

IMPLEMENTING THE NECP WEBINARS

PLANNING FOR EMERGING COMMUNICATIONS TECHNOLOGIES

SEPTEMBER 22, 2021



Agenda

- Overview and Objectives
- National Emergency Communications Plan (NECP) and SAFECOM Nationwide Survey (SNS): Technology
- Emerging Technologies and First Responder Network Authority (FirstNet®)
- Resources and Actions
- Question and Answer Session



Presenters

Charlee Hess

Cybersecurity and Infrastructure Security Agency



Jennifer Harder

FirstNet® Authority



National Emergency Communications Plan



NECP Vision

To enable the Nation's emergency response community to communicate and share information securely across communications technologies in real time, including all levels of government, jurisdictions, disciplines, organizations, and citizens impacted by any threats or hazards events



National Emergency Communications Plan



Mandate

The NECP is mandated by Title XVIII of the Homeland Security Act of 2002



Guidance

Provides guidance for those who plan for, coordinate, invest in, and use communications



Stakeholders

Helps stakeholders update policies, governance, planning, and protocols



NECP Goals



Goal 1
Governance & Leadership



Goal 2
Planning & Procedures



Goal 3
Training, Exercise, & Evaluation



Goal 4
Communications Coordination



Goal 5
Technology & Infrastructure

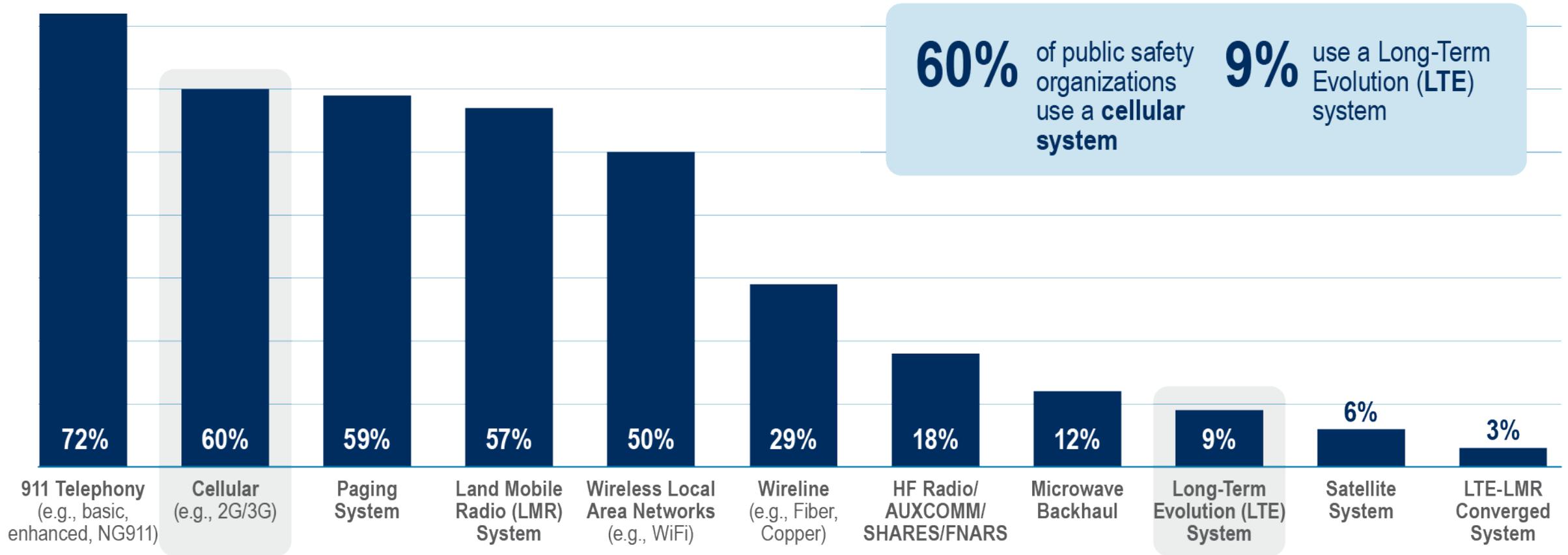


Goal 6
Cybersecurity



Technology Evolution Overview

Systems in Use



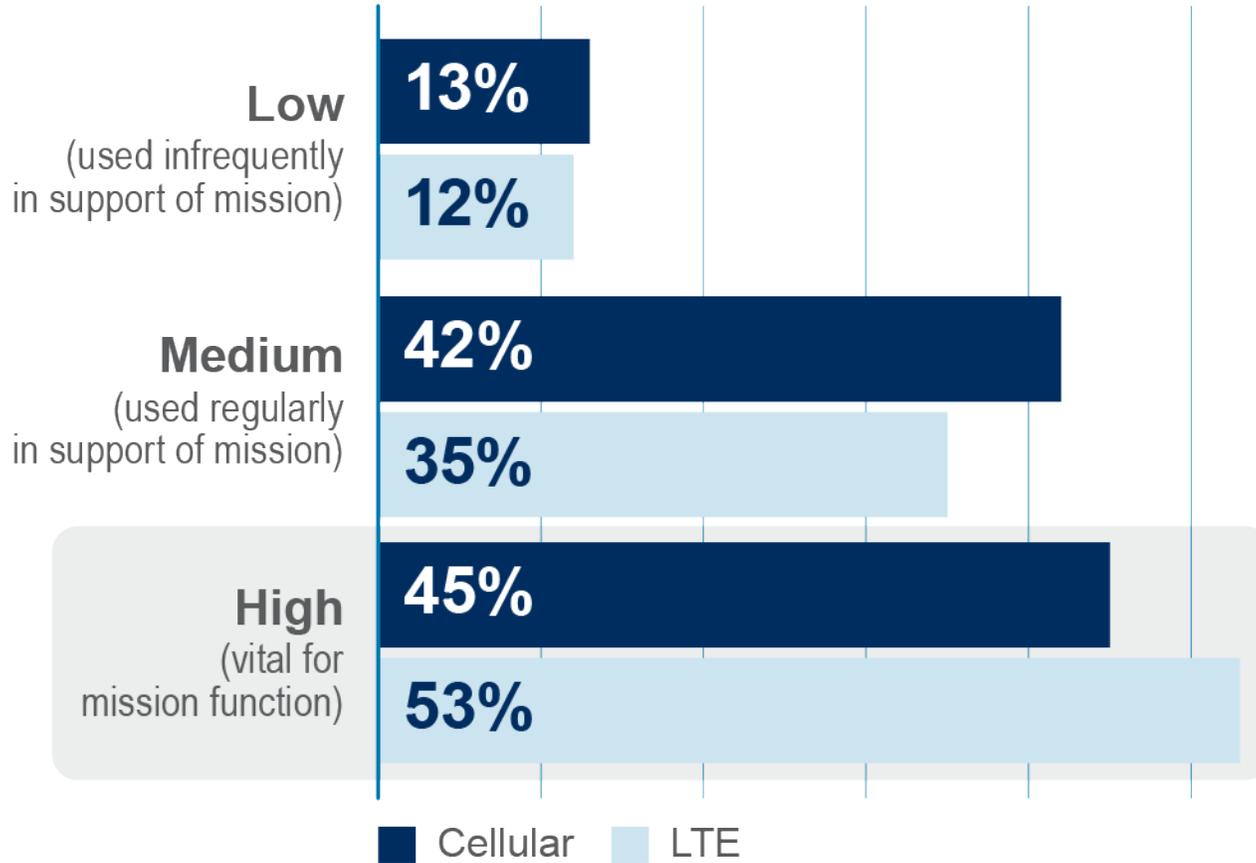
SAFECOM Nationwide Survey (SNS)

