

FirstNet

Dedicated to Public Safety

*Creating FirstNet Together:
Why We Need it and What it Will Take*



Sue Swenson

FirstNet Board Member



Competitive Carriers Global Expo

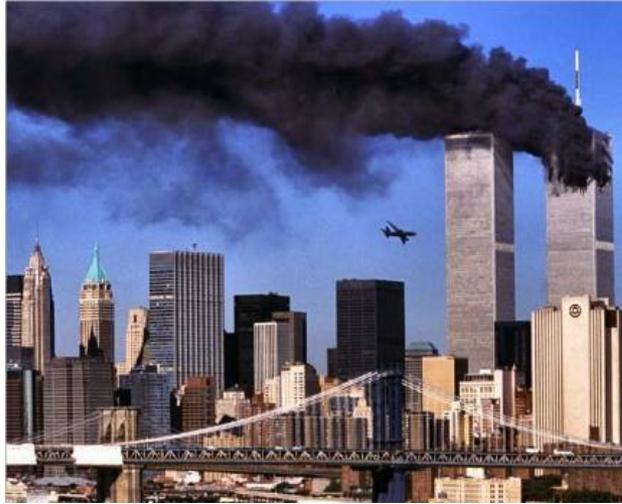
April 17th, 2013

New Orleans, Marriott



Why FirstNet?

Walls between emergency responders take their toll.



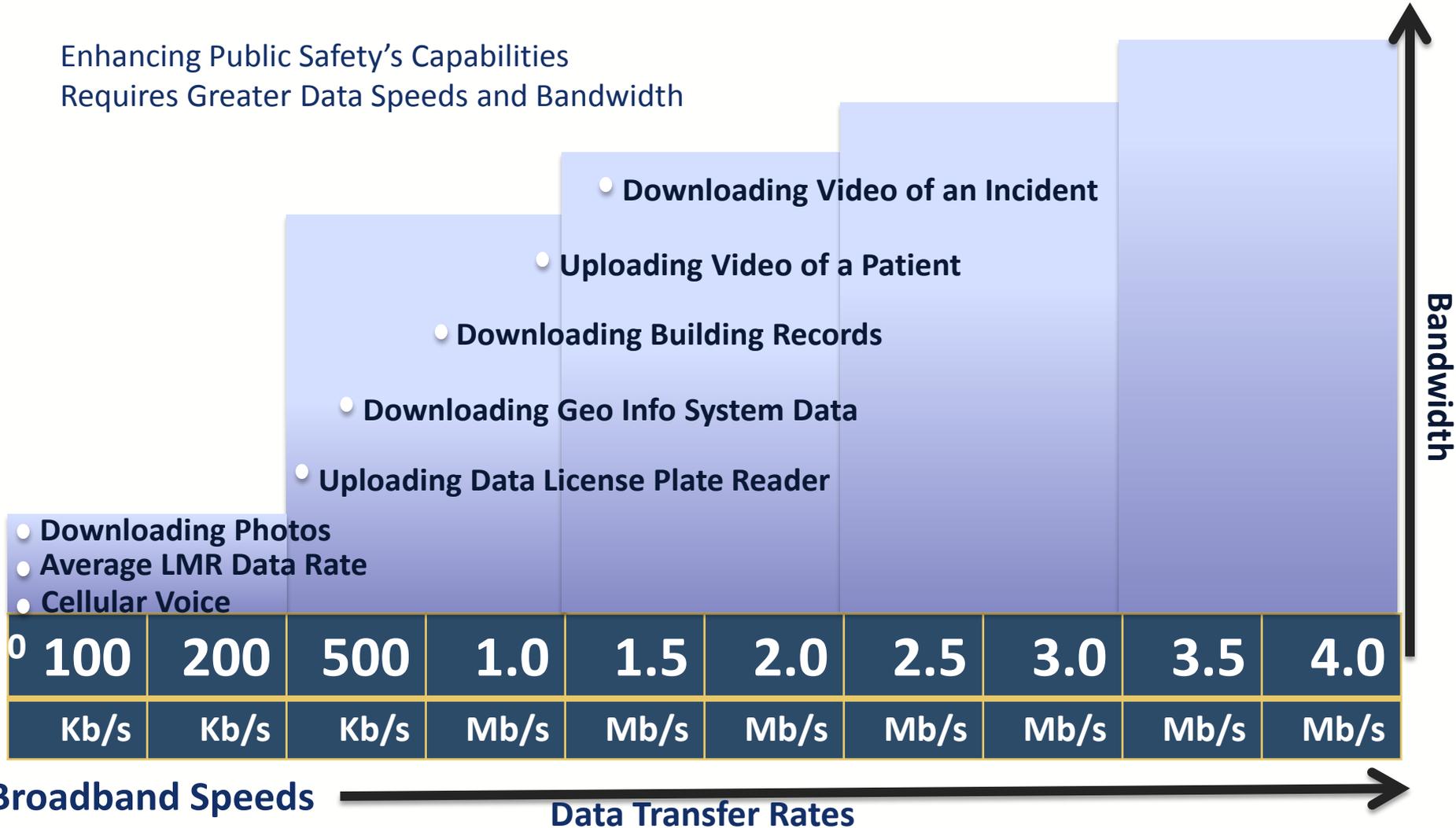
Agencies have been “walled-off” from each other – denying force-multiplier effectiveness.



