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## FirstNet Board Meeting

December 9, 2015



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## Public Safety Advisory Committee Update

**Harlin McEwen**  
PSAC Chairman

December 9, 2015

- Current vacancies
  - Police Non-Management First Responder
  - Fire Non-Management First Responder
  
- Organizational representative change
  - National Council of Statewide Interoperability Coordinators (NCSWIC) – Todd Early

- **Priority and Preemption (P&P):** Provided advice and recommendations on an initial framework for implementing access prioritization, user preemption, and application prioritization on the nationwide public safety broadband network (NPSBN)
- **Public Safety Grade (PSG):** Provided advice and recommendations on an initial methodology and framework for prioritizing and implementing public safety grade hardening recommendations for the NPSBN
- **User Equipment (UE):** Provided advice and recommendations on functional objectives for and ergonomic considerations of Band 14 broadband user equipment that will meet the operational needs of first responders

## ■ Priority and Preemption

- Barry Fraser (chair)
- Trey Forgety
- Brent Lee
- Chris Lombard
- Mel Maier
- Phil Mann
- Gary McCarraher
- Harlin McEwen
- Mark Ryckman
- Tom Sorley

## ■ Public Safety Grade

- Chris Lombard (chair)
- Dan Eaton
- Trey Forgety

– Barry Fraser

– Brent Lee

– Gary McCarraher

– Harlin McEwen

– Jonathan Olson

– Charlie Sasser

– Tom Sorley

– John Sweeney

## ■ User Equipment

– Harlin McEwen (chair)

– Niles Ford

– Jimmy Gianato

– Paul Patrick

– Tom Sorley

# Priority and Preemption Recommendations



- Defined basic usage patterns
- Developed access and applications prioritization framework
- Reviewed case studies of actual incidents submitted by task team members and adjusted usage patterns based on sequence of events

# Public Safety Grade Recommendations



- Identified 19 critical asset layers (e.g., fire stations, law enforcement locations, hospitals, major stadiums/arenas, airports, PSAPs, etc.)
- Developed methodology and applied filters to better prioritize asset layers
- Identified geographic hazards (e.g., earthquakes, hurricanes, flooding, etc.)

1. Vehicular Network System (VNS; formerly mobile communications units, or MCU)
2. Bring Your Own Device (BYOD)
3. Mobile Security
4. Virtual Assistants (VA)
5. Local Control
6. Internet of Things/Machine to Machine (IoT/M2M)
7. Portfolio Planning Process

# Requested Future Taskings



- Local Control
- Identity, Credential, & Access Management (ICAM)
- Public Safety Discipline Specific Working Groups
- Public Safety Communications Research Program (PSCR) Research and Development Project Task Team



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## Review of Charters

**Jason Karp**  
**Chief Counsel**

December 9, 2015

# Texas and Harris County Public Safety Broadband Update to FirstNet Board

**Todd M. Early**

Texas Single Point of Contact (SPOC)  
Statewide Interoperability Coordinator (SWIC)  
Deputy Assistant Director  
Law Enforcement Support Division  
Texas Department of Public Safety

**Shing Lin**

Director, Public Safety Technology Services  
Harris County



2009



2010



# Overcoming Congestion



# Overcoming Congestion



2011



2012

# Texas SMLA

- SMLA signed in August 2014
- Includes 5 Key Learning Conditions (KLCs):
  1. Core Transition
  2. Data Analytics
  3. Special Events
  4. Extended Mode
  5. Training