The SNS consisted of 38 questions that span the 5 elements of the *SAFECOM Interoperability Continuum*, plus a security element that accounted for cybersecurity



SNS: System Usage

Importance

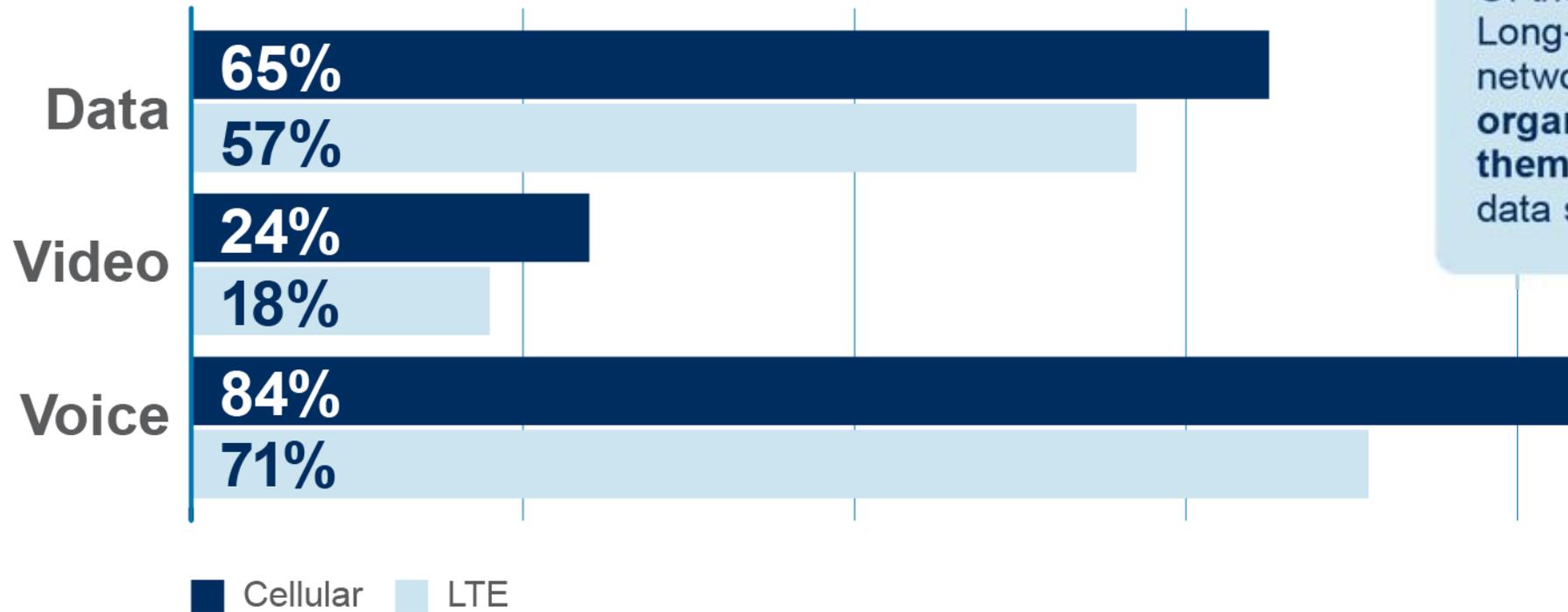


>45% of organizations indicate their cellular and LTE systems are **highly vital** for mission function