- **Spectrum fragmentation**
- **No single standard for systems and devices**
- **Interoperability differences across jurisdictions and disciplines**

Public safety has been “walled-off” from leveraging wireless technology advancements.

Enhancing Public Safety’s Capabilities
Requires Greater Data Speeds and Bandwidth



Source: GAO Analysis

Public safety has been “walled-off” from capturing device and infrastructure cost savings.

300 million Users

Economies of Scale Advantage

- Increased Device Capabilities, Lower Costs
- Increased Infrastructure Capabilities, Lower Costs
- Increased Reliability (Hardening, Redundancy) at Lower Costs
- Lowering Operating and Upgrade Costs

Public Safety Users
U.S. Only

- ✓ 2 million users in 2010
- ✓ >10,000 Uniquely Managed Networks
- ✓ Avg 200 Users Per Network
- ✓ Cost per User = >20x of Avg Carrier User*

1 million 2 million Users
1990 2010

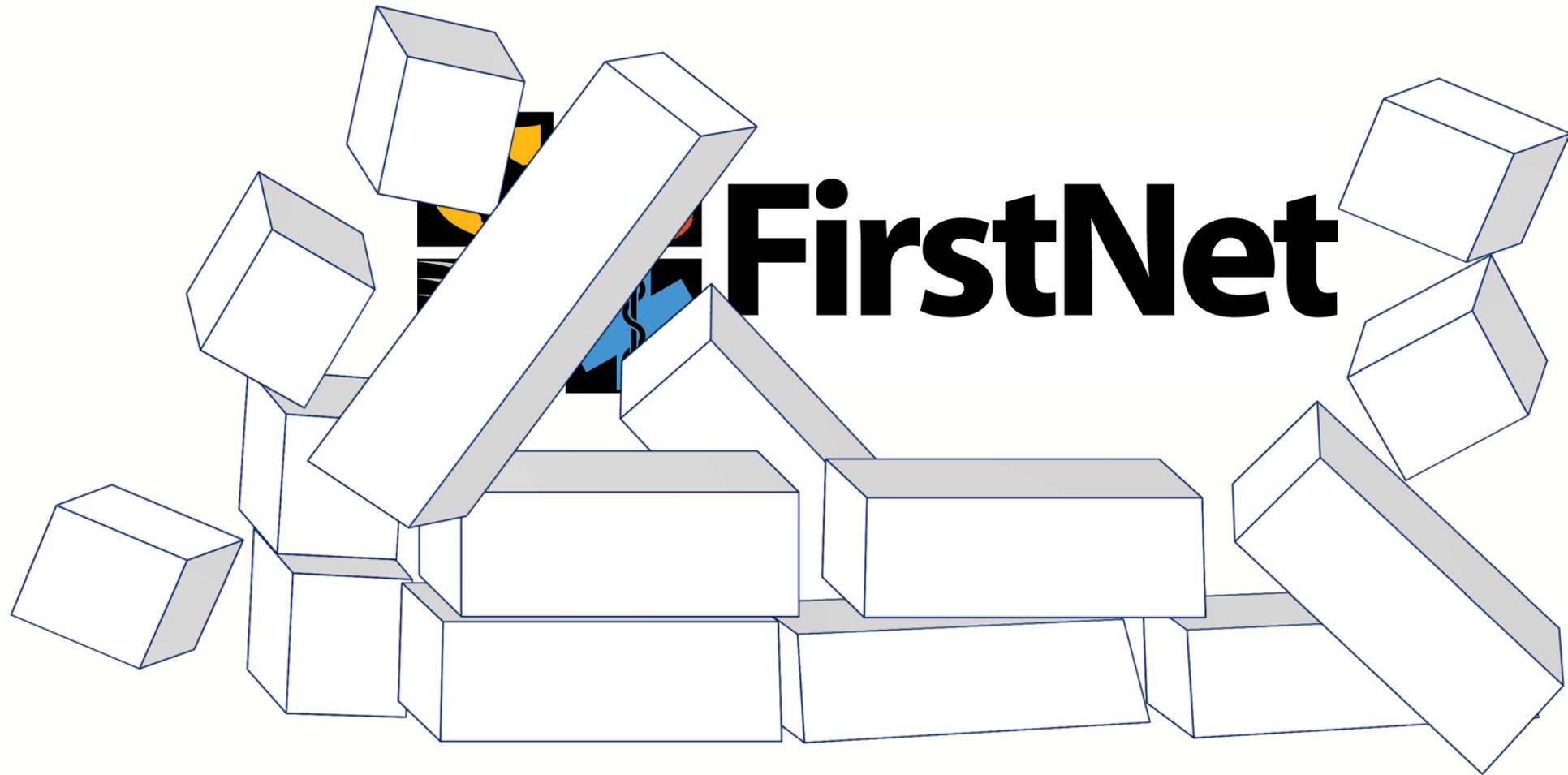
Commercial Cellular Users
U.S. Only

- ✓ 300 million Users in 2010
- ✓ 4 Uniquely Managed Networks
- ✓ Avg 75M Users Per Network
- ✓ Cost per User = fraction of Public Safety Users*

5 million 300 million Users
1990 2010

* R. Hallahan and J. M. Peha, “Quantifying the Costs of a Nationwide Broadband Public Safety Wireless Network,” 36th Telecommunications Policy Research Conference, Sept. 2008,

