Single Point Of Contact (SPOC) Quarterly Webinar

January 8, 2015

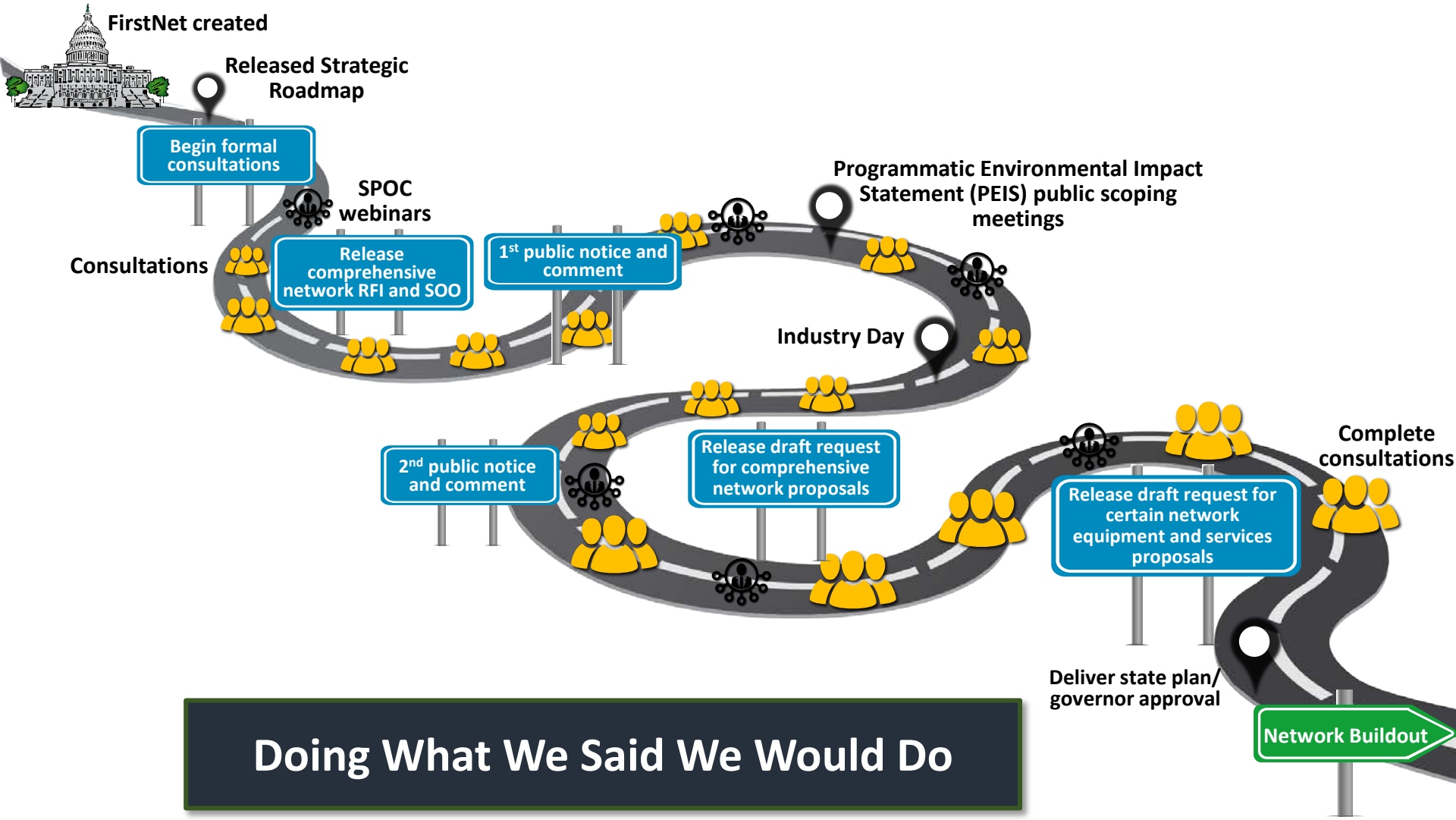
Agenda

- Welcome
- Organizational Updates
- Request for Information, Statement of Objectives, and Public Notice Response Summary
- FirstNet National Environmental Policy Act and National Historic Preservation Act Compliance
- Chief Technical Officer Updates
- Open Forum / Q&A
- Wrap Up