SNS: System Usage

Type of Use



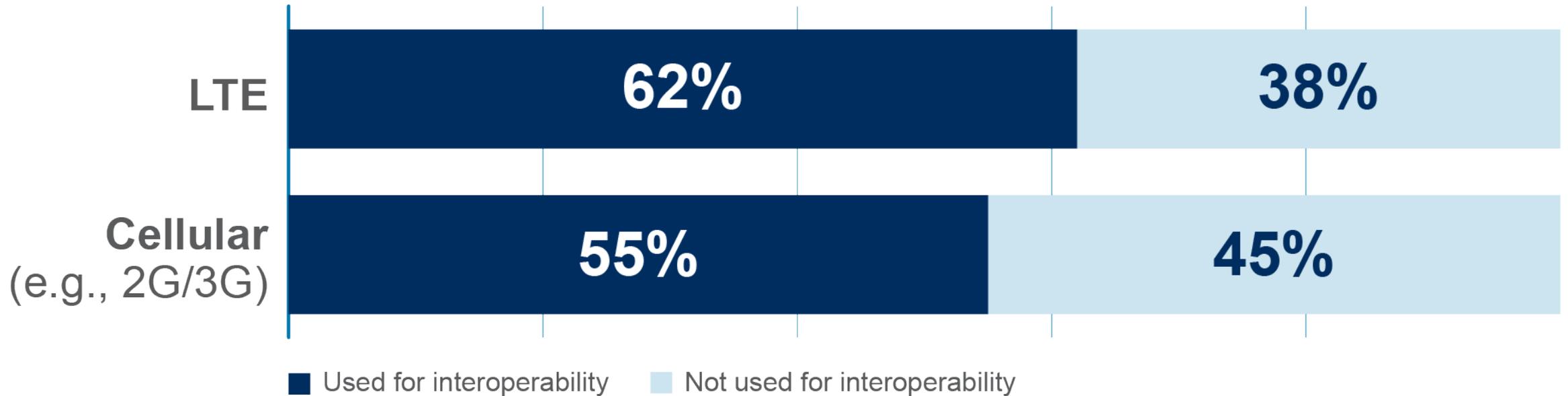
Of those using cellular and Long-Term Evolution (LTE) networks, **more public safety organizations are using them for voice services than data services**



SNS: System Usage

Interoperability

>55% of respondents indicated that they use cellular and LTE systems for interoperability

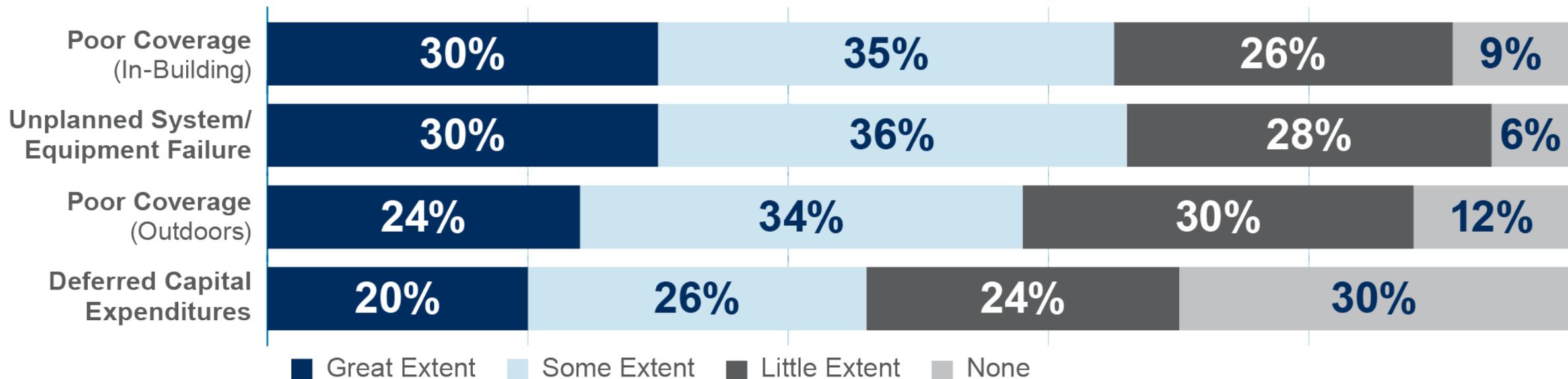


SNS: Technology

Factors that Affect Ability to Communicate

91% of respondents report poor **in-building** coverage impacting their ability to communicate

88% of respondents report poor **outdoor** coverage impacting their ability to communicate



NECP Goal 5: Technology & Infrastructure

Improve lifecycle management of the systems and equipment that enable emergency responders and public safety officials to share information efficiently and securely

- Objective 5.1 - Research and Development
- Objective 5.2 - Information Sharing to Meet Mission
- Objective 5.3 - Data Interoperability

Success Indicators: Emerging Technology





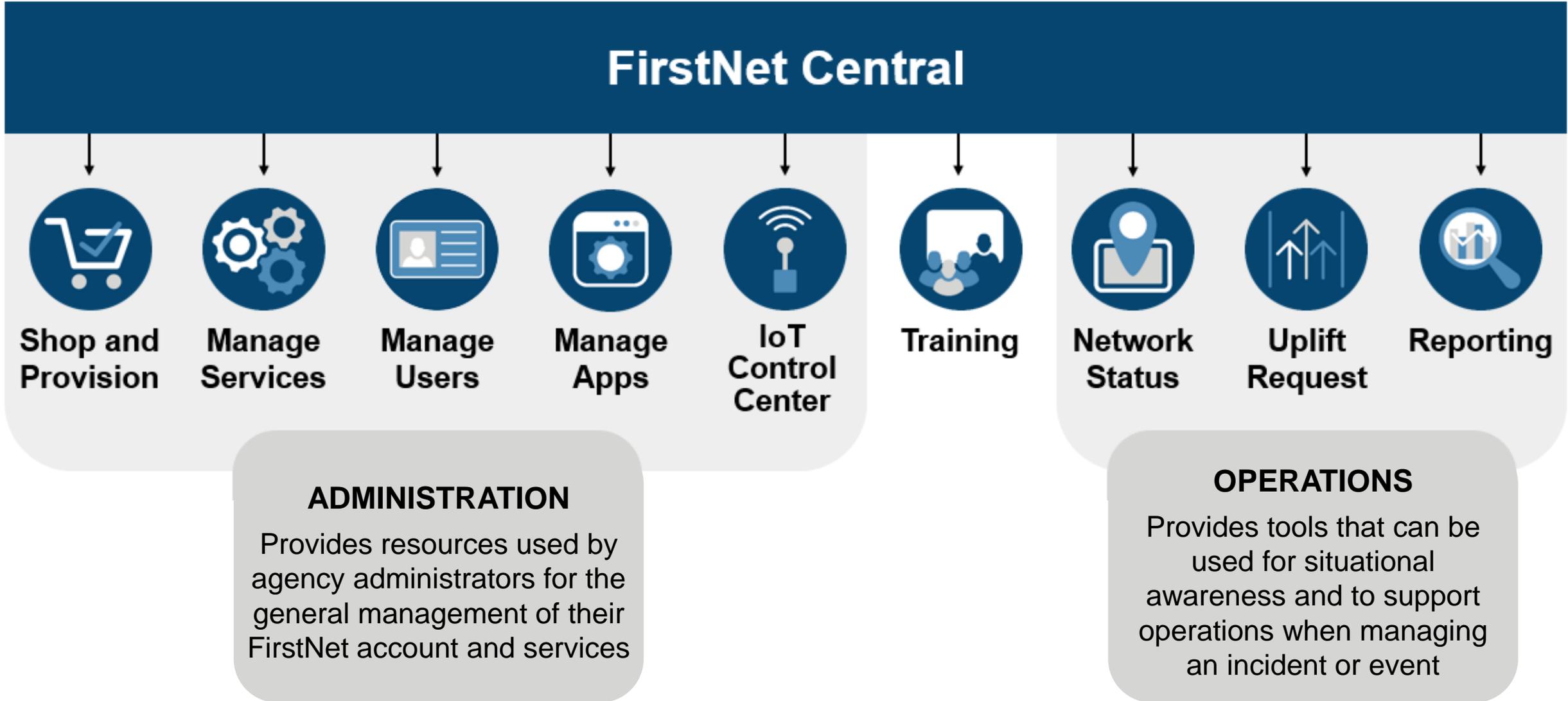
Planning Considerations for Emerging Technologies

