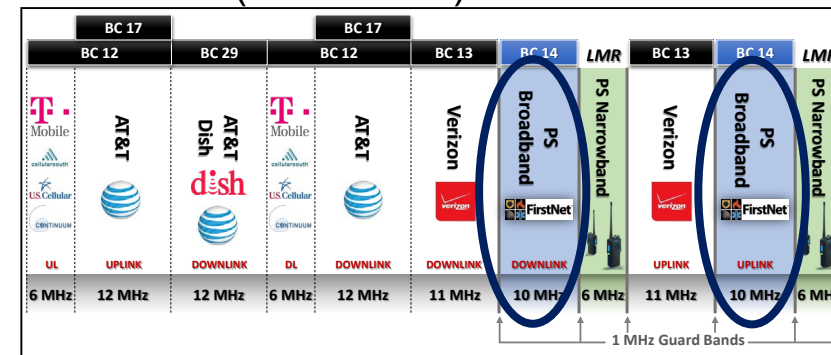
FirstNet 16 Objectives

Building, Deployment, Operation & Maintenance of the NPSBN

Financial Sustainability

First Responder User Adoption

Device Ecosystem

Applications Ecosystem

Accelerated Speed to Market

User Service Availability

Service Capacity
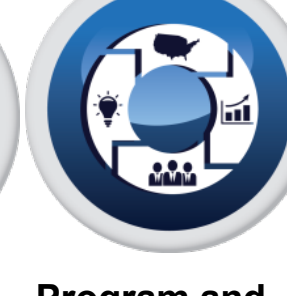
Cyber Security

Priority Services

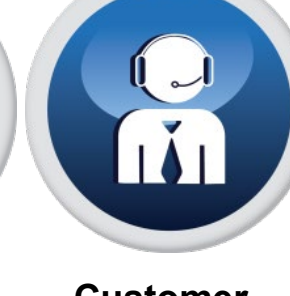**Integration Of Opt-out State RANs**

Integration of Existing Commercial/ Federal/ State/Tribal/Local Infrastructure To Support NPSBN Services

Life-cycle Innovation

Program and Business Management

Customer Care and Marketing

Facilitation of FirstNet's Compliance with the Act & Other Laws

An Innovative Public-Private Partnership

First Responder Network Authority

- Partner oversight and support
- Public safety advocate
- Technical expertise
- Innovation strategy and investment

FIRSTNET™
Built with AT&T

AT&T

- Nationwide core
- RAN build-out
- Adoption and customer care (24x7x365)
- Security operations center
- Mission-critical services
- App and device ecosystems

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State Plans and Governors' Decisions

50 states, **5** territories, District of Columbia

Focus in 2019

- **Expanding FirstNet**
- **Driving innovation**
- **Public safety engagement**

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Vision to Reality: A Catalyst for Public Safety Communications

VISION: Create a dedicated and differentiated broadband communications experience that transforms public safety operations to save lives

PUBLIC SAFETY'S NEEDS

ROADMAP

INVESTMENT

First Responder Network Authority Roadmap Overview

The Roadmap expresses how the FirstNet Authority will work to advance the FirstNet network over a multiyear horizon.
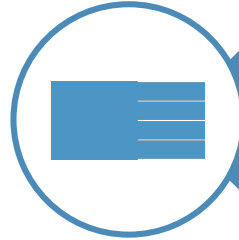
Provides a ***technology framework*** to understand all of the components and capabilities of the FirstNet Experience

Reflects ***public safety's feedback*** and needs based on a multitude of Roadmap engagements with the public safety community
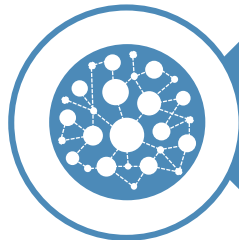
Incorporates ***analysis*** of industry trends and drivers as well as AT&T's roadmap for the Network

Identifies the ***priorities that will guide investments*** and other opportunities based on FirstNet Authority analysis

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First Responder Network Authority Roadmap Domains

Core

- EPC
- IMS Core
- Services Platforms
- App Servers
- Service Enablers

Coverage & Capacity

- Macro Coverage
- Capacity
- In-building Solutions
- Temporary/On-Demand Coverage
- Range Extension
- Device-to-Device
- Air-to-Ground
- Maritime Operations
- Availability/Reliability/Resiliency/Hardening