Opening Remarks

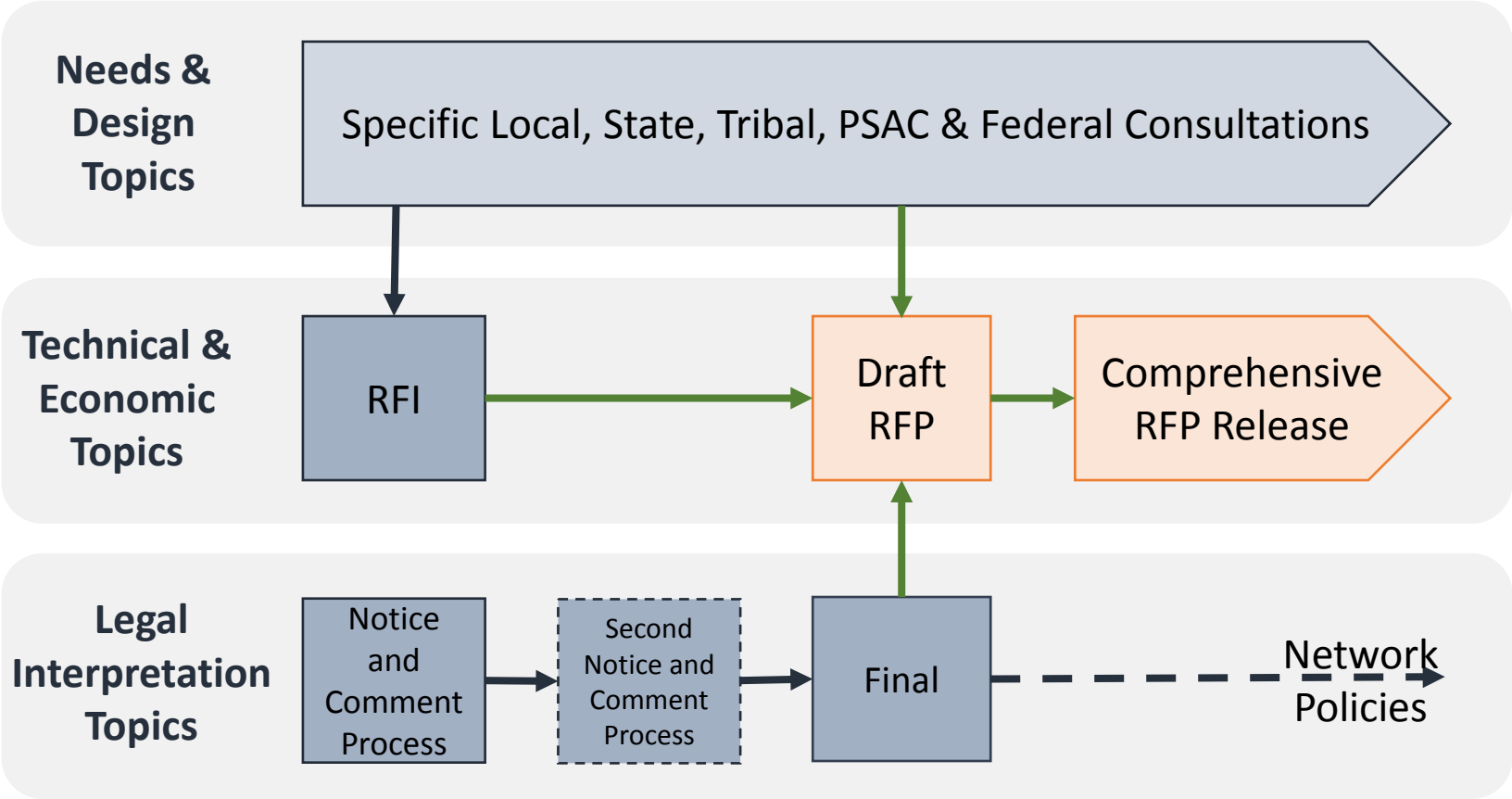
Stuart Kupinsky

Current Roadmap Snapshot



Doing What We Said We Would Do

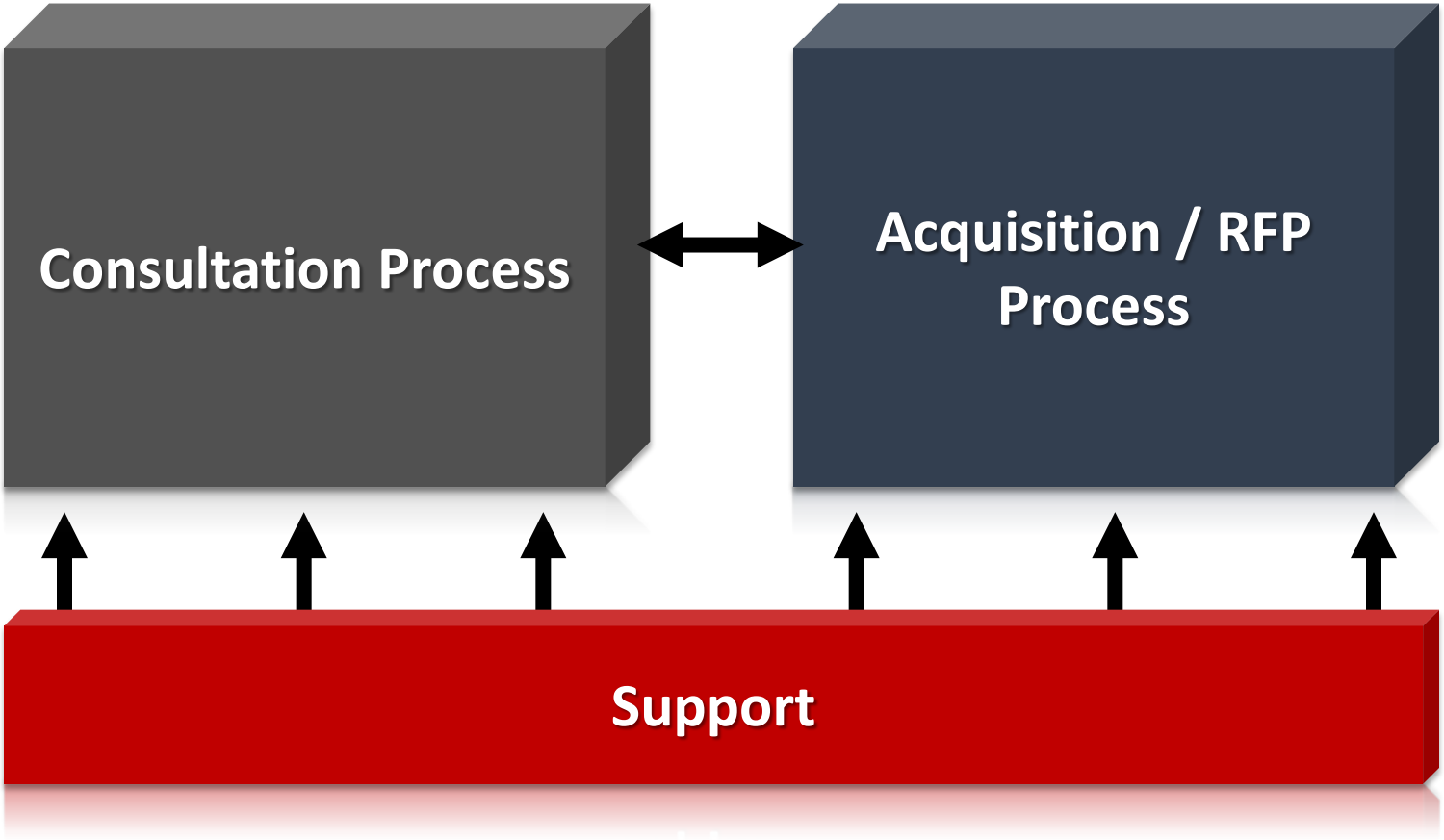
Consultation Inputs to RFP



RFP Processes

Consultative Processes

FirstNet's Focus

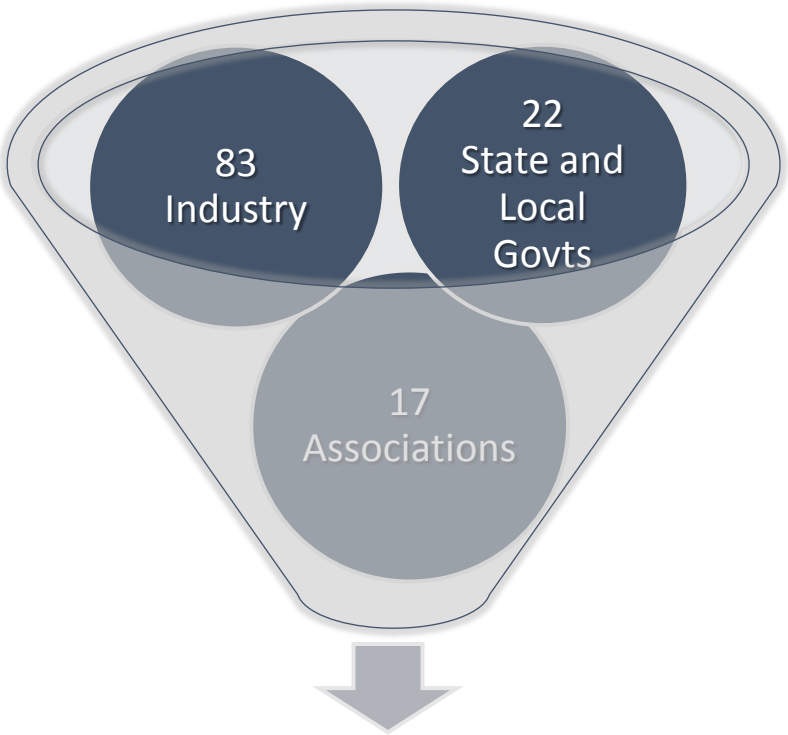


RFI and Statement of Objectives Summary

Michael Landry

RFI and Draft Statement of Objectives Recap

- Broad participation from industry, government, and associations
- Thoughtful answers to most questions and objectives
- Largely validated our Statement Of Objectives