Dr. Jennifer Harder

Director, Roadmap Domains

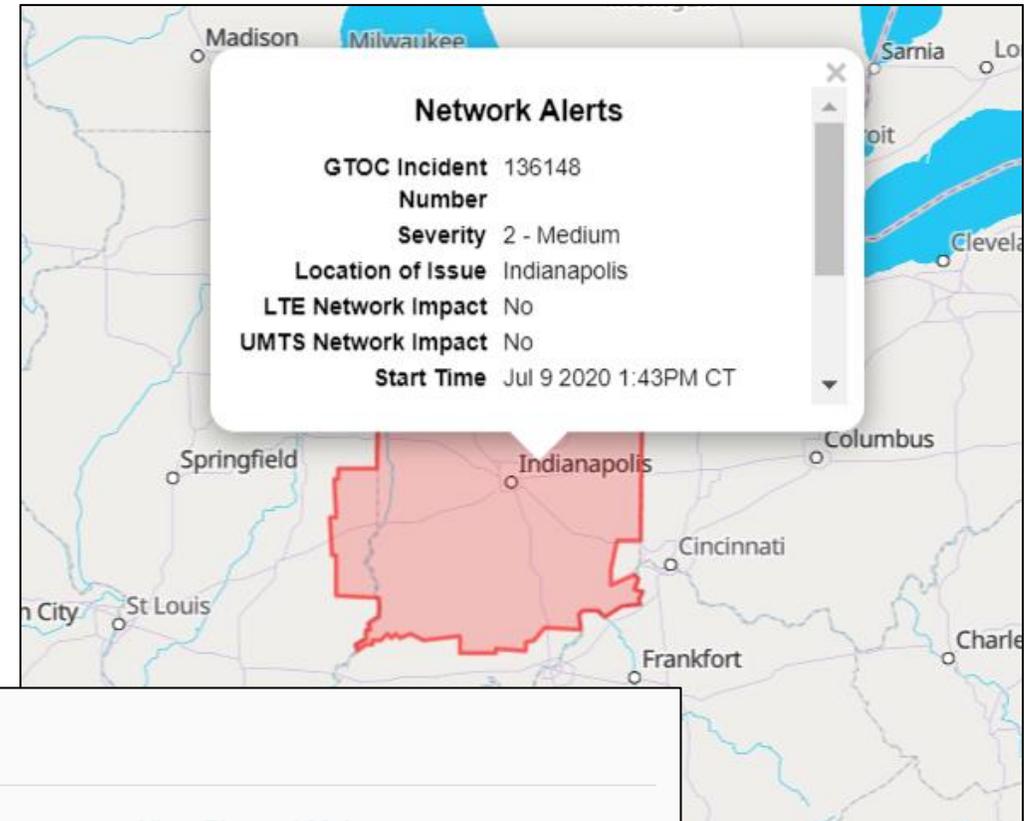


- FirstNet Technologies
 - FirstNet Central
 - Deployables
 - MegaRange™
 - FirstNet Push-to-Talk (PTT)
 - Z-Axis
- Additional Planning Considerations and Use Cases



- View established network coverage
- Search for a specific location
- View pertinent, real-time information about the network
- Subscribe to and manage network alerts via e-mail, SMS text message, and/or push notification to FirstNet Assist app
- Jump to COVID-19 dashboard
- View planned maintenance