Public safety needs it, demanded it and worked to get it: it's time for the walls to come down....



“We must all hang together, or assuredly we shall all hang separately.”

Ben Franklin

At the signing of the Declaration of Independence

FirstNet Purpose



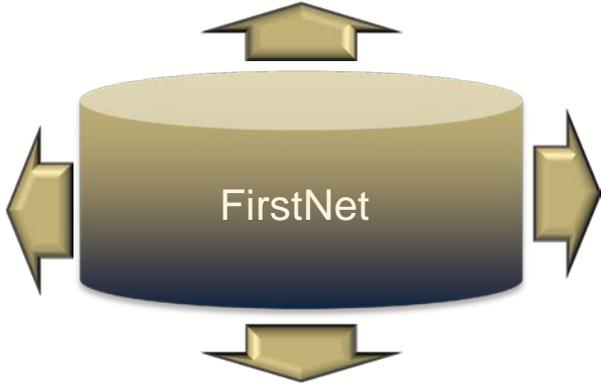
Provide emergency responders with the first nationwide, high-speed, broadband network dedicated to public safety

“FirstNet will be a force multiplier, enabling collaboration to help save more lives, protect property and solve crimes faster.”

Jeffrey D. Johnson, Chief (Ret.)
Chief Executive Officer
Western Fire Chiefs Association
FirstNet Board Member

FirstNet: A Dedicated Public Safety Network

Nationwide Connectivity
Terrestrial, Deployables, Satellite



Public Safety Effectiveness
Priority Access;
Force Multiplier

Public Safety Applications
4G Data, PTT, Web, Video,
Mission Critical Voice (future)

Public Safety Grade
Reliable: Hardened, Redundant

Perceptions and Reality

Perception

- Public safety may have to give up autonomy and control
- Public safety currently manages devices, users and talk groups
- Public safety is comfortable using commercial 3G/LTE networks
- FirstNet will cost too much to build & operate