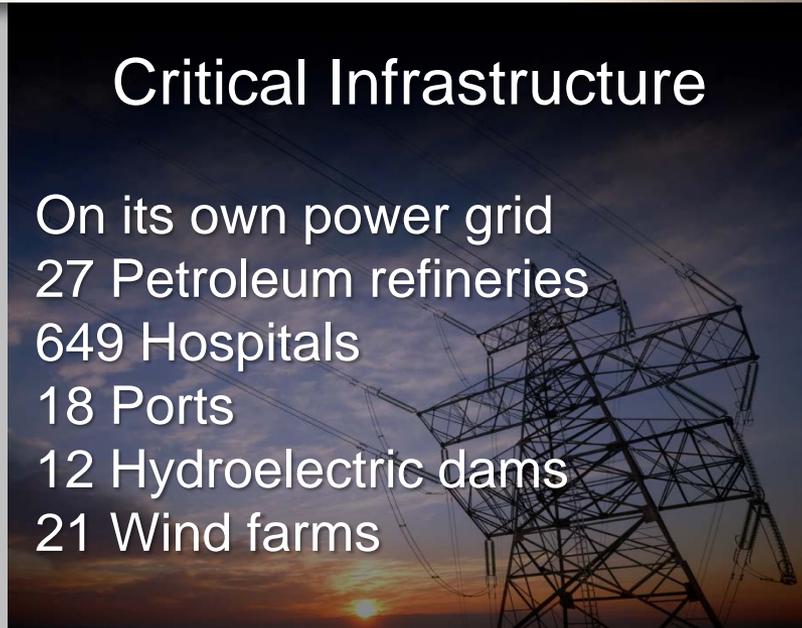
# The Texas Perspective

74,681 Certified  
Law Enforcement  
Officers



## Critical Infrastructure

On its own power grid  
27 Petroleum refineries  
649 Hospitals  
18 Ports  
12 Hydroelectric dams  
21 Wind farms



**EMERGENCY**

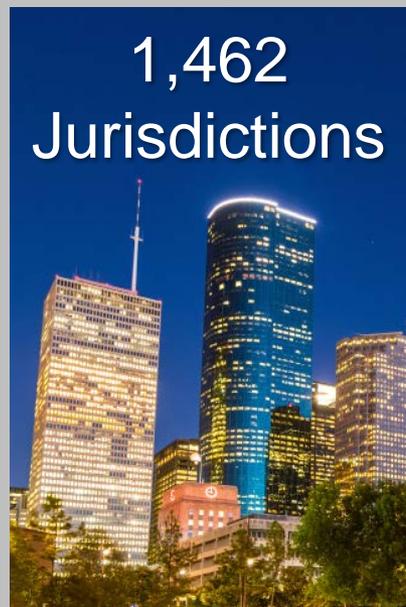


61,737 EMTs  
and Paramedics

78,000  
Firefighters



1,462  
Jurisdictions



1,254 Miles of  
International  
Border



3 Tribal  
Nations



# Texas Data Collection

Optimum Design in Texas begins with Texans!

## Priority Ranking:

Creating an objective tool to rank areas for build out

## Optimum Network Design

## Information Gathering:

Documenting the needs/requests of jurisdictions

- Participating in the process
- Providing necessary design information:
  - Current use of mobile data
  - Where mobile data coverage is needed

# Texas Data Collection

## Capacity

### How Much?

- # of Users and Devices
- Application Usage
- Data Consumption

- Texas used the Mobile Data Survey Tool provided by the DHS Office of Emergency Communications to collect our User / Device and Application data.
- Texas had a great response - over 1100 agencies completed the survey
- Data was submitted to FirstNet 9/30/15