Network Status Map



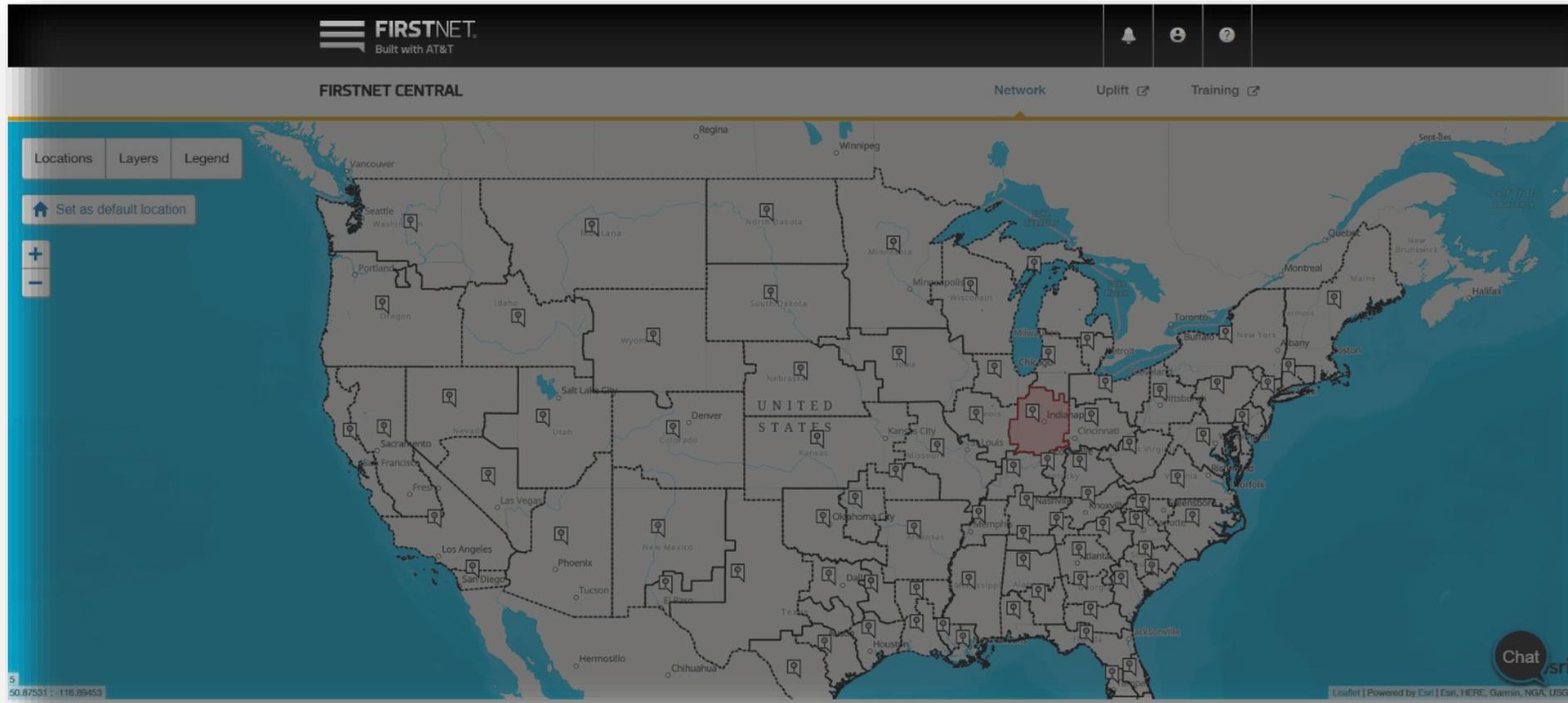
[COVID-19 dashboard](#) 

Report Network Issue:
[800-574-7000](tel:800-574-7000)

[Manage Network Alerts](#)
Subscribe to outage via email or text

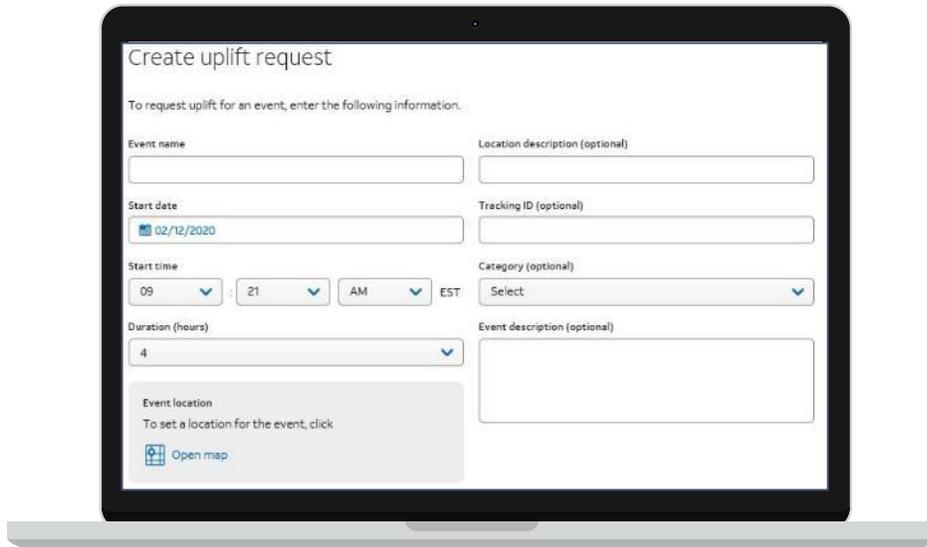
[View Planned Maintenance](#)
Search for planned maintenance

- Site-level outage information is available to account administrators and other authorized personnel, including Communications Lead, ESF #2, Communications Coordinator, and equivalent roles



Uplift Request Tool

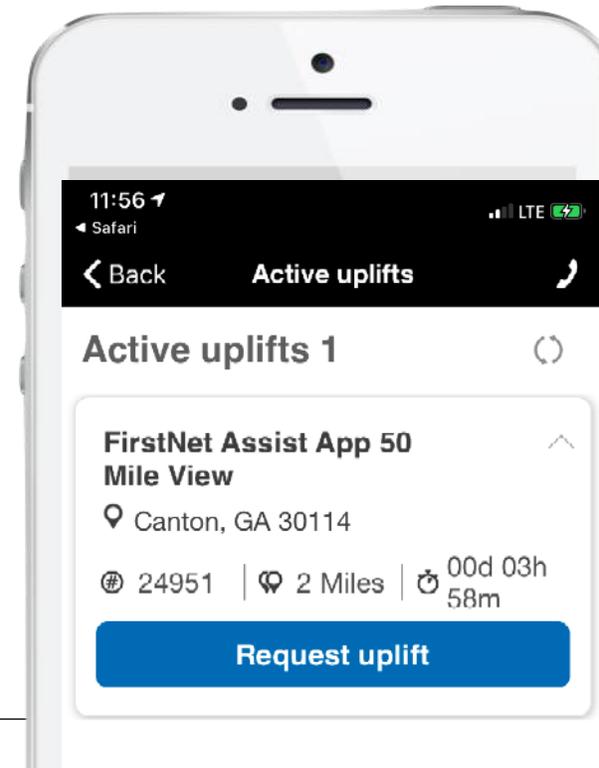
- Create and manage uplift requests
- Add users to uplift requests by phone number, group, or in bulk (via .csv file)
- Approve or deny uplift requests from FirstNet Assist app users



The screenshot shows a web form titled "Create uplift request". It includes fields for "Event name", "Location description (optional)", "Start date" (set to 02/12/2020), "Start time" (09:21 AM EST), "Duration (hours)" (4), "Event location" (with an "Open map" button), "Tracking ID (optional)", "Category (optional)", and "Event description (optional)".