Situational Awareness

- Location Services
- Sensors
- Wearables
- Cameras/Video
- Mapping/Geographic Information System (GIS)
- Data Analytics/Artificial Intelligence

Voice Communications

- Mission Critical Push-to-talk (MCPTT)
- PTT Interconnection

Secure Information Exchange

- Data Access
- Data Sharing
- Cybersecurity
- Identity, Credential and Access Management (ICAM)/Single Sign-On

User Experience

- Priority Services
- Applications
- Devices
- Accessories
- Hands Free Operations
- Augmented Virtual Reality
- Heads-Up Display

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FirstNet 101

1. History, Partnership and Strategy

2. **The Network: Core, QPP, and Deployables**

3. The Solution: Apps, Devices, Security and Services

4. Public Safety Engagement and Successes

Dedicated Public Safety Core

Roaming

APPLICATIONS
(Cloud, OTT, PS)

RAN / BACKHAUL

TRANSMISSION

PSEN/PSAP

NETWORK OPERATIONS
(NOC/SOC)

CORE

External Networks
(Internet, PSTN)

Service and QOS Priority
Subscriptions

Charging Control

Basic Network Services and
Mission Critical Services

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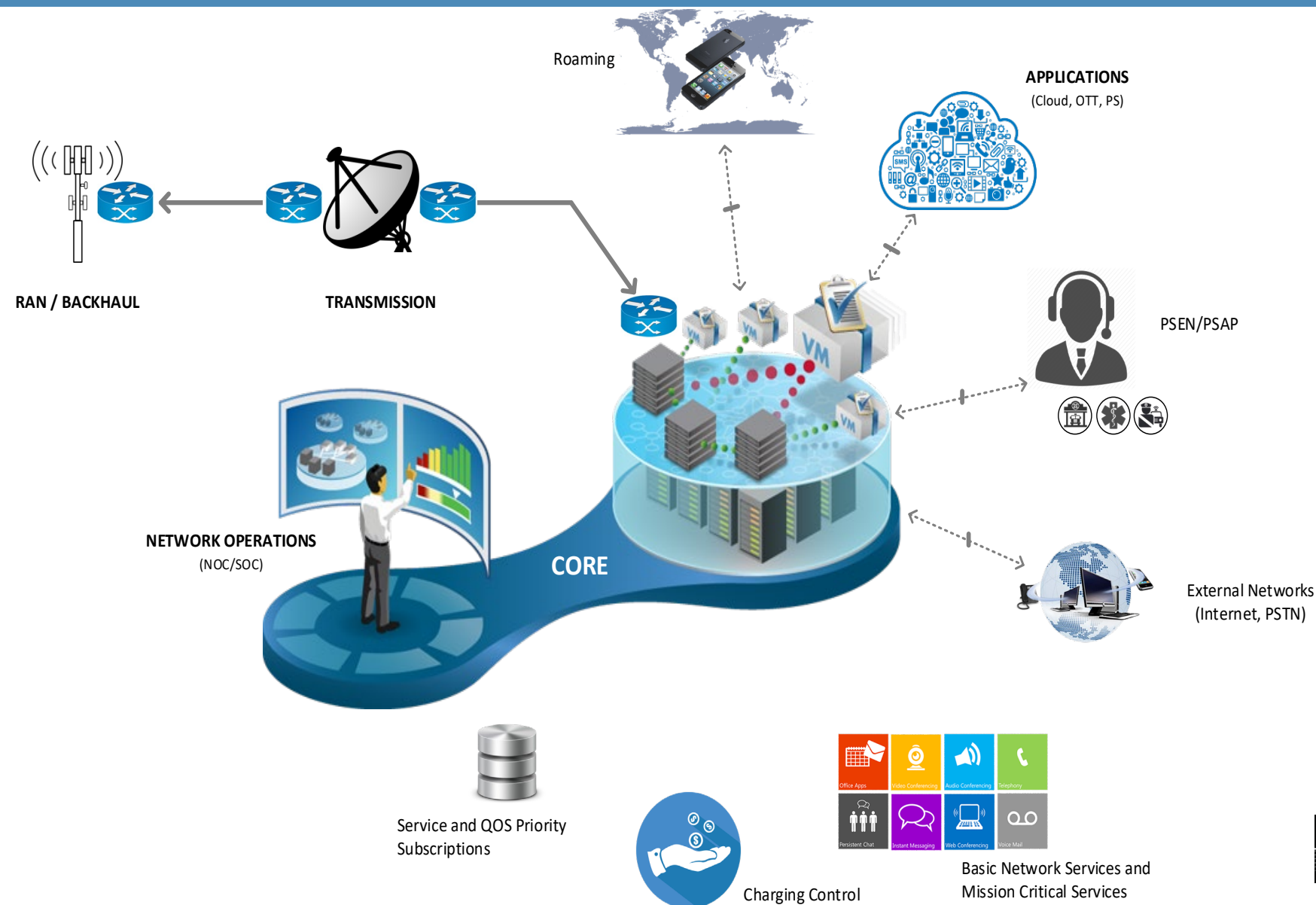
QPP (aka "First Priority")