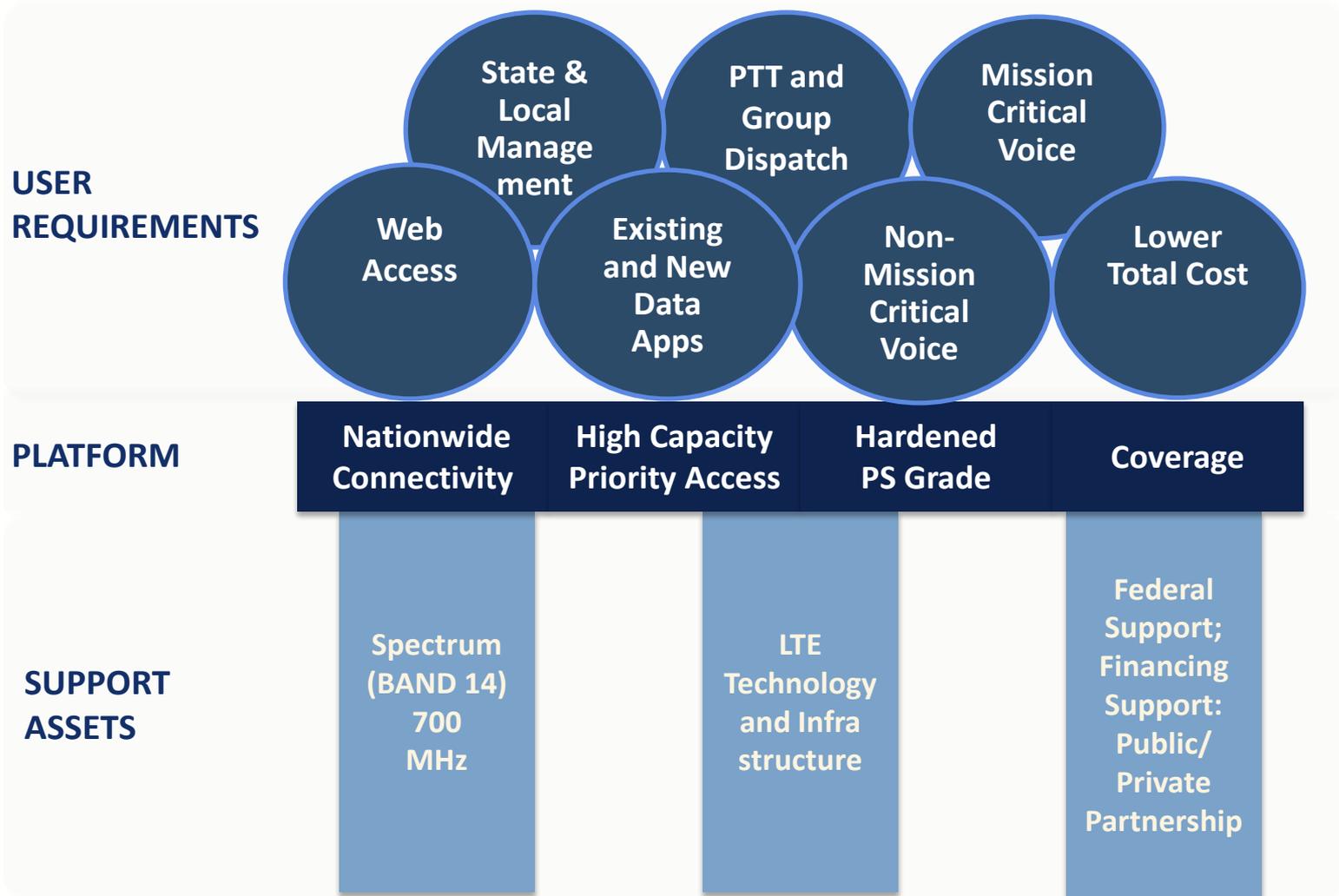
FirstNet

Reality

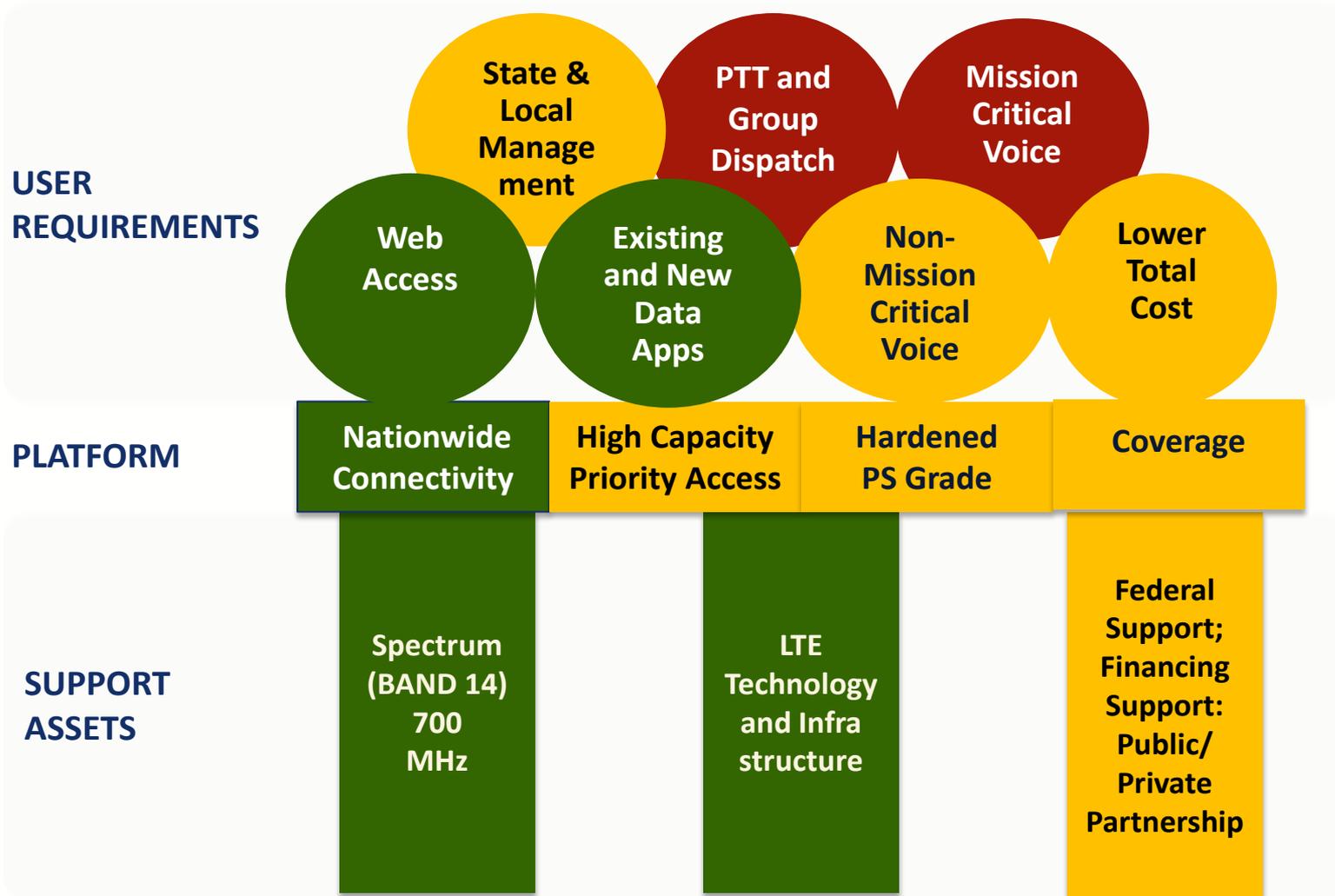
- FirstNet is a nationwide platform; Public safety sets rules locally
- Public safety maintains local management
- Commercial carriers cannot offer priority or cost protection
- FirstNet has substantial opportunities to partner to lower construction and operating costs

FirstNet's goal: bring nationwide scale, ecosystem, interoperability, and platform. Enable public safety to choose suitable services, devices, prioritization, and access.

