



## FirstNet Planning Services Briefing Coverage Review Presentation

North Dakota Information Technology Department  
Network Services Division



## Agenda

- Introduction and purpose
- Discuss your public safety requirements and needs – how do you leverage wireless data? and how do we make the solution more effective for your operations?
- Interactive session: define coverage needs and identify assets
- Broadband Case Study
- Q&A on the Program



## Introduction

### The Middle Class Tax Relief and Job Creation Act of 2012

- FirstNet
  - 20 MHz of spectrum for public safety broadband
  - Up to \$7 Billion dollars
  - Tasked to create the Nationwide Public Safety Broadband Network (NPSBN)
  - Public private partnership
  - Built to public safety requirements
  - Public safety priority over "secondary" users



- State and Local Implementation Grant Program (SLIGP)
  - Captures each state's requirements

### North Dakota FirstNet Services Project

- State awards a contract to Televate to manage the program (October 2013)
- Project Scope:
  - Governance
  - Education and Outreach
  - Statewide Requirements Working Groups
  - Local Requirements - Coverage Assessments
  - Surveys: User Population & Utilization Requirements
  - Strategic plan development



## Program Goals

- FirstNet Goal: NPSBN service will be priced competitively with commercial carriers
- **Short term:** Define minimum requirements for you to adopt FirstNet service for your mobile data requirements
  - Network will be improved and built out as it matures
- At launch, NPSBN service will not replace your LMR radio
  - In the future, NPSBN service *may* be capable of replacing your radio
    - Lifecycle of incumbent systems, a major consideration
    - Presently, not a priority for MN FirstNet planning
    - Requires changes to the standards



## Goal Today

**We will identify the level of coverage that would convince you to adopt the FirstNet service.**

- Do you use cellular data service today through a major carrier? Which do you use? Would you define this as your minimum requirement for adoption?
- We are focusing on early, **launch window** requirements



## Defining the MN-PSBN Service Types

- **Critical Priority Service Area (Highest Priority)**
  - Where you want FirstNet coverage **first** and where you need it **most** (public safety grade service)
  - High-activity areas based on CAD data and other defined areas
  - Points of interest (critical infrastructure, anchor institutions, etc.)
- **Required Service Area “Need”**
  - The minimal service area required to adopt the service
  - At minimum: compare to existing cellular service
- **Extended Service Area “Want”**
  - Where commercial carriers do not cover, but where you need coverage
  - Where deployable or satellite is not acceptable



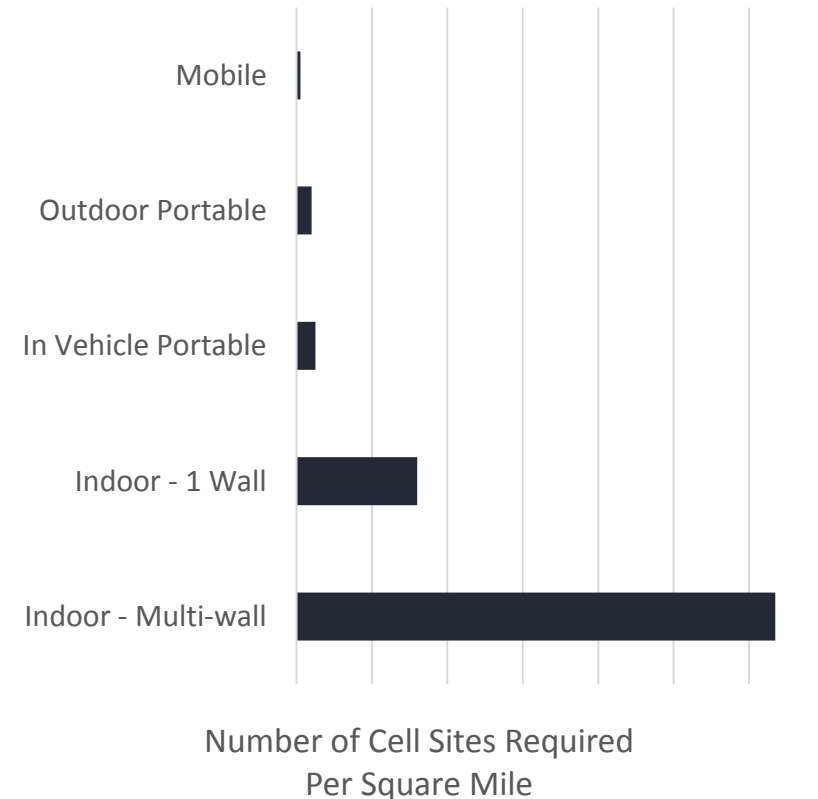
## Why Coverage is Critical

### Types of Coverage

- Mobile: Vehicle based modem/router with external antenna
- Outdoor Portable: same as above with operation outside the vehicle
- In Vehicle Portable: handheld (smartphone/tablet), or PC based modem operated inside vehicle
- Indoor Portable: handheld (or equivalent) with additional losses incurred from walls/windows
  - The more walls, density of construction, the more signal is required

Stronger Signals Required

### Impacts On Cost



It is critically important to understand the type of coverage required!



# Why Coverage is Critical

Mobile Coverage	Outdoor Coverage	In-Vehicle Coverage	Indoor Coverage
<ul style="list-style-type: none"><li>External Antenna</li></ul>  	<ul style="list-style-type: none"><li>Hand-held device</li></ul>  	<ul style="list-style-type: none"><li>No External Antenna</li></ul>  	<ul style="list-style-type: none"><li>Varying degrees of building loss</li></ul> 

Stronger Signal Required = more sites, more \$\$\$





# Coverage Assessment



## Wireless Data Case Study

*Consider a recent major incident:*

- **Describe the incident.**
- **Did wireless data play a major role at the incident?**
  - Describe the data system utilized at the incident.
  - If so, how?      – If not, why not?
- Were your responders satisfied with their data service?
- How could the service have been improved to have resulted in a better outcome?
- Which kinds of information flow to and from the incident could have resulted in a better outcome?



# Closeout



## Closeout

- Other Needs:
  - What are your other requirements for the FirstNet service?
  - What other impediments and opportunities exist for FirstNet with your agency?
  - Is satellite acceptable?
- Q&A
- How can we improve this process?