- **Quality of Service (QoS):** Minimum/maximum service quality parameters
- **Priority**: Gives preferred access to network resources
- **True Preemption**: Terminates/relocates non-primary/commercial users so high-priority users have access

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Deployables

- **75 FirstNet-dedicated** deployable assets available nationwide

- **Subscribing agencies can request at no cost** to support scenarios, from disasters, to critical incidents and planned events

- **Service included** all expenses directly associated with FirstNet deployables are included, at no cost to public safety

FirstNet 101

1. History, Partnership and Strategy

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Delivering on the Promise

- **Public safety always gets priority**

- **Highly secure network to meet public safety's data requirements**

- **Controlled access by public safety agencies for their users**

- **Coverage where public safety operates**

- **Enhanced user experience**

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FirstNet Devices Ecosystem

- Achieving rich, diverse user device portfolio
- Band 14 adoption ramping up, with FirstNet Ready device announcements
- Inclusive of public safety focused Internet of Things (IoT) devices and accessories
- SIM/UICC available and connect users to dedicated FirstNet Core
- See latest available devices at **FirstNet.com/devices**

*This slide does not constitute an endorsement by FirstNet Authority of any product or service, organization or company.

Enabling Apps Ecosystem to Meet the Needs of Public Safety

JOIN PROGRAM

- Open and free FirstNet app developer program membership
  - Developers
  - Policymakers
  - IT Specialists
  - First Responders

Connect, innovate and create opportunity

DEVELOP APPS

- Access to resources, e.g., APIs and code optimization tools
- Complete checklist and source code scan

Events including conferences and workshops

TEST AND CERTIFY

- Submit app for FirstNet certification and review
- Receive and address results
- Review branding and media guidelines

Promote product and evangelize solution

APP CATALOG

- Use FirstNet tools for app distribution and management
- Collect participation points