FirstNet Elements



FirstNet Elements

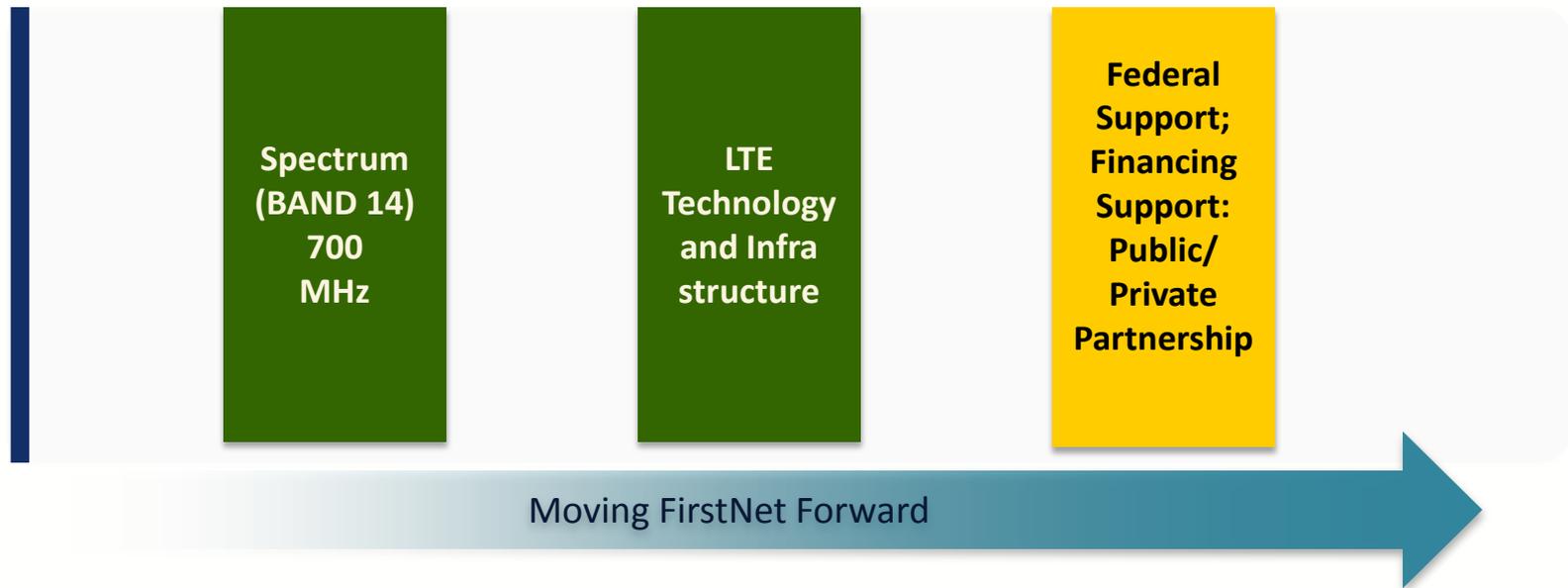


Done or on track to be completed

Have visibility and traction

Working on greater visibility/predictability

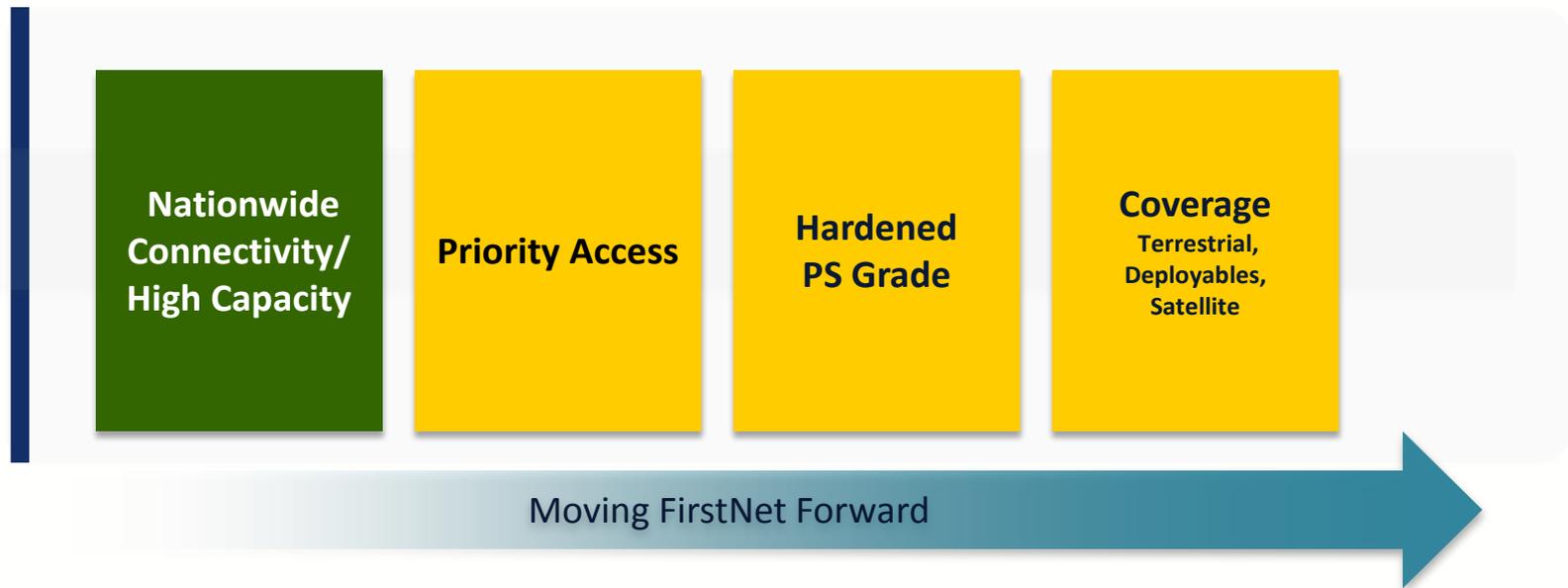
FirstNet Support Assets



- Design with national, regional and local operating partners to utilize assets
- Initiate RFP processes
- Meet with potential suppliers
- Leverage existing public safety, operator and utility infrastructure

FirstNet's goal: work with operating partners to lower construction and operating costs, yielding lower cost of ownership to public safety

FirstNet Platform



- FirstNet will build a standards based LTE platform
- Define RF engineering (RAN Plan) and network core requirements
- Test and evaluate preemption technology
- Exploring options for working with operating partners
- Understand coverage requirements by state
- Define hardening requirements