122 RFI Responses Received

More than 3000 pages of information to analyze

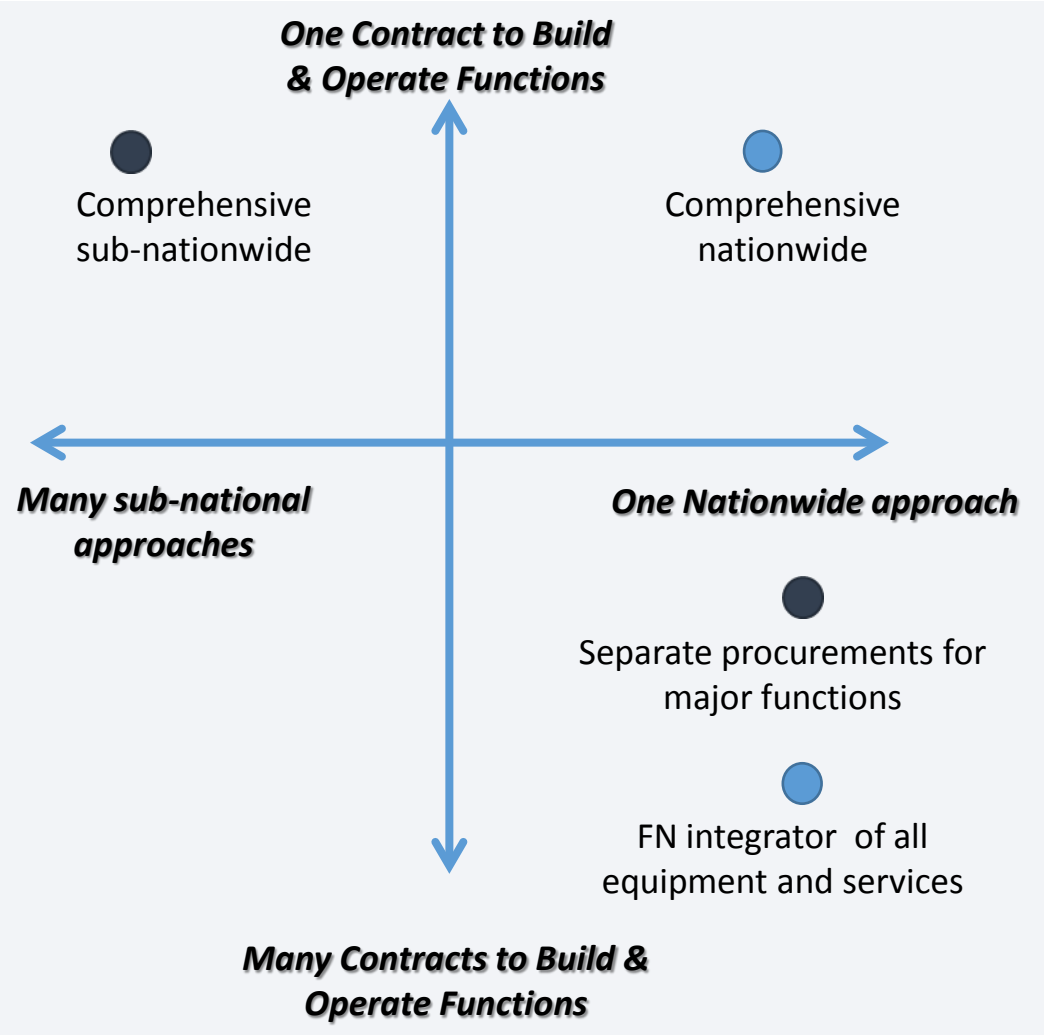
Analyzing the RFI Responses

122 responses across 16 major topics

Major themes

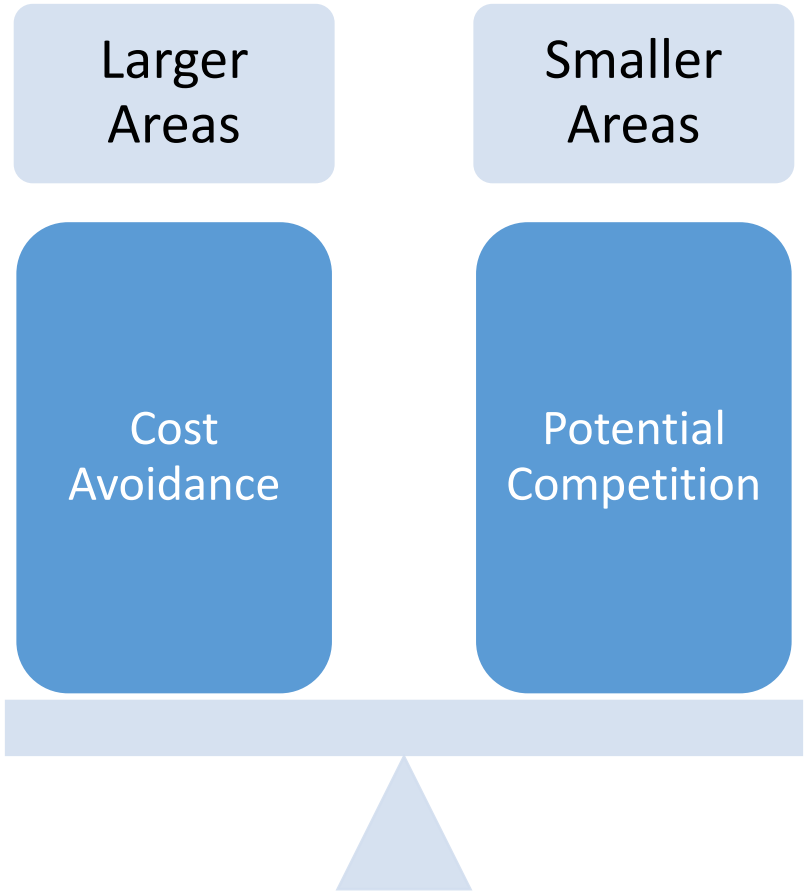
Trends

The Marketplace Can Deliver a Network Meeting FirstNet Statement of Objectives



- Many firms possess the capability to build and operate the network
- Approaches suggested ranged from single comprehensive provider to FirstNet-led integration
- Many responses emphasized FirstNet's limited funding
- Respondents broadly validated FirstNet's objectives and approach

Respondents Support Monetization of Excess Network Capacity



- Broad support to promote sustainability through use of excess capacity
- Contractor use of excess capacity needed to promote aforementioned cost avoidance
- Smaller areas may increase competition, and excess capacity value, by allowing more firms to participate, but may limit cost avoidance
- Excess capacity commitments by firms could reduce the importance of cost avoidance

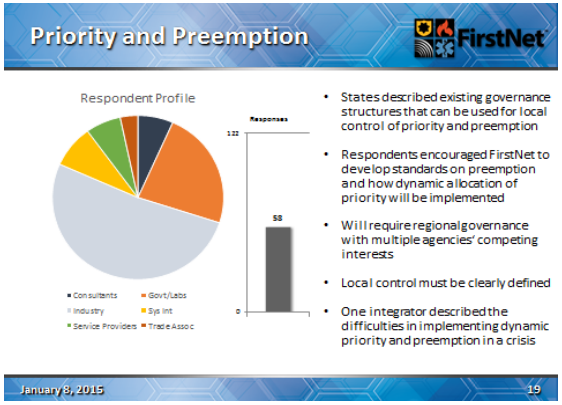
Minimize Costs by Leveraging Mass Market Standards-Based Solutions

Standards-based solutions support FirstNet's Statement of Objectives

- Financial Sustainability
- Speed to Market
- Opt-Out RAN Integration
- Lifecycle Innovation
- Application Ecosystem
- Device Ecosystem
- Required by the Act

Major Themes from RFI

- Near unanimous support for national core
- Respondents preferred that FirstNet make the ultimate economic desirability determinations
  - States generally voiced support for a greater role in the determination
- Universal agreement that security and resiliency are critical distinguishing factors
  - Respondents generally cautioned against the cost of across the board hardening – instead suggesting selective hardening of critical sites
- States most vocal in advocating higher minimum thresholds in reliability
- Accelerate to market:
  - Most suggested to build in phases in populous areas
  - States recommended balanced plan to ensure timely rural and tribal coverage



**** Download detailed slides from FirstNet Board meeting at FirstNet.gov****

Acquisition Accomplishments Since Last SPOC Quarterly Webinar

Step	Timeframe	Status
Draft RFI/SOO	August/September	✓
Review RFP Approach at Board meeting	September	✓
Approve RFI/SOO	September	✓
Release RFI	September	✓
Review RFI responses	October/November	✓

Next Steps

Document RFI analyses and refine acquisition alternatives

Continue consultation efforts, public notice and comment processes

Finalize acquisition approach and issue draft RFP

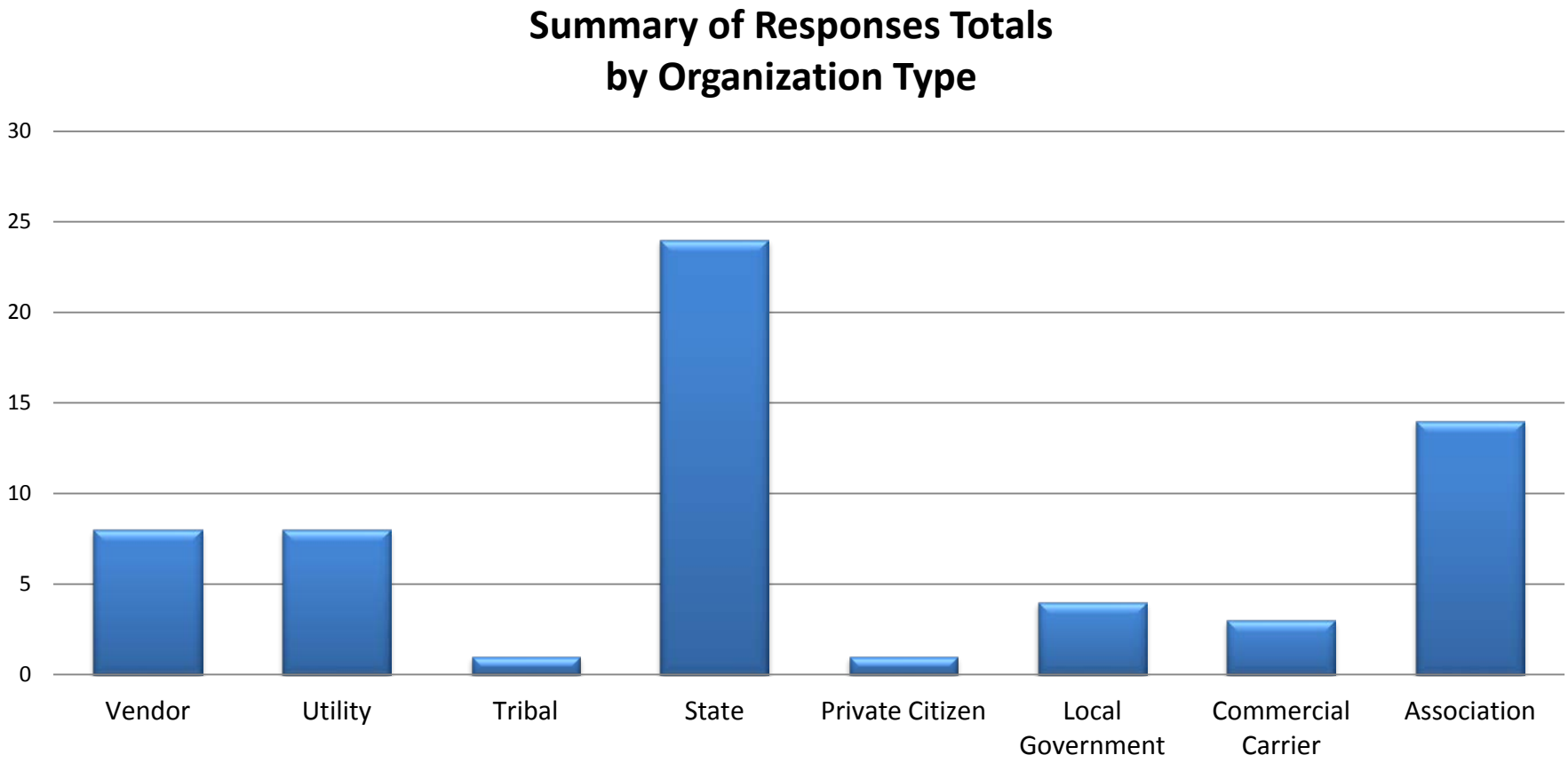
Public Notice and Comment Response Summary