FirstNet Assist App

- View active uplift incidents within 50-99 miles of device's location
- Initiate a request to be added to a given uplift incident



Deployable Fleet

100+ FIRSTNET-DEDICATED deployable assets available nationwide, including **3 FLYING COWS, AN AEROSTAT, AND COMMUNICATIONS VEHICLE**

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 subscribing agencies



Deployable Types in the Fleet



SatCOLT



Flying COW



Communications Vehicle



Compact Rapid Deployable



Aerostat

Compact Rapid Deployables





Increases transmission power for devices beyond what is allowed for commercial devices

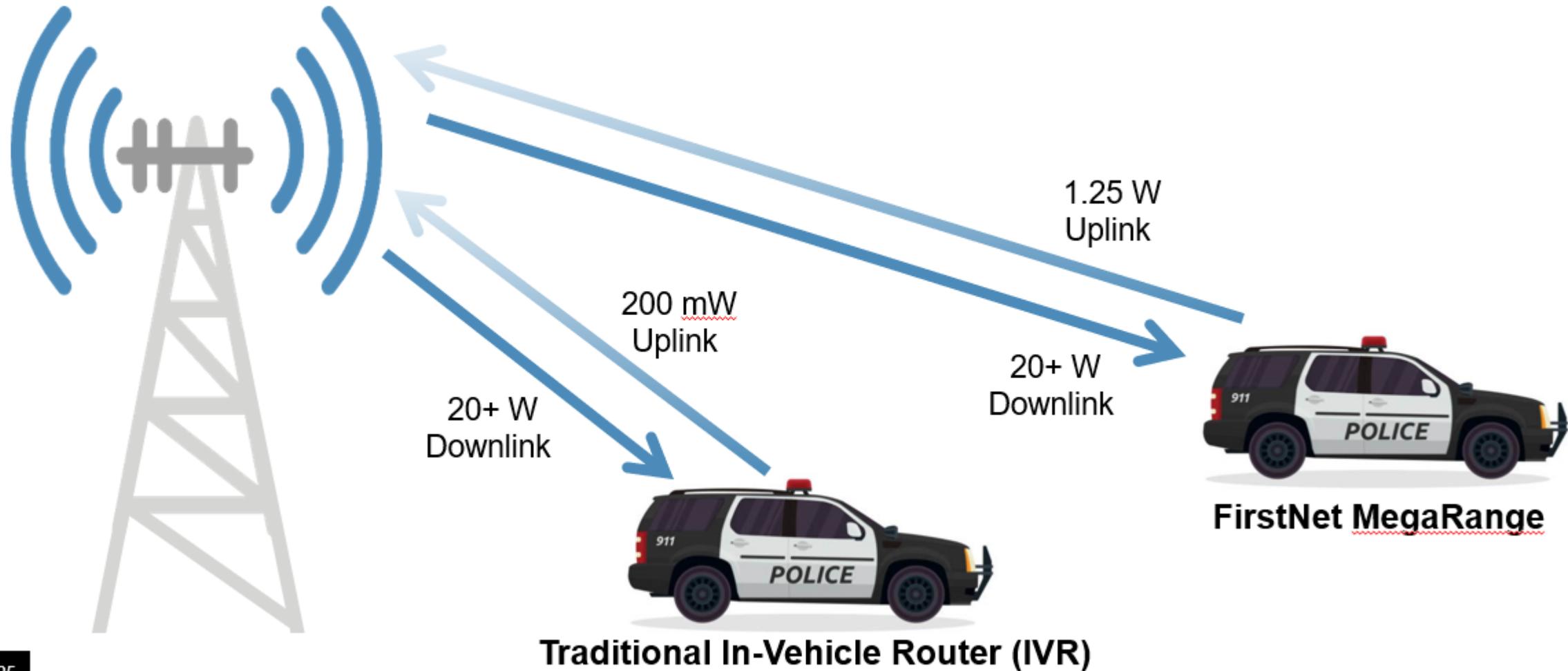


This increased signal can only be transmitted using Band 14 which is unique to FirstNet



Improves coverage in rural areas and provides stronger building penetration in urban environments

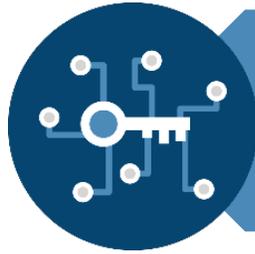
Enhances Cell Edge Performance



- FirstNet devices operating on Band 14 are allowed to transmit according to the 3GPP standard for HPUE. **This is unique to FirstNet**
- Devices also operate on the other FirstNet bands at standard power levels
- Devices added to the National Institute of Standards and Technology (NIST) list of certified devices as of June 2020
- See [FirstNet.com](https://www.firstnet.com) for additional information



Mission Critical (MC) Services Background



MC Services are key components of the commitment to a differentiated public safety network experience