FirstNet's goal: finalize network design after full consultation with states/local entities and operating partners

Hardening for Public Safety Grade Reliability

1. Physical Resiliency

Building to sustain network in adverse conditions (sites)

2. Physical Redundancy

Avoiding single points of failure across the network (power, back haul, sites, coverage)

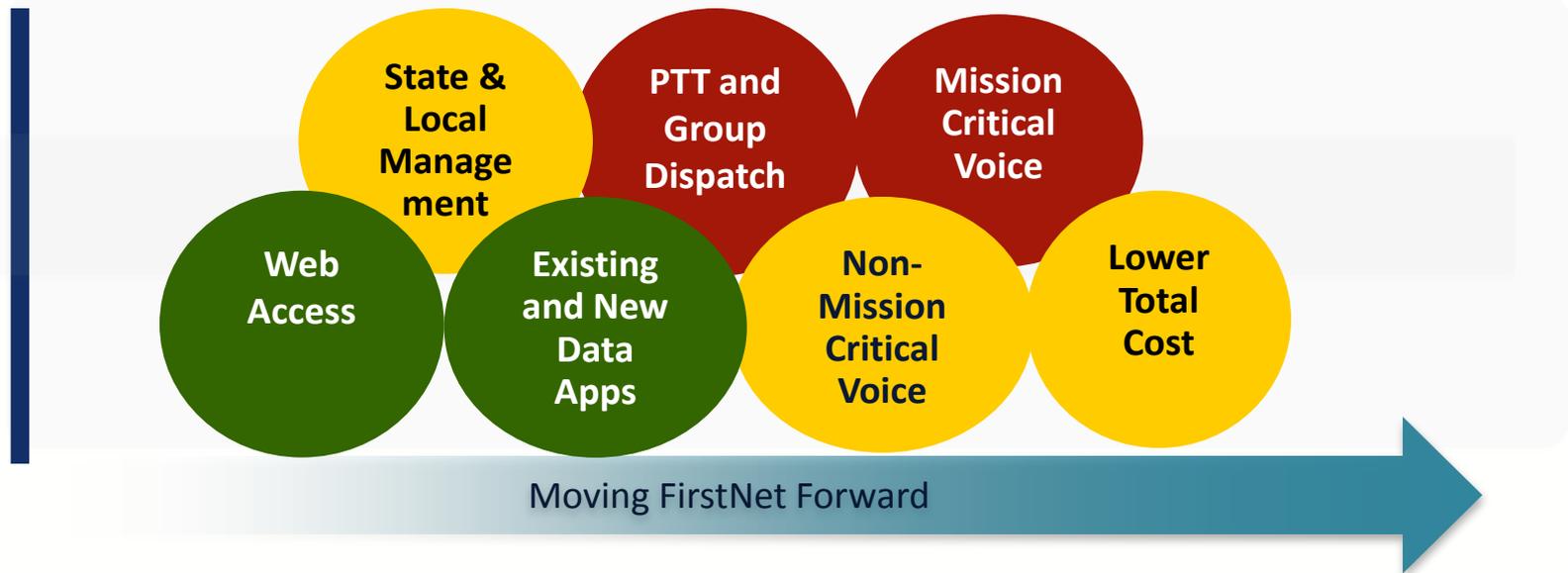
3. Operational Resiliency

Maintaining the network to ensure reliability (spares management and preventative maintenance, primary assets recovery after outages)

4. Operational Redundancy

Providing backup equipment (Deployables) and technology (commercial carrier roaming/direct mode) that facilitate operations during primary network failure