Stuart Kupinsky
Eli Veenendaal

Public Notice and Comment Process Overview

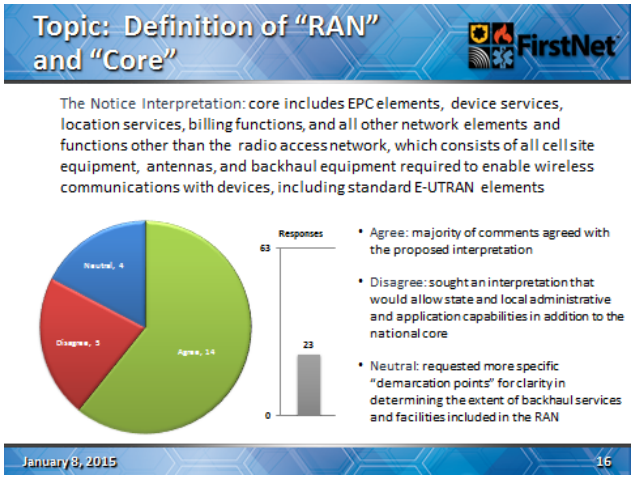
- The Notice sought comment on key topics including:
  - Network elements, including “core” and “RAN”
  - Network users, including “public safety entity,” “secondary” and other network users
  - Permitted services
  - RFP standards for “open, transparent, competitive” process
  - Definition of “Rural” and substantial rural coverage milestones
  - Existing infrastructure sharing
  - Fees, including covered leasing fees
- FirstNet will consider comments for purposes of informing the RFP process, interpreting the Act, and establishing network policies
- We have made no final determinations, and today is an update on comments received generally and will not hit on every comment. Numbers and positions of commenters are approximations

Overview: Public Notice Responses



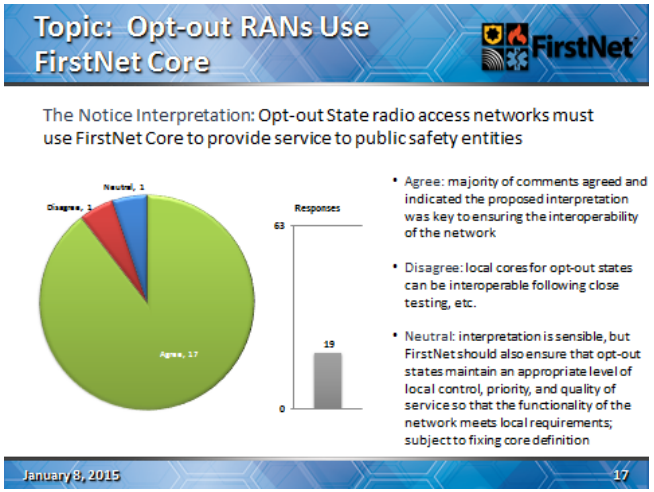
A total of **63** responses were received from various groups, including state, local and tribal governments, commercial carriers and vendors, and associations

RAN and Core Network



Definition of RAN and Core

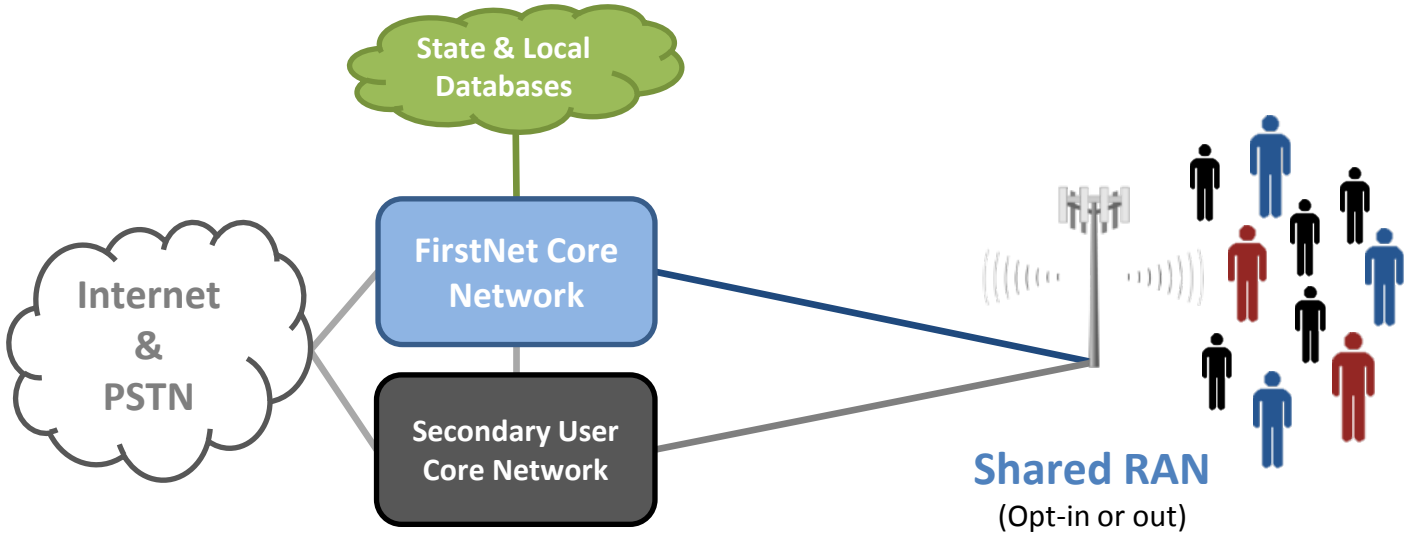
The Notice Interpretation: Core includes EPC elements, device services, location services, billing functions, and all other network elements and functions other than the radio access network, which consists of all cell site equipment, antennas, and backhaul equipment required to enable wireless communications with devices, including standard E-UTRAN elements



Opt-out RANs Use FirstNet Core

The Notice Interpretation: Opt-out state radio access networks must use FirstNet Core to provide service to public safety entities

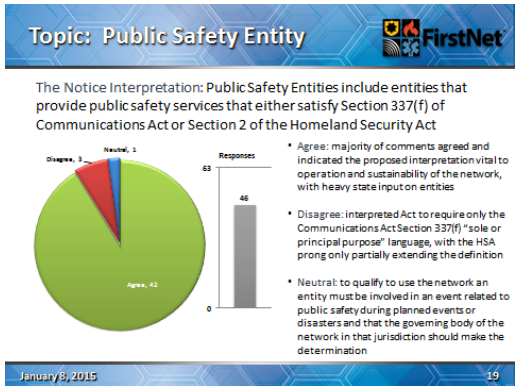
RAN and Core Network (continued)



- State & Local Databases ≠ FirstNet Core Network and can be directly connected to the FirstNet Core

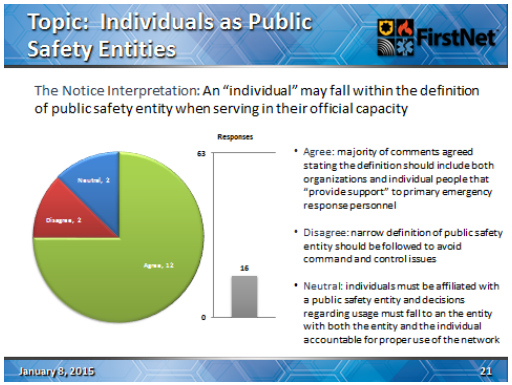
- Considering the extent to which opt-out States could have certain separate network functions from the FirstNet Core Network if interoperability and priority/preemption for public safety are not affected – per FirstNet Network Policies

Public Safety Entity



Public Safety Entity

The Notice Interpretation: Public Safety Entities include entities that provide public safety services that either satisfy Section 337(f) of Communications Act or Section 2 of the Homeland Security Act

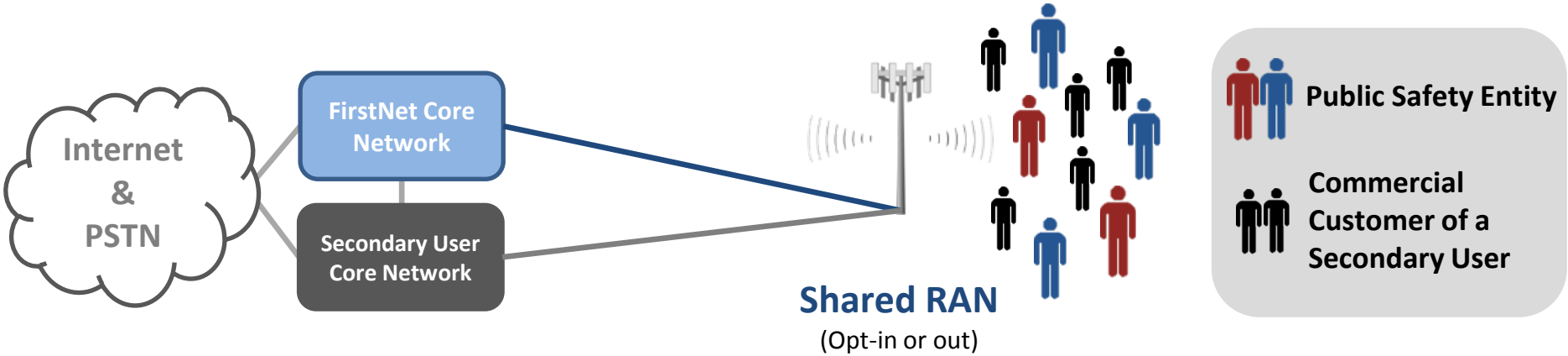


Individuals as Public Safety Entities

The Notice Interpretation: An "individual" may fall within the definition of public safety entity when serving in their official capacity