# Texas Data Collection

Free Online Tutorial – Used Nationwide

Menu

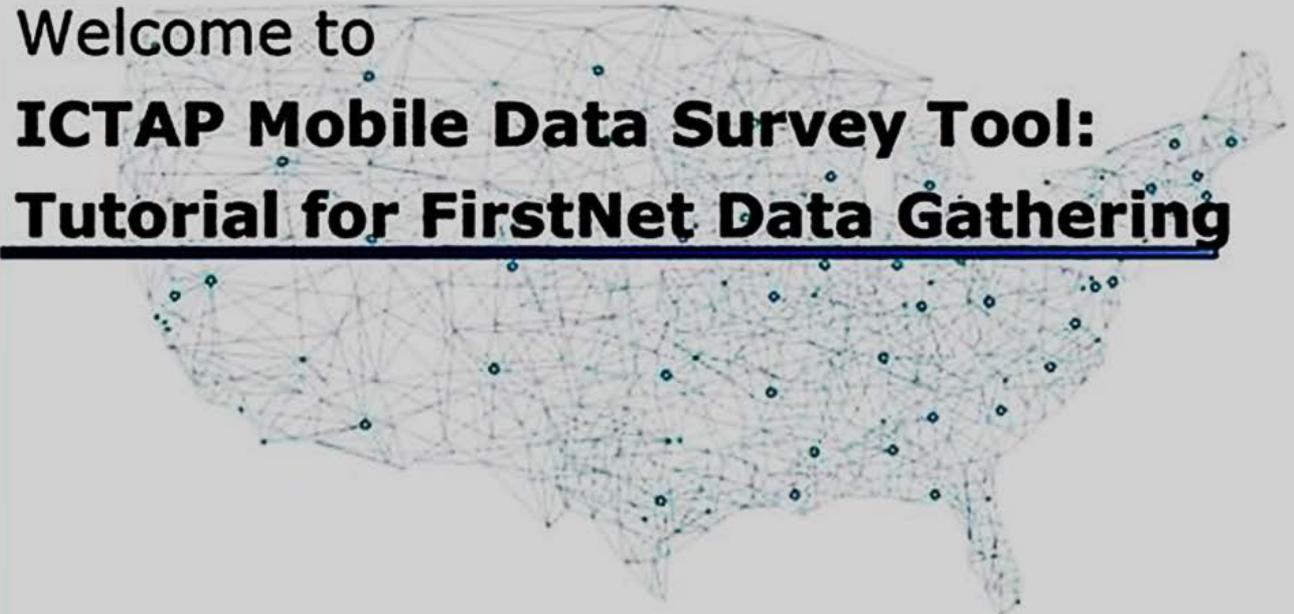
- Desktop
- Welcome and Viewing Needs
- Navigating the Course
- Course Objectives
- Why Public Safety Broadband
- Public Safety Broadband is C...
- Your Input is Vital
- Mobile Data Survey
- How Your Data Will Be Used?
- Steps to Public Safety Broad...
- Who Should File Out The MDS
- What You Will Need
- Making the MDS Easy
- Logging In
- Navigating the MDS
- PSE Information
- PSE Information Select Your ...
- PSE Info: Organization Size ...

MDS Course

Resources

## ICTAP Mobile Data Survey Tool

# Welcome to ICTAP Mobile Data Survey Tool: Tutorial for FirstNet Data Gathering



This course was developed by the Texas Public Safety Broadband Program and may be used without charge or permission by all United States public safety entities.



Next →

# Texas Data Collection

## Coverage

### Where?

- Where Needed (objectives)
- Different Device Types
- Throughput Levels

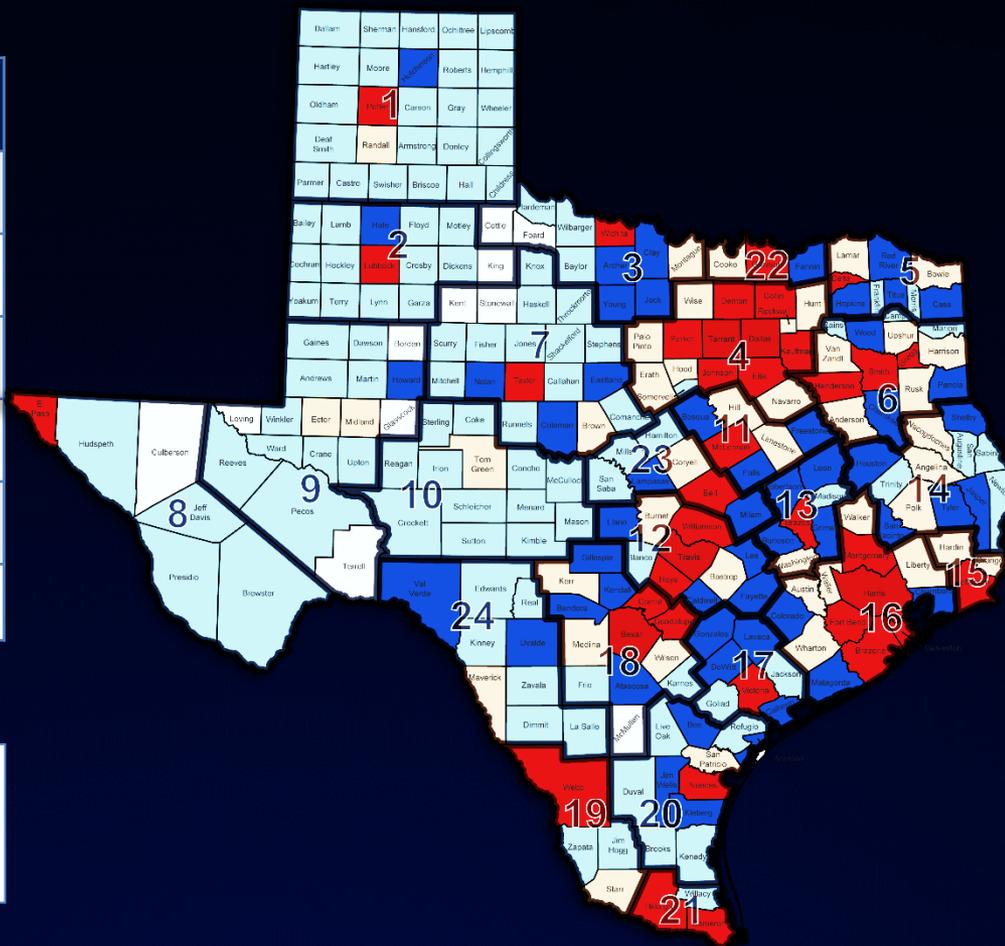
## Coverage Objectives collected in two phases:

- Phase 1: Statewide data was submitted to FirstNet on 9/30/15
- Phase 2: Online Coverage Objectives Mapping Tool will be rolled out ~ Q4 2015

# Texas Data Collection

## Where are Texas Public Safety Users?

Agency Type	Total Agencies	Total Sworn
Police (Local Law Enforcement)	1,507	52,363
Sheriff (County Law Enforcement)	254	29,152
State Police (State Law Enforcement)	1	3,636
Fire Departments (All/Most Career)	231	25,651
Emergency Medical Services	1421	61,690
<b>TOTAL</b>		<b>214,120</b>

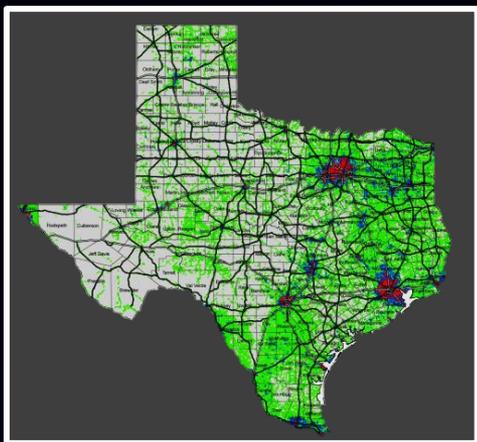


### LEGEND

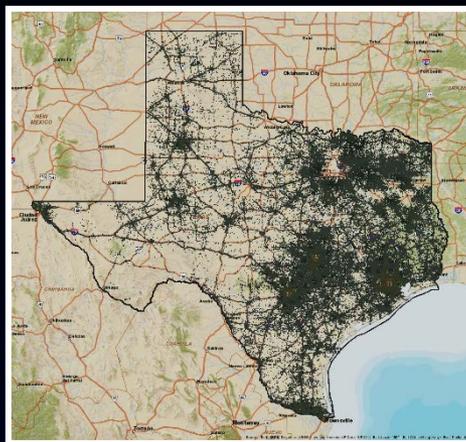
All Public Safety Users

<span style="color: lightblue;">■</span> 3-49	<span style="color: blue;">■</span> 50-249	<span style="color: orange;">■</span> 500-999	<span style="color: darkred;">■</span> 5000+
	<span style="color: darkblue;">■</span> 250-499	<span style="color: red;">■</span> 1000-4999	

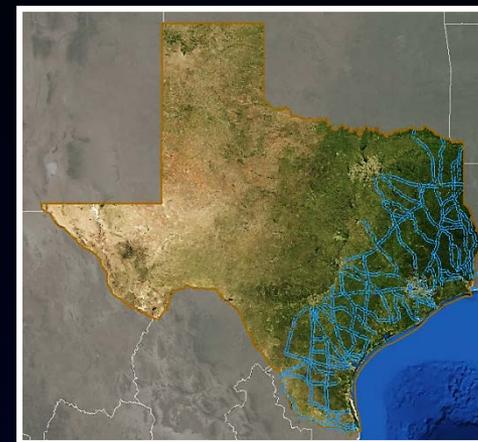
# Coverage Planning: TX Coverage Objective