Direct exposure to public safety market

MANAGE APPS

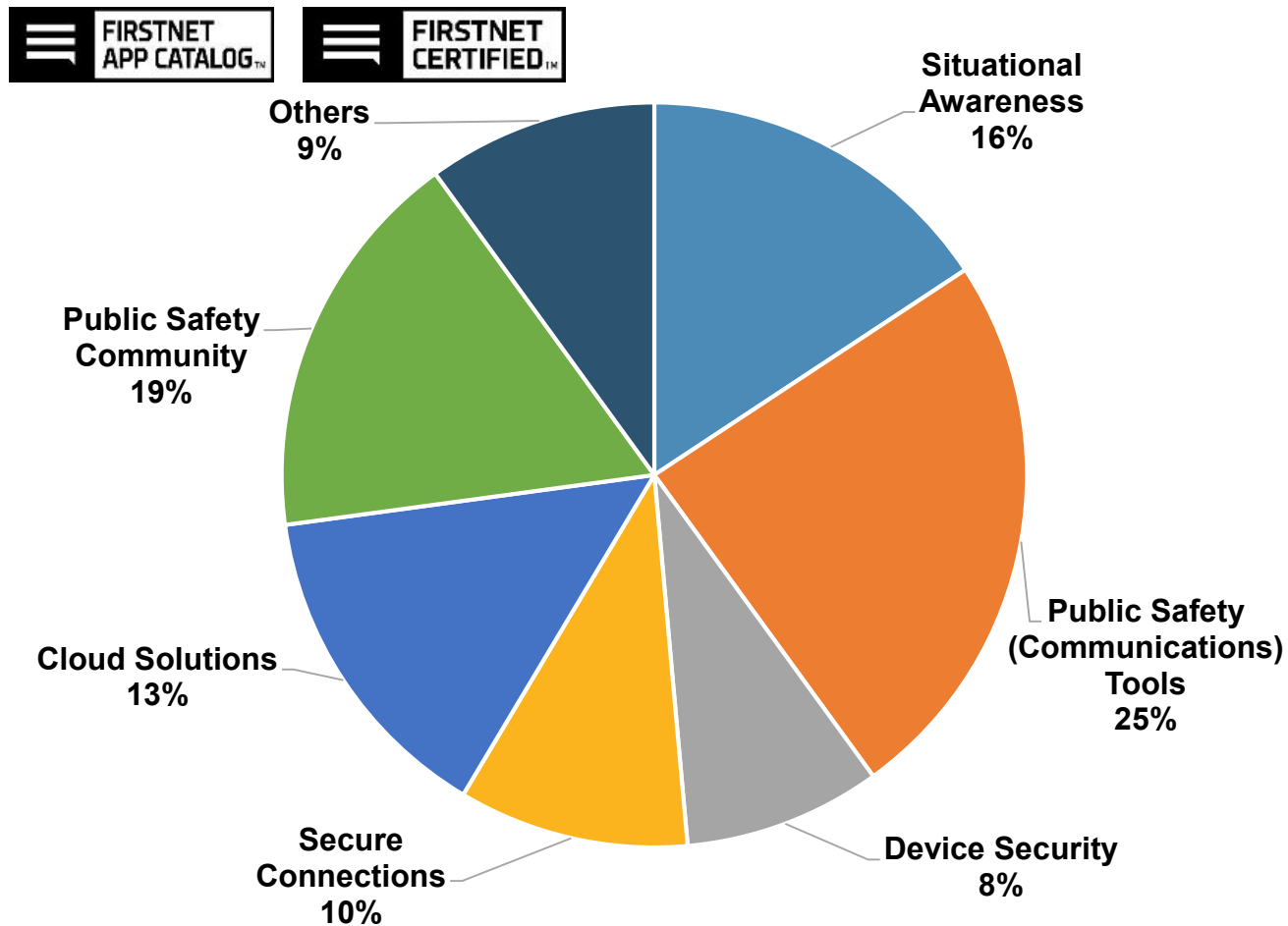- Review user ratings and feedback
- Manage app versioning and metadata

Blogs and forums to advance innovation

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Building the Ecosystem: Apps and Devices that Align to the Roadmap (as of April 2019)

APP CATALOG PORTFOLIO

FIRSTNET APP CATALOG™   FIRSTNET CERTIFIED™

- Situational Awareness 16%
- Public Safety (Communications) Tools 25%
- Device Security 8%
- Secure Connections 10%
- Cloud Solutions 13%
- Public Safety Community 19%
- Others 9%