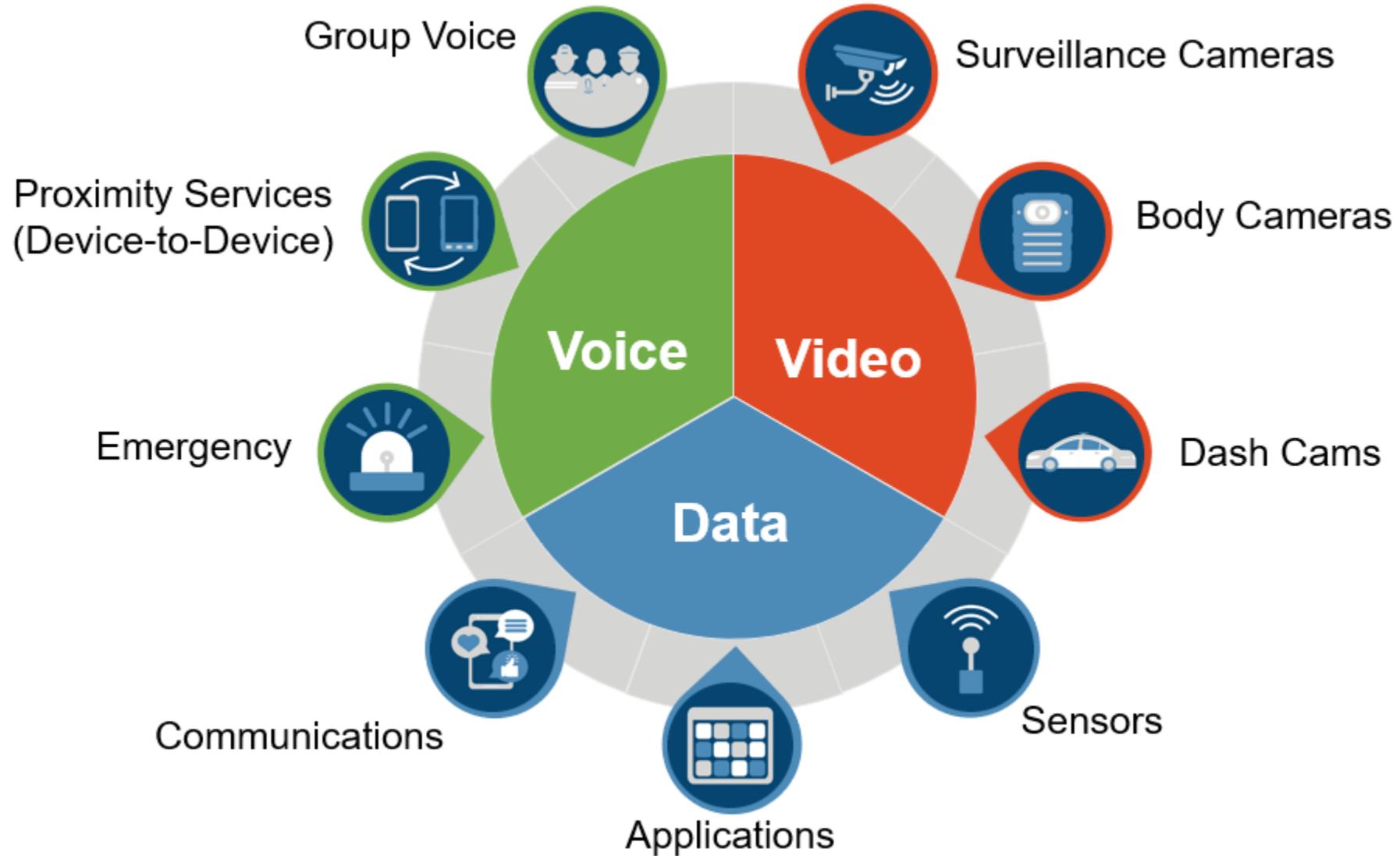
FirstNet Authority Roadmap priorities include operationalizing FirstNet PTT



FirstNet Authority is actively engaging public safety and AT&T to improve MC services



On-going, collaborative effort with AT&T to ensure successful roll-out of MC solutions





Announced and released into controlled introduction on March 31, 2020

Samsung® XCover FieldPro, Samsung Galaxy S9/S10/S20 family,
Kyocera Dura Force Pro 2, Sonim XP8 devices

First ever nationwide mission critical standards-based PTT solution to launch in US

Highest priority traffic on the FirstNet network

LMR Interoperability RoIP Gateway

Focused on augmenting LMR and not replacing

What is it?

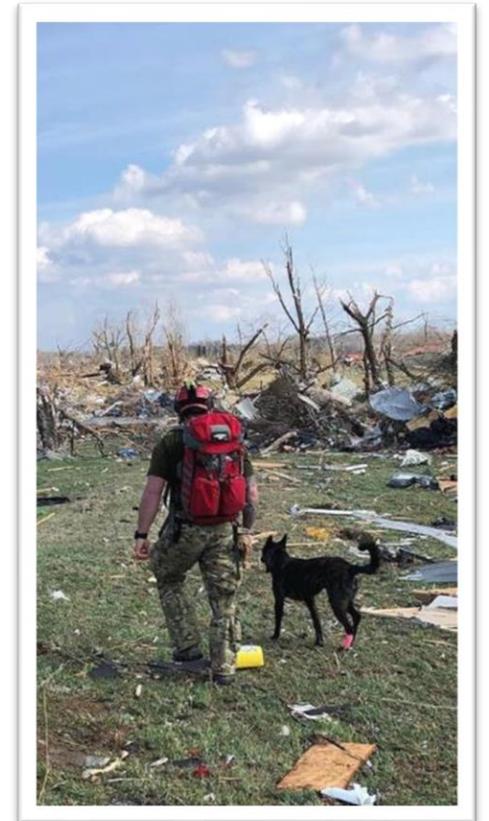
- 3GPP standards-based solution
- Only PTT solution integrated into the FirstNet network
- First-of-its-kind offering
- Evolutionary, growing product

What is it not?