FirstNet Coverage Objective Baseline



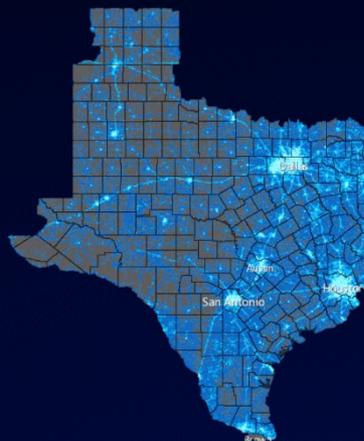
PSAP 911 call data



Hurricane evacuation routes



**Texas Coverage Objective Baseline Q4 2015**

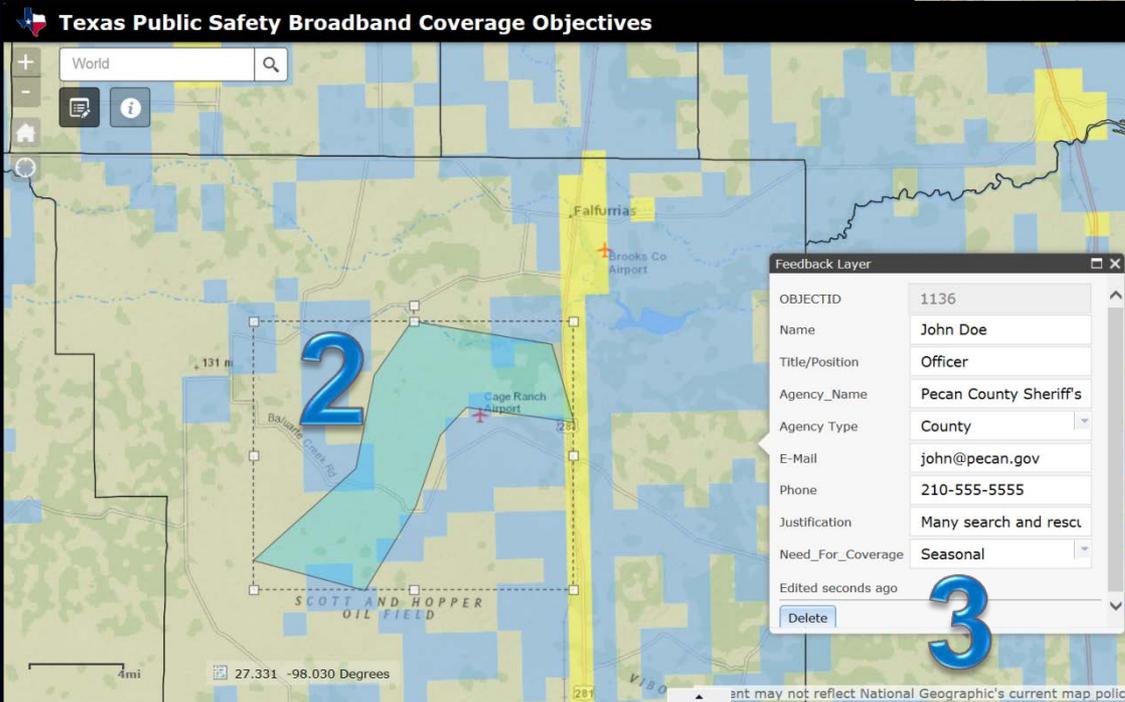
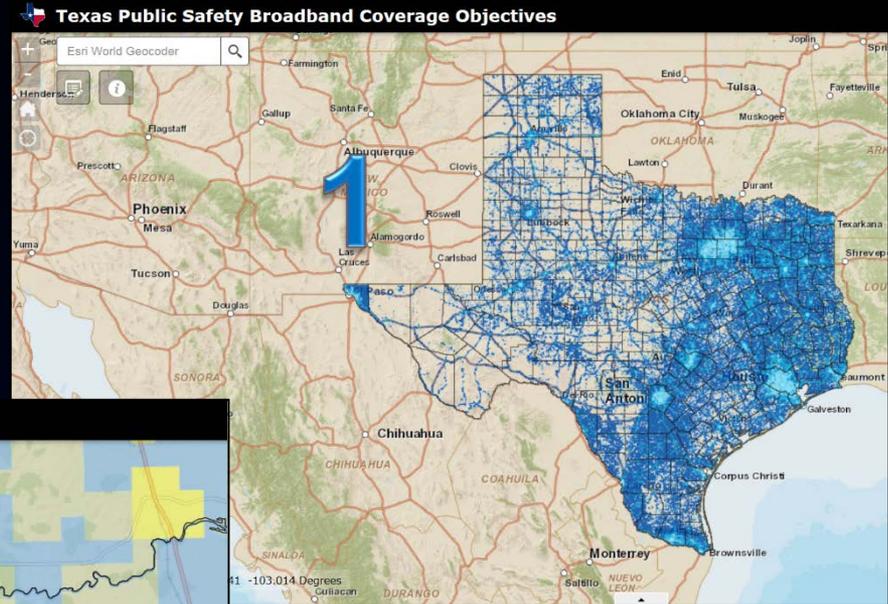