DEVICES BY TYPE ON NIST LIST

FIRSTNET READY™

- Smartphone, 42
- Tablet, 17
- Hotspot, 2
- IVR, 16
- Laptop, 13
- Rugged handheld, 7
- Other, 5
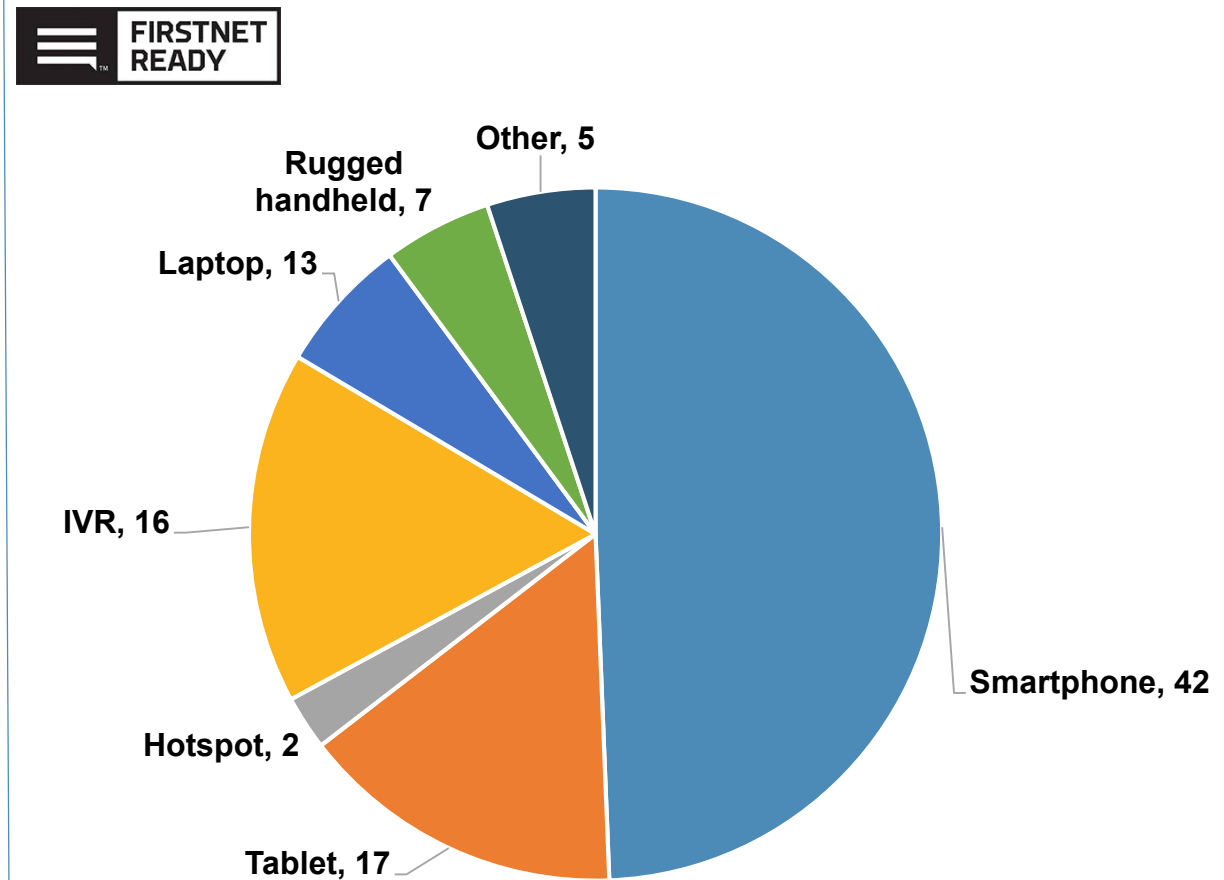
NIST List of Certified Devices:
https://www.nist.gov/ctl/pscr/process-document-nist-list-certified-devices

Security

- **Dedicated** Security Operations Center (SOC) for FirstNet subscribers

- **Coordinates** with AT&T's Global Network Operations Center (GNOC)

- **24x7x365** situational awareness

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Service Plans and Customer Care

Service plans

- Agency- or subscriber-paid
- Flexible
  - Unlimited plans pooled
  - Smartphones or data-only
  - Machine-to-machine options
- Multiple contract options
  - NASPO
  - NPPGov
  - GSA Schedule 70
  - Custom Government