FirstNet User Requirements

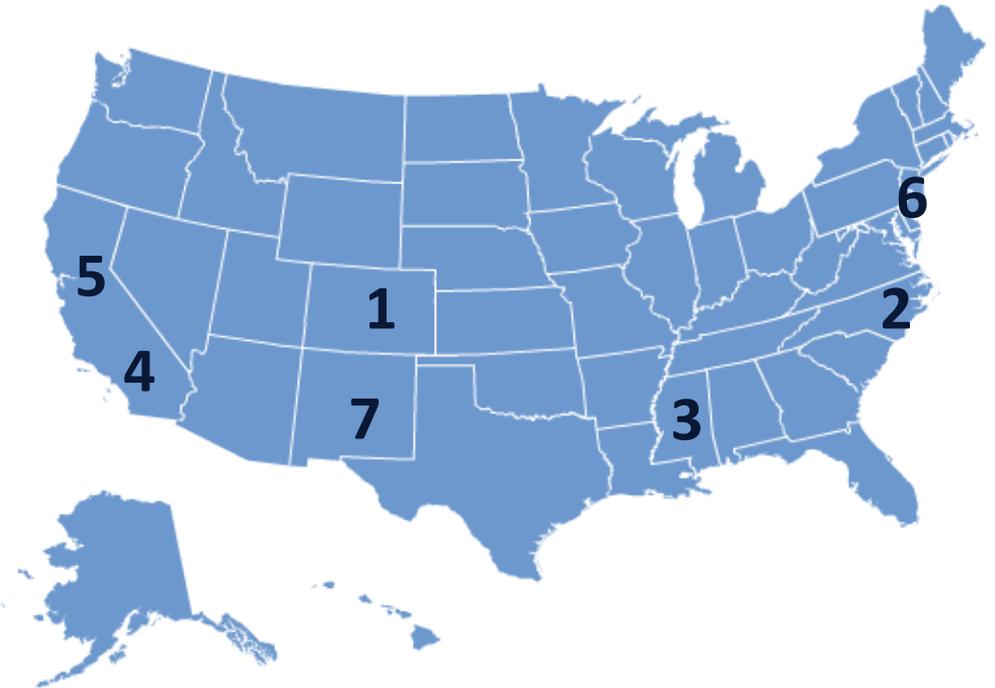


- Work with standards bodies on 3GPP, PTT, dispatch and mission critical voice
- VoLTE is advancing, VoIP exists (no handoff)
- Wide range of new public safety apps to take advantage of LTE not yet developed
- State consultancy outreach project to define local management criteria, priorities

FirstNet's goal: build the lowest cost and best standards-based platform upon which Public Safety can locally deploy services which fit their requirements

Early Builders Making Progress

Early Builders	BTOP Award
1. Adams County, CO	\$ 12,137,422
2. Charlotte, NC	\$ 16,702,490
3. Mississippi	\$ 70,055,000
4. LA-RICS (Los Angeles)	\$154,640,000
5. Bay-RICS (San Francisco)	\$ 50,593,551
6. New Jersey	\$ 39,638,152
7. New Mexico	\$ 38,699,997



Update on FirstNet Next Steps

Moving FirstNet Forward 

**1. State & Local Consultancy Process
Regional Meetings**

Start Dates

Status

May 2013

Planning with NGA,
board

**2. NTIA Grant Process to States, Local, Tribes;
Phase 1 (SLIGP)**

Awarded by
July 15, 2013

Coordinating with
NTIA

3. Early Builders Negotiations

February 2013

On track for May
completion

4. State Data Collection

POST NTIA
grants

Announce at regional
meetings

5. RFI and RFP Processes

Summer 2013

In progress

6. Vendor Outreach

Summer/Fall
2013

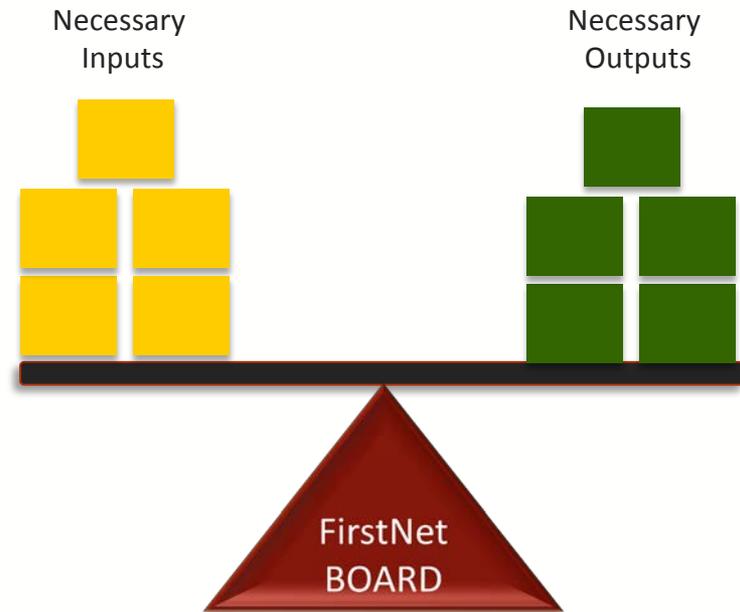
PSCR to host forums

7. FirstNet State Level RAN Concept Plan

Fall 2013

Dependent on 1, 5, 6

FirstNet Board Role



Balance: Proper measures of input with meaningful levels of progress

FirstNet Exists to Serve Public Safety



Creating FirstNet will require an unprecedented level of public-private partnership, collaboration and shared commitment to the well-being of all Americans.



Thank you.

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