**Standardized into FirstNet 1x1 mile grid**

**Identify preliminary gaps in FirstNet baseline**

# Coverage Planning: Feedback Tool

**1** Interactive Texas coverage baseline released to Texas Councils of Government and first responder agencies Q4 2015



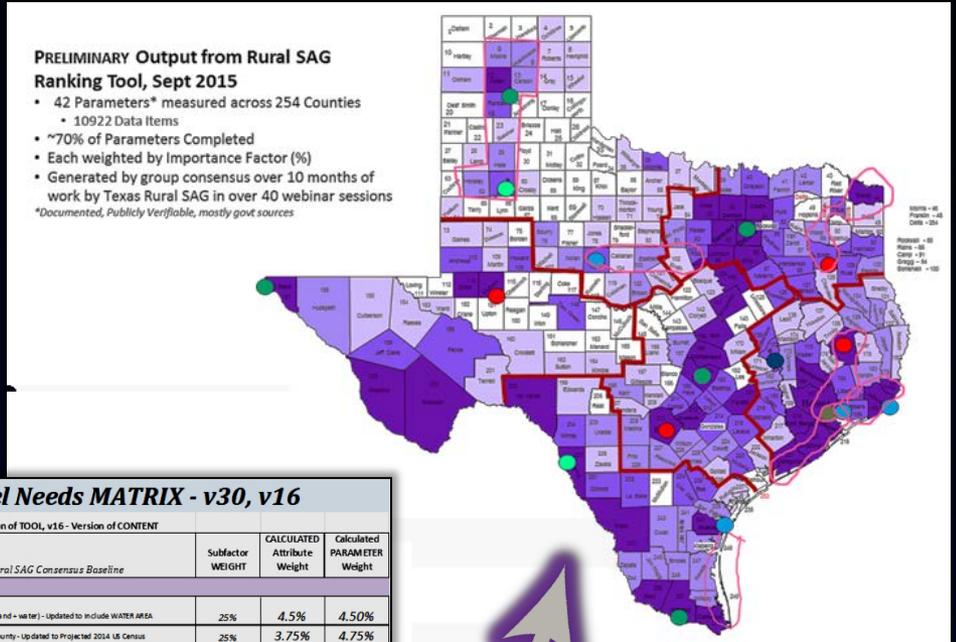
**2** Identify remaining coverage needs at the local level

**3** Incorporate first responder feedback Q1 – Q2 2016

# Coverage Planning: Phased Deployment Tool

Objective decision-making tool, based on dozens of weighted datasets covering areas such as:

1. High risk temporary populations
2. Border risk areas
3. Pipeline risks
4. Tribal interests
5. Transportation
6. Natural hazards



**PRELIMINARY Output from Rural SAG Ranking Tool, Sept 2015**

- 42 Parameters\* measured across 254 Counties
- 10922 Data Items
- ~70% of Parameters Completed
- Each weighted by Importance Factor (%)
- Generated by group consensus over 10 months of work by Texas Rural SAG in over 40 webinar sessions