Customer care

- 24x7x365 technical support
- Single phone number
- Chat and email available
- U.S.-based public safety-specific reps
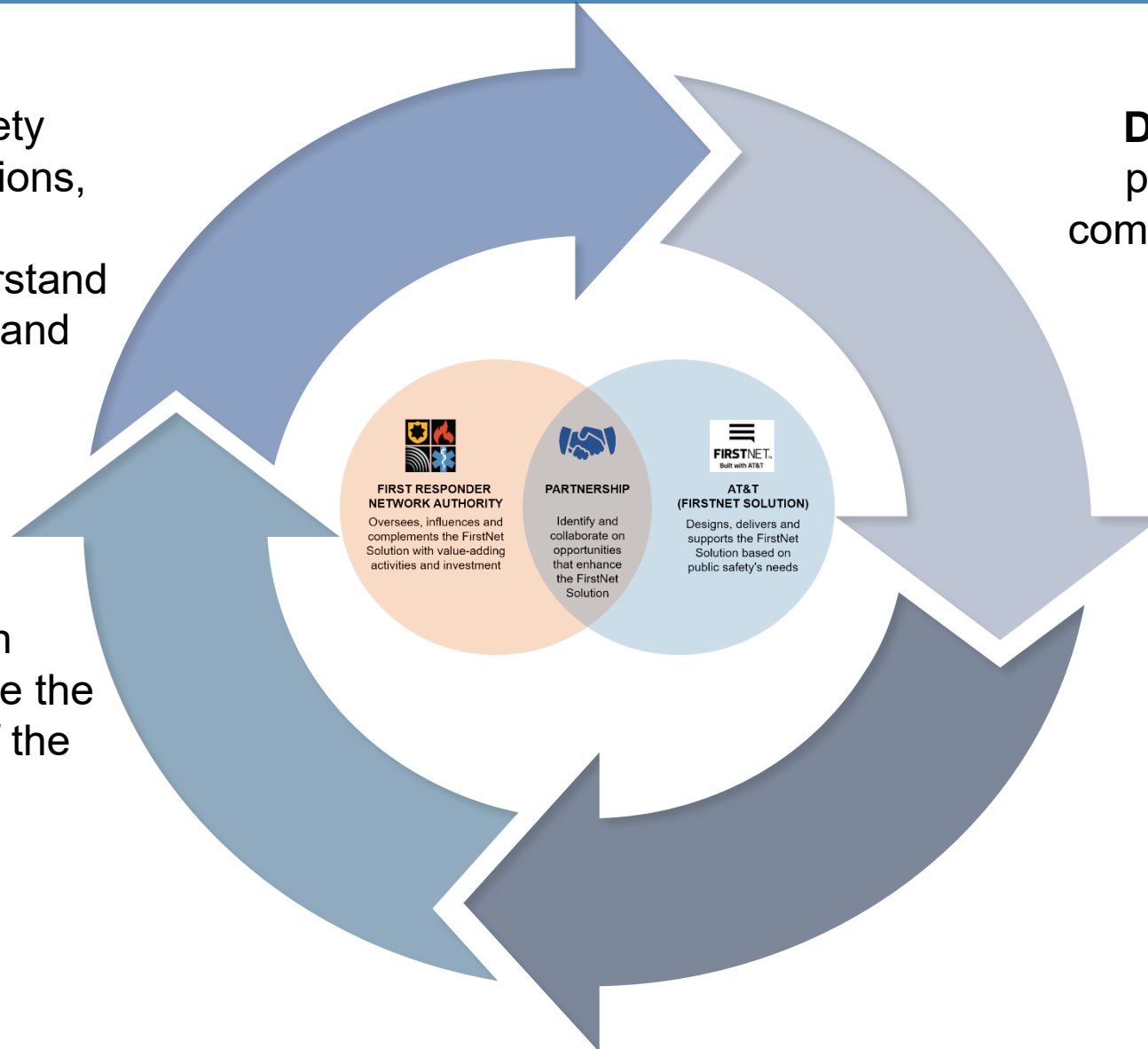- Training available

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FirstNet 101

1. History, Partnership and Strategy

2. The Network: Core, QPP, and Deployables

3. The Solution: Apps, Devices, Security and Services

4. **Public Safety Engagement and Successes**

Public Safety Focused

ENGAGE public safety entities and associations, PSAC, industry, and government to understand their trends, drivers, and priorities

DEVELOP and promote public safety broadband communications roadmaps that reflect the voice of public safety

COLLABORATE with public safety to realize the operational benefit of the FirstNet Experience

INVEST in the network to further a differentiated FirstNet Experience

FIRST RESPONDER NETWORK AUTHORITY
Oversees, influences and complements the FirstNet Solution with value-adding activities and investment

PARTNERSHIP
Identify and collaborate on opportunities that enhance the FirstNet Solution

AT&T (FIRSTNET SOLUTION)
Designs, delivers and supports the FirstNet Solution based on public safety's needs

Public Safety Advisory Committee (PSAC)

- **43 member committee** with public safety and state/local/tribal representatives and non-traditional first responders

- Led by five-member **Executive Committee**

- **Monthly webinars** on essential topics related to network, products, and devices, plus in-person meeting(s) each year

- Operates **Tribal Working Group** to provide advice on tribal outreach, education and consultation

The PSAC provides subject matter expertise on concepts, policies, procedures, technologies, and operational methods developed in support of the FirstNet network. Its perspective helps ensure necessary operational constructs are met for critical first responder communications

FirstNet by the Numbers

750K+ FirstNet connections

~9,000 Public safety agencies subscribed

75+ FirstNet Ready™ devices

~650 Markets[1] with Band 14 spectrum

FASTER than any commercial network[2]

~65% Band 14 coverage completion; well ahead of schedule

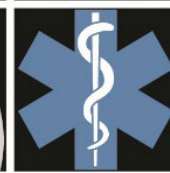**50+** Unique apps in the FirstNet App Catalog

75 Dedicated deployable network assets, including 3 Flying COWs™

175+ Asset deployments for planned and emergency events this year

Q&A

FirstNet