FirstNet agrees with commenters that the network will be rolled out in a manner that ensures the prioritization of traditional first responders

Public Safety Entity (continued)



- Public Safety Entity = served by FirstNet Core Network
- Consumer/Commercial Customer = served by Secondary User Core Network
- Optimum Interoperability & Local Prioritization Control = served by FirstNet Core Network

FirstNet can provide first responders with the greatest control over priority (high & low) for those entities on FirstNet's Core Network

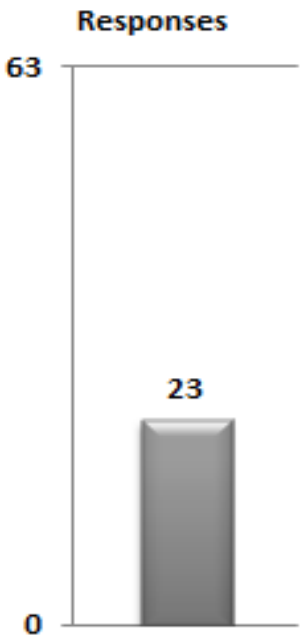
Non-Governmental Entities

The Notice requested comments on what types of non-governmental entities or organizations should qualify as a public safety entity

Comment Summary

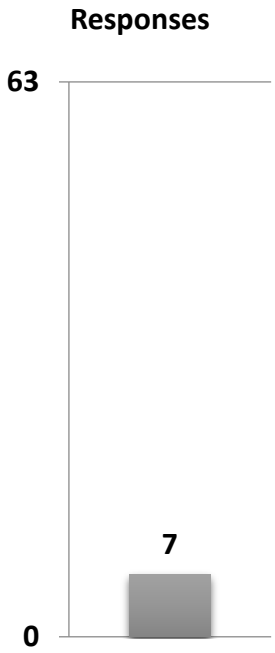
Responders supporting the proposed definition suggested consideration of the of the following entities and services:

- Private ambulance service
- Electric cooperatives and other utilities
- Energy industry companies (e.g. oil and gas)
- The commercial airline industry (e.g., flight attendants employed by commercial airlines with significant public safety responsibilities)
- Non-governmental and private, and non-profit and for-profit organization (e.g., American Red Cross, educational institutions, healthcare facilities, independent firefighting corporations)
- Public transits
- Transportation Departments
- Parks and Recreation Departments



Designation of Public Safety Entity

The Notice requested comments on which government entities may authorize non-governmental organizations to provide public safety services based on the "primary mission" limitation



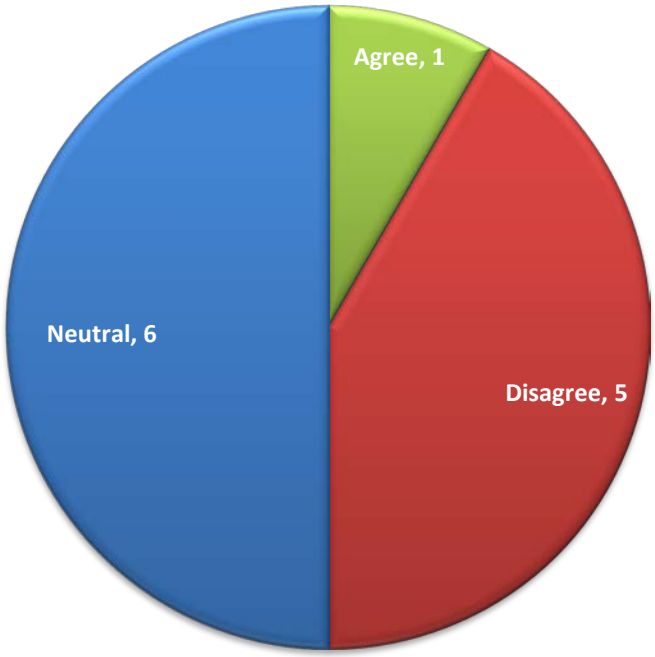
Comment Summary

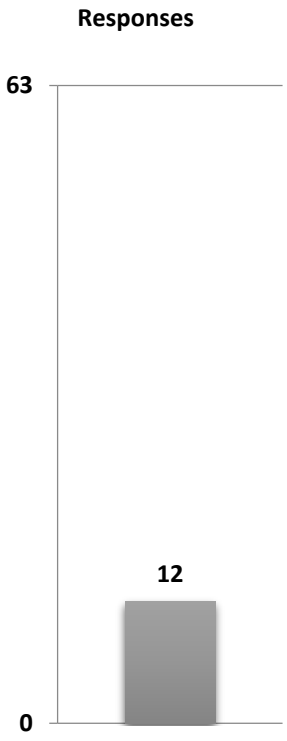
Responders supporting the proposed definition suggested consideration of the following entities and services:

- Police Departments
- Fire Departments
- Health Departments
- Emergency Medical Services
- Emergency Managers
- State Utility Commissions

Opt-out States as Network Users

The Notice Interpretation: Opt-out States could constitute either a public safety entity or fall within another unspecified user category





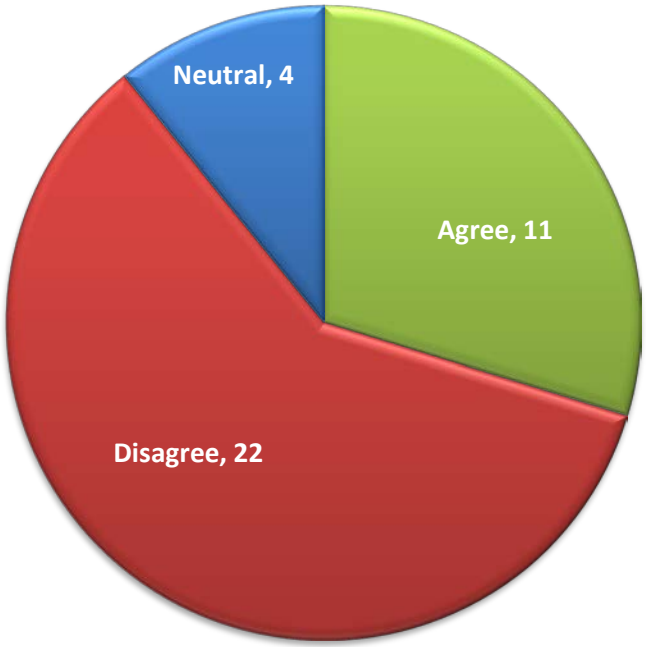
- Agree: responder provided a general agreement and not a detailed response
- Disagree: majority of comments disagreed with the proposed interpretation and indicated that an opt-out state should qualify as either a public safety entity or secondary user
- Neutral: generally indicated that more details on the implications of this classification were needed and could potential influence a State's decision process

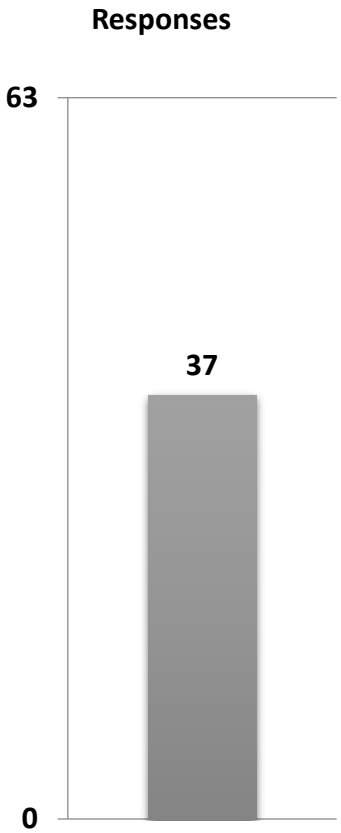
Definition of "Rural" Overview

- The Act requires "substantial rural coverage milestones as part of each phase of the construction and deployment of the network" and for FirstNet "to utilize cost-effective opportunities to speed deployment in rural areas"
- FirstNet must develop RFPs with "appropriate . . . coverage areas, including coverage in rural and nonurban areas"
- FirstNet must consult with regional, state, tribal, and local jurisdictions on, among other things, "coverage areas of the network, whether at the regional, State, tribal, or local level"
- FirstNet preliminarily proposed the Rural Electrification Act definition, and asked if a lower density or other boundary should be established
- Definition of rural ≠ definition or guarantee of coverage
  - Consultation will drive priorities for rural and nonurban coverage
  - "Rural" guarantees substantial rural coverage milestones in each phase of building out appropriate rural and other areas after consultation

Definition of "Rural"

The Notice Interpretation: Define "rural" as having the same meaning as "rural area" under the Rural Electrification Act





- Agree: widely recognized and used and would promote the substantive goal of providing coverage in rural areas
- Disagree: definition too limiting and responses suggest states should have primary role in identifying the rural coverage and milestones in each individual state
- Neutral: use an established statutory definition but adapt the definition where necessary to specific needs