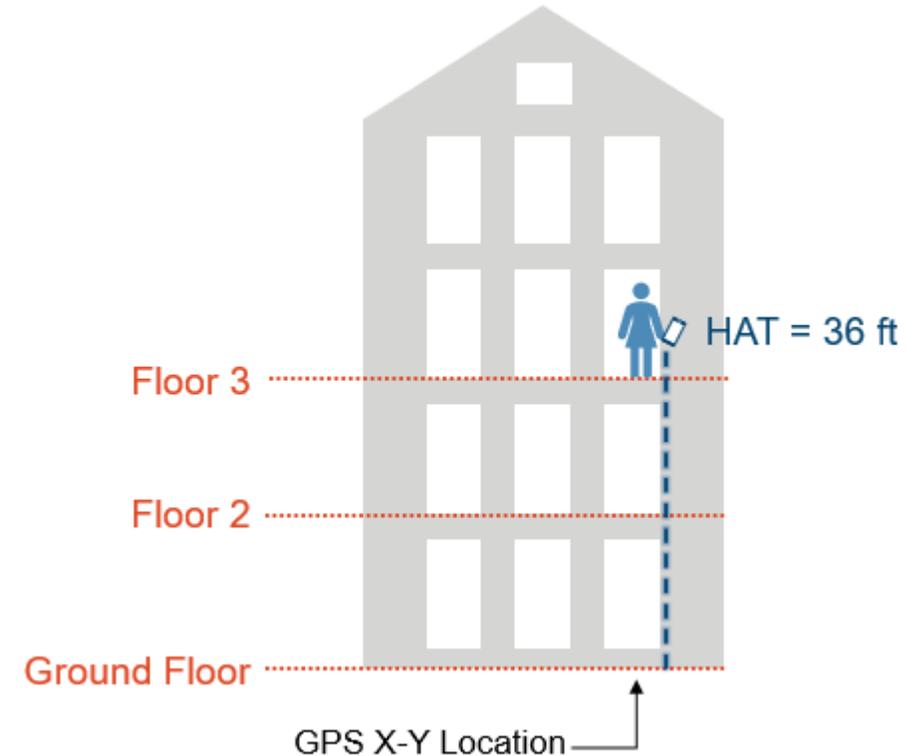
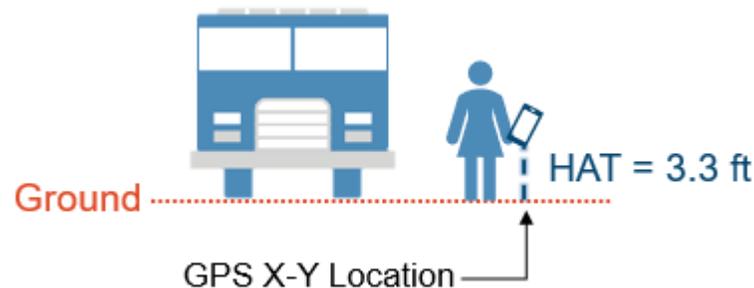
- Replacement for LMR
- A perfectly mature product
- Just another over-the-top product

Objective: Collaborate with key partners and stakeholder champions in NCSWIC and SAFECOM to help define requirements and determine best practices for the establishment and acceptance of a new broadband-based mutual aid framework.

- **Partner with CISA:** The FirstNet Authority will act as a technical resource and represent the voice of our stakeholders with CISA, as they leverage existing governance within SAFECOM and NCSWIC (i.e., Joint Committee or Governance Committee) and seek input to validate a framework and market a governance structure to:
 - Vet initial proposed technical and operational approaches
 - Discuss appropriate representation from public safety groups
 - Socialize the framework with the broader public safety communications community and seek feedback
 - Integrate the framework in the tribal, territorial, state, regional, and national plans
 - Include in training through various programs



- Capability that could benefit public safety operations, especially the fire service
- Z-Axis for FirstNet® provides **altitude measurement** to X and Y locations using barometric pressure
- **Locates** first responders indoors and in **multi-storied buildings**
- Measured as **Height Above Terrain (HAT)**
- **Exclusively** available on FirstNet via Intrepid **Response for FirstNet** app
- Available in **major US metros**, covers 52 markets





Additional Planning Considerations and Use Cases



FirstNet[®]
Authority



City of Alexandria, VA Uses FirstNet for 911 Remote Call Taking



“We didn’t want to rely on people’s home internet because we know they can lose connectivity. We know we won’t lose connectivity with FirstNet.”

Renee Gordon

Director, Dept. of Emergency & Customer Communications
City of Alexandria, Virginia





Event Planning

- Identify public safety agencies
- Identify locations where broadband capabilities are needed by public safety
- Identify broadband capabilities needed by public safety
- Identify technologies being used by public safety



Exercises

- Catalog of injects/questions for operations and discussion based exercises
- Injects/questions cover a wide range of public safety activities
- Homeland Security Exercise and Evaluation Program (HSEEP) compatible format



After-Action Reviews

- Pre-planning
- Logistics
- Operations
- Technology



Uplift

Know the who, when, and why; understand how to uplift



Deployables

Know who can request assets, how to coordinate requests, and how to make requests



FirstNet Central

Know how to look at planned and/or current network outages to inform operations



FirstNet PTT

Know how to support mutual aid especially with LMR interoperability

Thank You



Resources

- [First Responder Network Authority Roadmap](#)
- [First Responder Network Authority App Catalog](#)
- [National Emergency Communications Plan](#)
- [SAFECOM Nationwide Survey](#)
- [Emergency Communications System Lifecycle Planning Guide](#)
- [Emergency Communications Technical Assistance and Planning Guide](#)

How You Can Take Action

- Take steps to implement the NECP and achieve its success indicators
- Use system lifecycle best practices when adopting new technologies
- Identify and resolve regulatory, compliance, and/or legal issues associated with implementing new technologies
- Update governance, SOPs, use, training, and exercises programs to include new technologies



Questions?



Upcoming Webinars

Implementing the National Emergency Communications Plan Webinar Series

Addressing the Ransomware Threat to Emergency Communications

October 26

All webinars
start at
1PM ET

To join, use:

Webinar link (for visual): <https://share.dhs.gov/necpwebinars>

Dial-in (for audio): 800-897-5813



Charlee Hess
September 22, 2021



For more information on the NECP:
www.cisa.gov/necp
NECP@cisa.dhs.gov

