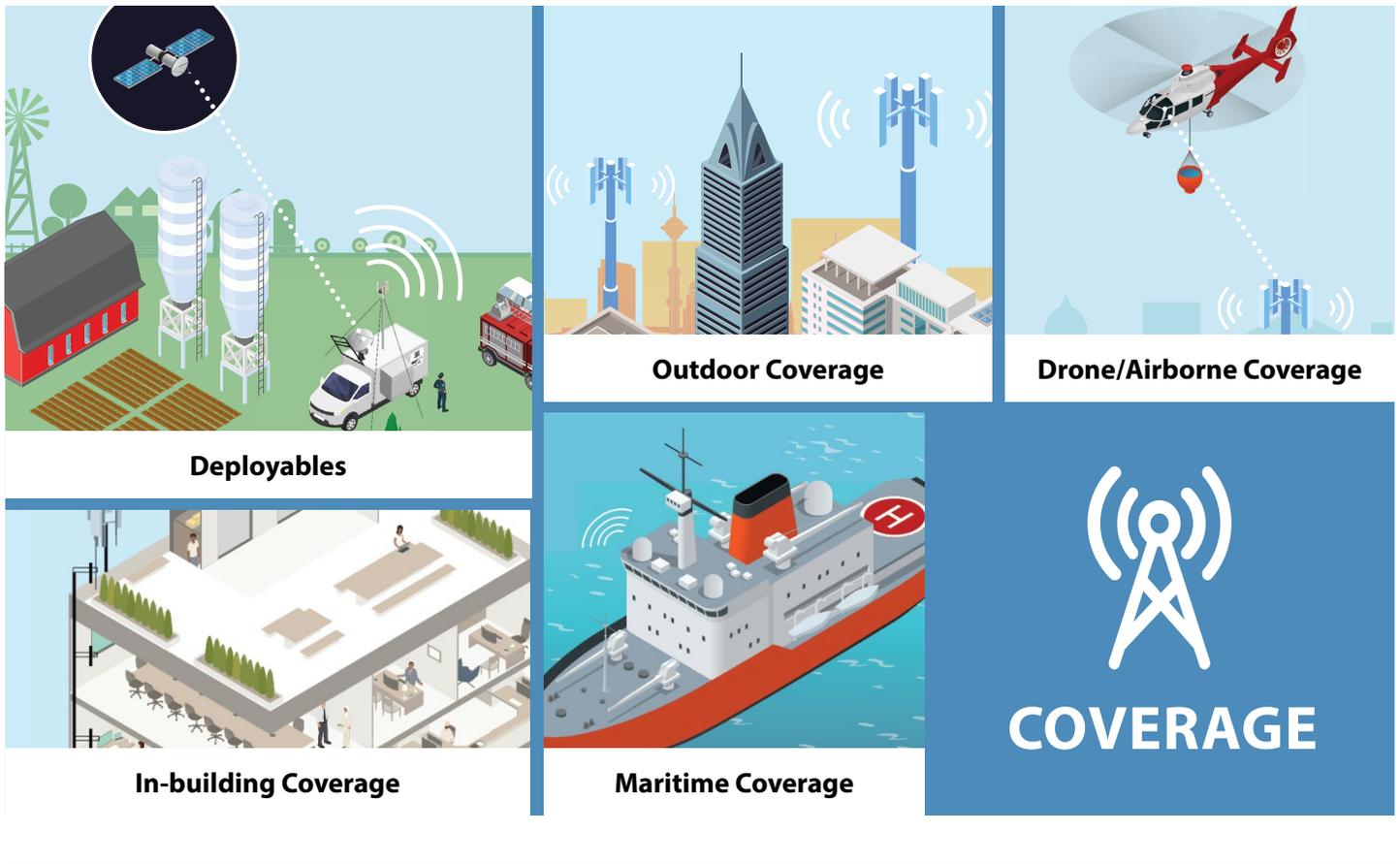


ROADMAP DOMAIN: COVERAGE



The Vision

The FirstNet Authority envisions the FirstNet network will be available to public safety personnel when and where they need it most.

Domain Overview

Access to mobile broadband with reliable, dependable, and consistent coverage with sufficient capacity fundamentally enables first responder operations. A principal focus of the FirstNet Authority's contract with AT&T is to build a robust nationwide broadband network for public safety's use on Band 14 spectrum. Coupled with public safety's access to all of AT&T's commercial spectrum on its permanent terrestrial network with the same features, public safety agencies have access to the differentiated FirstNet network, enhancing their ability to access network services that can transform operations.

Roadmap Priorities for Coverage

The FirstNet Authority will prioritize the following areas in alignment with stakeholder contributions and the prioritized needs of other Roadmap domains.

- **Outdoor Coverage Expansion:** Increase outdoor coverage, particularly Band 14, at locations deemed to be strategic public safety priorities.
- **Indoor Coverage Expansion:** Increase indoor coverage and advocate for changes in policies, codes, and standards to facilitate in-building coverage enhancements.
- **Unique Coverage Solutions Advancement:** Address and support unique coverage solutions that enable public safety to rapidly provide coverage in specialized circumstances and various outage scenarios.

Key Technologies and Solutions that Impact Coverage

- **Outdoor Coverage:** A broad coverage footprint typically enabled by fixed cell sites and commonly referred to as the macro network.
- **In-Building Coverage:** Persistent coverage in areas that may be hard to reach by the macro network (e.g., inside commercial buildings, underground public transit stations, crowded sports arenas) typically enabled by various technology solutions.
- **Deployables:** Solutions that deliver or help restore coverage on an on-demand basis (e.g., AT&T FirstNet deployable solutions, customer-owned and maintained deployable solutions, satellite).
- **Drone and Airborne Coverage:** Solutions that enable operations and the use of broadband applications while in the air (e.g., unmanned aerial systems, aircraft).
- **Maritime Coverage:** Solutions that enable operations and use of voice and broadband applications while operating in coastal and inland waterways.

Public Safety's Take on Coverage

- First responders need transparency on where coverage exists today and want the ability to guide where coverage will expand in the future across all operational areas, including outdoors, indoors, and for airborne and maritime operations.
- Fixed, reliable wireless broadband coverage is preferred for public safety operations, especially as it becomes foundational to public safety communications.
- Temporary and public safety-unique coverage solutions must be readily available to an agency and their use must easily integrate into ongoing operations.
- Network availability, reliability, resiliency, and hardening are fundamental to meeting public safety's operational needs.

Key Takeaways from the FirstNet Authority's Analysis of Learnings from Stakeholders

- Coverage expansion investments that address critical operational areas will have a direct and meaningful impact on public safety operations and will improve confidence in the FirstNet network.
- Significant improvements to indoor coverage can be achieved by investing in existing and new technology solutions, as well as updating relevant policies to encourage cooperation from building developers and owners.
- Public safety operations occasionally require unique coverage solutions to address mission needs, including but not limited to rapid coverage restoration during emergencies and immediate accessibility to coverage solutions in remote locales or atypical operational areas (e.g., tunnels, parking garages), and off-network coverage at a level that public safety is accustomed to today.



*Public safety engagements that addressed Coverage
(October 1, 2019 – September 30, 2020)*