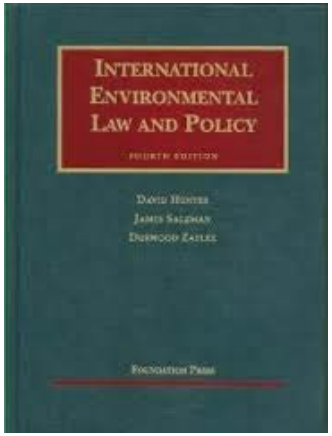
Questions & Answers

FirstNet NEPA and NHPA Compliance

Amanda Pereira
Chris Eck

Requirements

As a federal entity, FirstNet is required to comply with all applicable environmental and historic preservation laws, regulations, Treaties, Conventions, Agreements, and Executive Orders (EOs)



THE CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES OF WILD FAUNA AND FLORA

CITES

ADVISORY COUNCIL ON HISTORIC PRESERVATION

ACHP

National Environmental Policy Act

Passed in 1970, NEPA is considered an "umbrella law" as it provides a framework within which all other environmental, historic, and cultural resources laws can be evaluated. This illustration identifies only a fraction of the requirements that must be met before a project can move forward

Resource Conservation and Recovery Act
Superfund Authorization and Recovery Act
Archeological and Historic Preservation Act
American Indian Religious Freedom Act
Floodplains and Wetlands laws and requirements
Safe Drinking Water Act
Coastal Zone Management Act
State and Local Land use requirements

Clean Water Act
Clean Air Act

Endangered Species Act
Migratory Bird Treaty Act
Bald and Golden Eagle Act
Executive Orders on Environmental Justice
Toxic Substances Control Act
Comprehensive Environmental Response, Compensation, and Liability Act
Farmland Protection Policy Act
Native American Grave s Protection and Repatriation Act

Resources Evaluated Under NEPA

- Land use planning
- Air space
- Transportation and utilities
- Parks and other public lands
- Visual resources
- Human and other biological receptors
- All media (air, water quality and quantity, soils, noise levels)
- Natural resources (wildlife, vegetation, threatened and endangered species)
- Climate change (recent addition and recent CEQ guidance)
- Cultural resources (architectural and archaeological resources, traditional cultural properties, etc.)
- Socioeconomic impacts and Environmental Justice
- Hazardous materials and hazardous waste
- All other resources that could be affected by a proposed action or alternatives

Federal Actions Not Subject to NEPA

- Explicit statutory exemptions
- Functional equivalency exemptions (e.g., CERCLA)
- Presidential and Executive Office exemptions
- Congress, the Judiciary, or the President

None of these situations currently exist for FirstNet and they are extremely rare

Public Involvement

- The public is invited to be involved in shaping the environmental analysis, from an initial comment period to determine what should be included in the draft PEIS to a comment period and public meetings shortly after the release of a draft PEIS
- Meetings can be held in any area that is accessible to those with disabilities and can take on a variety of formats from a formal hearing to a more interactive informational session

When Must NEPA Begin?

- NEPA analysis should begin as soon as the Agency knows what it wants to do and the potential effects can be meaningfully evaluated

- FirstNet does not yet know exactly how or where we will deploy, but we DO know the types of actions we will likely use and the range of environmental conditions that may be encountered

FirstNet NEPA Compliance

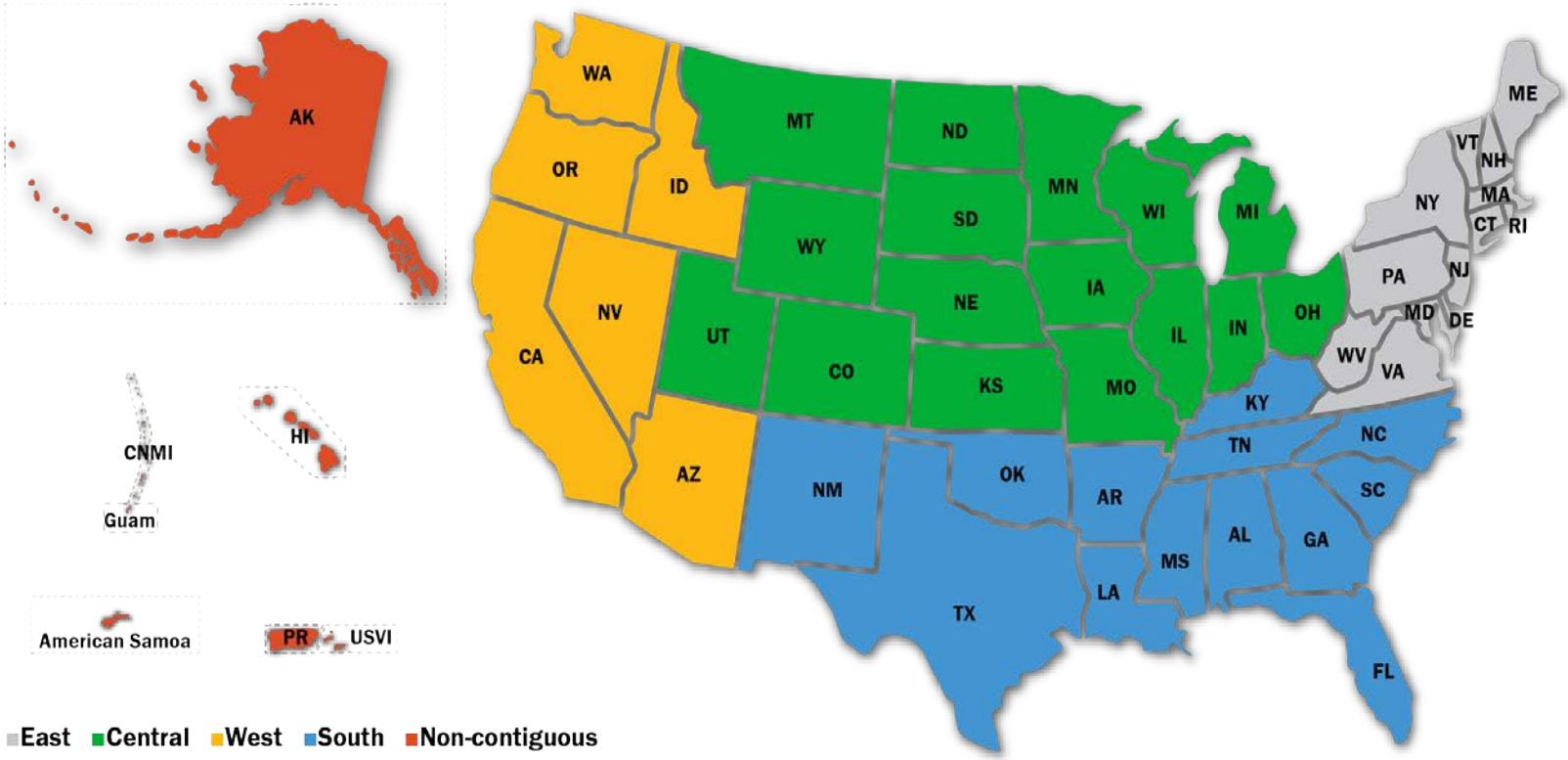
- To address these unknowns without delaying the project, we are preparing five regional Programmatic Environmental Impact Statements (PEISs)
- The PEISs will address most of the potential issues associated with FirstNet implementation, and identify best management practices and mitigation measures to reduce potential impacts
- This will decrease the time needed for future site-specific analysis once individual projects are defined

Opt-In vs. Opt-Out

- Generally speaking, FirstNet and its partners will be ultimately responsible for satisfying environmental compliance requirements for Opt-In states
- Environmental compliance with regard to Opt-Out states is a highly complex legal issue
- Generally speaking, regardless of whether federal funds are used, certain environmental compliance obligations will apply to Opt-Out states

Proposed NEPA Analysis

The programmatic documents are currently planned to cover five regions that are largely compatible with FEMA regions



National Historic Preservation Act

- Signed in 1966, NHPA is the most broad-reaching historic preservation law in the United States
- Established the National Register of Historic Places, the list of National Historic Landmarks, the Advisory Council on Historic Preservation (ACHP), and State Historic Preservation Offices (SHPOs)
- Requires the federal government to examine the effects of its actions on historic properties before committing resources

FirstNet and NHPA Compliance

- NHPA requires federal agencies to take into account the effects of their actions ("undertakings") on historic properties and afford the ACHP a reasonable opportunity to comment

- A federal agency is required to determine whether its activities could affect historic properties, which are those properties listed or eligible for listing on the **National Register of Historic Places** ("National Register")

- **Early action** in addressing historic preservation issues enables an agency to move forward in a timely manner

What is a historic property?

Buildings

Structures

Objects

Sites

Districts

Cultural Resources

- There are more than 560 federally-recognized American Indian tribes
- NHPA **promotes a partnership relationship** among federal agencies and the states, Indian Tribes, and Native Hawaiian Organizations to protect cultural resources
- Cultural resources may include sacred sites and landscapes, ceremonial sites, burial sites, human remains, and other resources of significance

Consultation

- *Consultation* under Section 106 (which is separate and apart from consultation under FirstNet's Act) refers to the process of seeking, discussing, and considering the views of other stakeholders
- Section 106 Consultation is a federal responsibility, and is specific to historic preservation issues
- The Section 106 regulations emphasize the **importance of consulting** with Indian Tribes and Native Hawaiian Organizations
- Tribes are considered sovereign nations, and therefore Section 106 Consultation must occur through a *formal government-to-government process*
- Tribal consultation accounts for current *and historic* territory

NEPA and NHPA

- NEPA and NHPA both require the government to examine the impacts of its proposed actions before taking them
- NHPA requirements can be addressed as part of the NEPA compliance process, *however…*
- NHPA consultation requirements apply regardless of requirements under NEPA
- Both NEPA and NHPA review, including consultation, must typically be completed before an action can begin
- Special review procedures exist for emergency situations and post-review discoveries

Anticipated PEIS Timeline

- FirstNet will accept comments from stakeholders throughout the process
- Many factors can impact the PEIS development timeline; actual dates may vary by region

Proposed Milestones:

November 2014: Publication of Notice of Intent

November – December 2014: Formal scoping

Winter 2014 – Winter 2015: PEIS development, including initiation of Section 106 consultation

Winter 2015 – Spring 2016: Release of Draft PEISs for comment, public meetings

Summer 2016 – Fall 2016: Review comments, revise PEISs as appropriate, continue consultation

Fall 2016: Release of Final PEISs and Draft Record of Decision

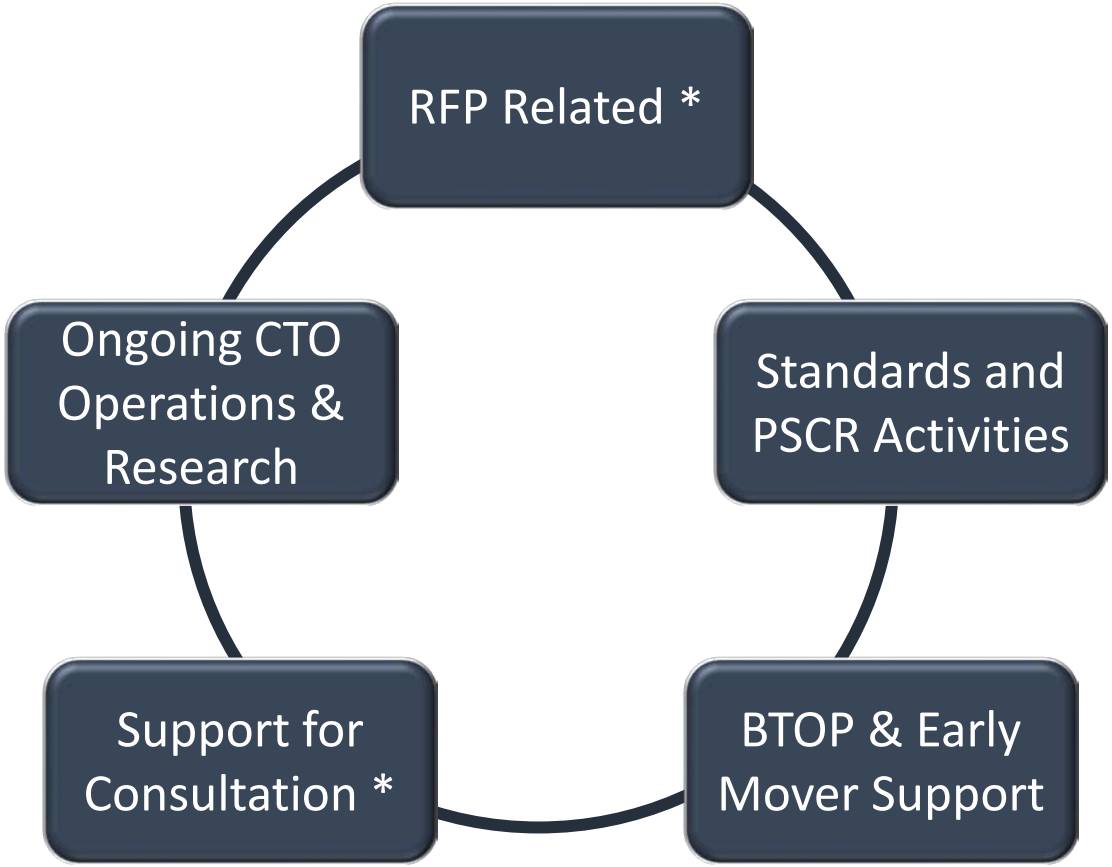
Winter 2016: Publish Final Record of Decision

Questions & Answers

CTO Updates

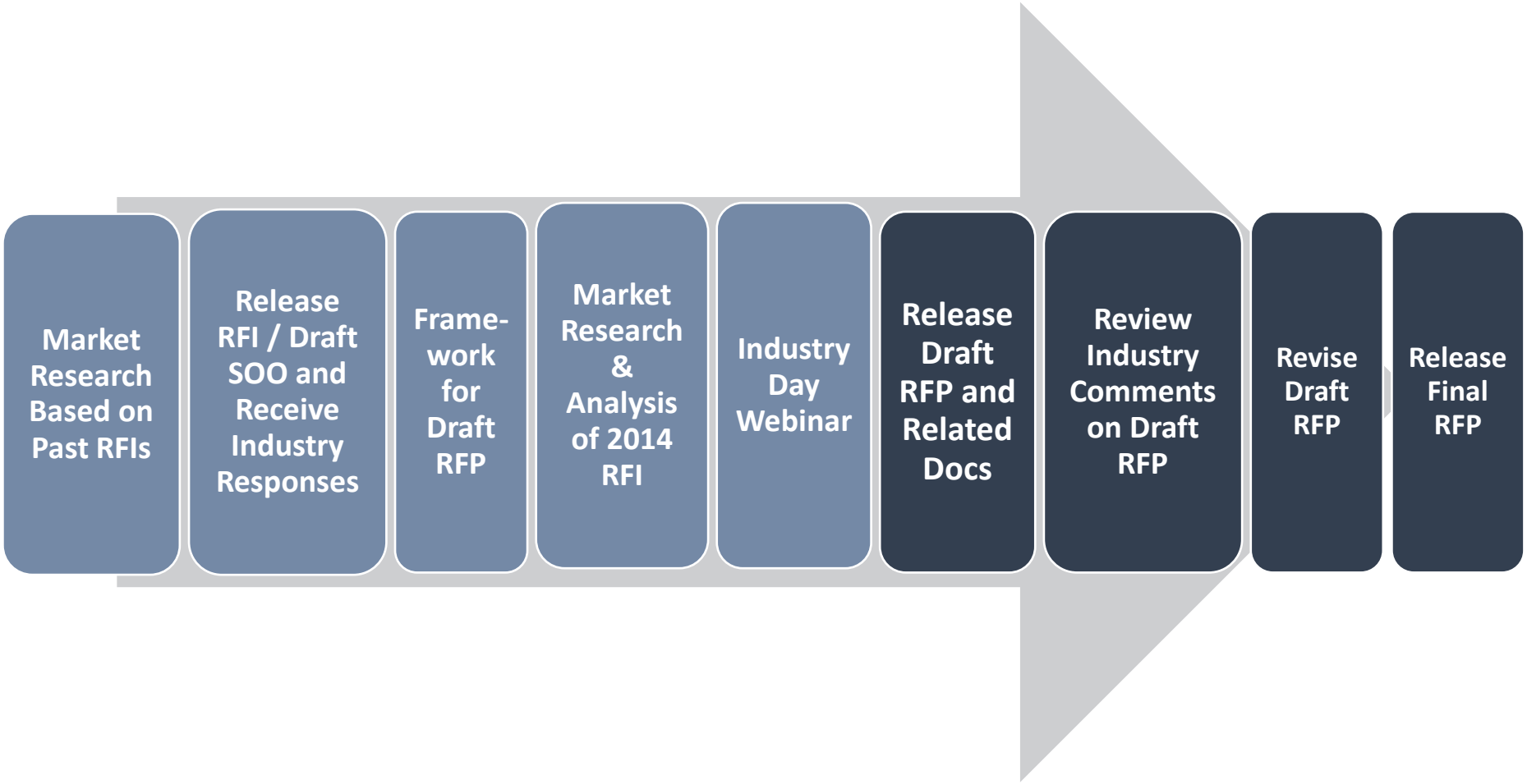
Jeff Bratcher

CTO Focus Areas



*** FirstNet Top Priority**

Progress of Key Technical Acquisition Documents



CTO Organization Evolution

TODAY

Planning & Design

- Market Research
- Industry Standards
- RFP and associated deliverables
- Skills aligned along network elements (RAN, Core, Device, Apps, etc.)
- ***Key Federal Leadership in Place***

TOMORROW

Source Selection, Development & Deployment

- Technical evaluation of offered solutions
- Increased team size to acquisition activities
- ***Additional Federal employees with Deployment and Operations Experience***

LONG-TERM

Ongoing Operations / Life Cycle Management

- Quality Assurance Surveillance
- SLAs / KPIs
- Network Evolution & Planning
- Standards advocacy
- ***Permanent employees focused on network operations and life cycle maintenance***

Identity, Credential, and Access Management (ICAM)

- **Devices can be shared by multiple users**
  - Cannot assume one-device-to-one-user
  - One user may have multiple devices
  - One device may have multiple users
- **Local control of user's identities**
  - Provisioning of first responders, roles, and attributes
  - Incorporation of more than 60,000 public safety agencies
- **Role and attribute-based access control**
  - Authorization for services and applications
  - Prioritization of public safety traffic during an incident
- **Management of diverse credentials**
  - Support multiple authentication methods
  - Ease of use required in the field, i.e., Single Sign On (SSO)

Cyber Security

- Effective cyber security is critical to FirstNet's success
- FirstNet collaborates with the Department of Homeland Security's (DHS) Office of Cyber Security and Communications, as well as other federal agencies
- We will leverage DHS tools that will be integral to FirstNet's Cyber Security Strategy

PSCR Supports FirstNet in 3 Key Areas

EVALUATION

- **What's working?**
  - Priority Pre-emption of bearers
  - ARP and QCI Configuration
  - Basic admission control
  - Basic packet scheduling
- **What is under investigation?**
  - Preemption triggers
  - Advanced admission control capabilities
- **What may need development?**
  - Establishment cause support
  - IMS based priority features (eMPS, Advanced Priority HSS/SPR)

Evaluation & Test

Modeling & Simulation

Standards

PSCR Supports FirstNet in 3 Key Areas (continued)

TEST

- **Current Focus (Allocation Retention Priority)**
  - User/Bearer Pre-emption
  - Bearer Admission
  - Bearer Modification
  - Congestion and Overload
- **On Deck (QoS Class Identifier)**
  - QoS/Traffic Flow
  - Packet Flow and Treatment
- **Looking Ahead**
  - Access Class
  - Emergency Services
  - Phase 2 Use Cases

Evaluation & Test

Modeling & Simulation

Standards

PSCR Supports FirstNet in 3 Key Areas (continued)

MODELING & SIMULATION

- Model the impact of target definitions and configuration on site count
- Model the impact of high power user equipment on nationwide site count
- Impact of traffic growth
- Network Resiliency

Evaluation & Test

Modeling & Simulation

Standards

FirstNet Features in the 3GPP Standards

Mission Critical PTT: Release 13

Proximity Services: Release 12 & 13

Group Communications System Enablers: Release 12 & 13

FirstNet feature needs are also supported by the UK, South Korea, Australia, and Canada

BTOP/Public Safety LTE Deployments

"FirstNet will provide technical support to these projects and will share any lessons learned with the broader public safety community to enable the successful implementation of FirstNet's nationwide deployment."

Project	SMLA	KLCP	Sites	Key Learnings	On-Air
1. LA-RICS	Yes	Yes	229	Quality of Service, priority/pre-emption	3Q15
2. NM	Yes	Yes	9	Hosted core, internat'l border spectrum management, federal partnerships	2Q15
3. NJ	Yes	Yes	31	Deployable assets, DR/COOP, training exercises, NOC notification	2Q15
4. ADCOM	Yes	In-Progress	17	PSCR/FirstNet test support, Band Class 14 device testing	NOW
5. TX	Yes	In-Progress	13	KLCP nearly complete (5 KLCs including core transition, data analytics, and extended modes)	NOW

SMLA: Spectrum Manager Lease Agreement
KLCP: Key Learning Conditions Plan

Questions & Answers

Open Forum

Wrap Up

Kristi Wilde

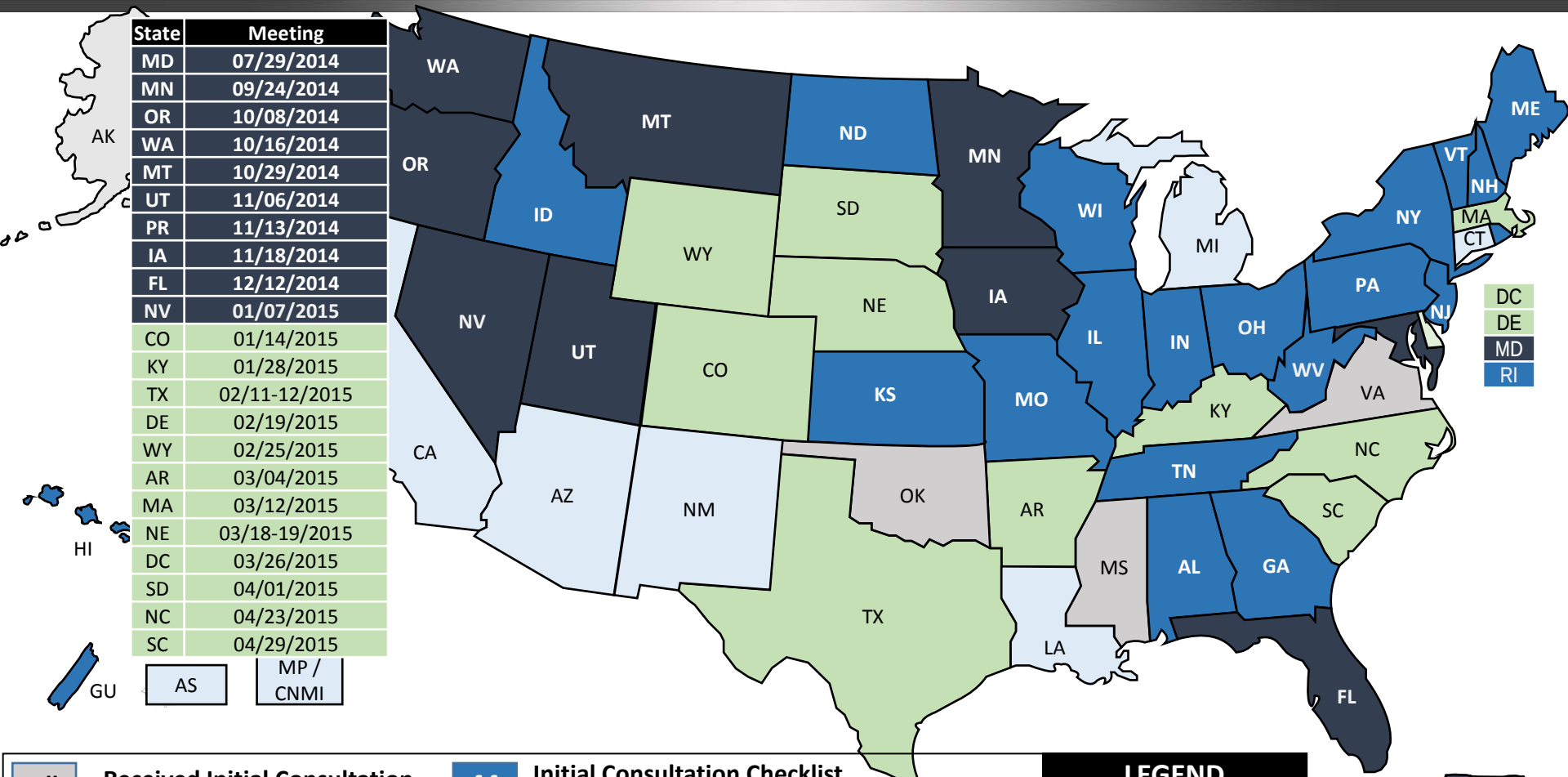
Upcoming Events

- March 24-25, 2015, Board Meeting, Washington, D.C.
  - March 24: Board Briefing and Committee Meetings, 9-6 pm
  - March 25: Board Meeting, 9-11:30 am
- April 2, 2015, SPOC Webinar, 2-3:30 pm
- April 2015, SPOC Meeting, Location TBD
- June 2-3, 2015, Board Meeting, San Diego, CA (PSCR conference site)
  - June 2: Board Briefing and Committee Meetings, 9-6 pm
  - June 3: Board Meeting, 9-11:30 am
- June 2015, PSCR and PSAC Conference, San Diego, CA

Tracker – State Consultation Activities

As of 08 January 2015

State	Meeting
MD	07/29/2014
MN	09/24/2014
OR	10/08/2014
WA	10/16/2014
MT	10/29/2014
UT	11/06/2014
PR	11/13/2014
IA	11/18/2014
FL	12/12/2014
NV	01/07/2015
CO	01/14/2015
KY	01/28/2015
TX	02/11-12/2015
DE	02/19/2015
WY	02/25/2015
AR	03/04/2015
MA	03/12/2015
NE	03/18-19/2015
DC	03/26/2015
SD	04/01/2015
NC	04/23/2015
SC	04/29/2015



LEGEND

All	Received Initial Consultation Package from FirstNet
44	Initial Consultation Checklist returned to FirstNet
52	Pre/consultation conference call scheduled or closed
10	Initial Consultation meeting held with FirstNet
12	Initial Consultation meetings scheduled in 2015

Today's Speakers

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