\*Documented, Publicly Verifiable, mostly gov't sources

Texas Coverage Tool - County Level Needs MATRIX - v30, v16						
Factors Req'd by PL 112-96		v30 - Version of TOOL, v16 - Version of CONTENT				
CAT	WEIGHT	Weighting Matrix, Public Safety NEED BY COUNTY	Current Rural SAG Consensus Baseline	Subfactor WEIGHT	Calculated Attribute Weight	Calculated PARAMETER Weight
<b>20%</b> Key Priority Factors By County						
		1-County Geographic Area Incl Water	Square miles (land + water) - Updated to include WATER AREA	25%	4.5%	4.50%
		2-2014 Population by County	Residents by County - Updated to Projected 2014 US Census	25%	3.75%	4.75%
		2.1-Students - Public Early Ed - 12th Grade	Public Early Education Thru Grade 12 Students	5%	1.00%	
Fed Law		3-Tribal County Priority Factor	100-Maverick, 105P-El Paso, A-C-Park	30%	6.0%	6.00%
Fed Law		4-Texas Rural County Priority Factor	Density of more than 10 less than 100 persons/square mile (updated)	30%	6.0%	6.00%
<b>10%</b> Tribal Interests By County						
		5-Counties of Texas Tribes (3)	Tribal lands in acres in Federal Trust Status	20%	2.0%	
		5.1-Tribal Interests Outside Counties of Texas Tribes	Counties with substantive Texas tribal interests outside El Paso, Maverick or Park	10%	1.0%	
		6-Tribal Population Per County	% of Total Texas Population of Tribal People who reside in each County, use of Census Bureau		0.0%	3.5%
		6.1 K-12 American Indian & Alaska Native Students	Number of students in this ethnicity category by county, 2014-15	35%	3.5%	
<b>16%</b> Borders & Ports By County						
		Mexican Border Risk, Traffic Volume				7.20%
		7- Mexican Border Risk Areas	Is derived from combination of types of activities, number of occurrences and amount of deployed surveillance	20%	3.2%	
		8- Length of Mexican Border	Mexican border in linear miles by County	10%	1.6%	
		9- Annual Volume of People, Vehicles & Containers	Annual Volume of People, Vehicles & Containers	10%	1.6%	
		10- Number of Border Crossings and Interior Checkpoints	Number of Border Crossings and Interior Checkpoints by County	5%	0.8%	
		Sea Port Risk				4.80%
		11- Estimated Deep Sea Port Risk	Is derived from combination of types of cargo, tonnage of cargo and amount of international cargo	25%	4.0%	
		12- Number of Sea Ports of Entry	Number of Sea Ports on Gulf Coast by County	5%	0.8%	
<b>31%</b> Critical Infrastructure by County						
		14- Texas Military Assets	1) Texas Army National Guard, 2) Texas Air National Guard, 3) Texas State Guard; state heavily relies on these resources for Emergency and Disaster Response	5%	1.6%	1.55%
		15- Water Infrastructure (Tx Dams)	Texas Dams - by Maximum Storage Capacity per County in Acres-Foot	6%	1.9%	1.86%
		16- Critical Government Infrastructure	Gov't (Public Administration) "Establishments" by County	7%	2.2%	2.71%
		17- Prisons, Jails & Detention Centers	Percentage of (all) Prison Security Employees by County	1.75%	0.5%	
		18- Civil Aviation Infrastructure	Top 25 Airports, No. Enplanements Per Year (FAA), all civil air and private air bases	7%	2.2%	2.17%
		19- Nuclear Hazards (all)	Is derived based upon weighted combination of Nuclear-Related risks	5.5%	1.71%	1.71%
		20-PS Network & Comms Infrastructure	Number of Licensed PS Fixed Transmitters by County	8.00%	2.5%	2.48%
		21- Crime Offenses by County	Percentage of Crimes by County (2013 TrCOPS Data)	15.00%	4.7%	4.65%

# 2015 Initiatives

## Expand Strategic Advisory Groups (SAGs)

Tap into the creativity and knowledge of Texas stakeholders and ensure that everyone has a place to “plug in.”

First Responder  
Discipline-  
focused

PSAP/NG911

Education

Rural

Tribal

SEC

VOAD/  
Private Sector

State Agency

# Online Learning

First On-Line Learning  
Course

*Public Safety Broadband  
Overview*

Approved for 2 hour  
Continuing Education (CE)  
Credit

# TxPSBP Online Learning Portal

## Menu

### Desktop

- Welcome and Viewing Needs
- Navigating the Course
- Course Overview
- Wireless Broadband Network
- Public Safety Current Uses
- Fact or Myth
- Public Safety Broadband Net...
- National Disasters
- Growth of Consumer Traffic
- Current Data Communication
- Commercial Carrier Limitations
- Differences
- Similarities
- Land-Mobile Radio (LMR)
- Continued LMR Use
- Applications - Interdisciplina...
- Applications - Discipline Spe...
- New Cellular Broadband Net...
- FirstNet
- Benefits of FirstNet
- The Road to the Public Safet...
- Funding Model
- Costs
- Texas Participation
- Texas Public Safety Broadband
- State and Local Implementat...
- Whole Community Impacts
- Local Input
- BIG-Net
- Public Safety Broadband Net...
- Summary

DPSOnline

Resources

**Texas Public Safety  
Broadband Program**

**Introduction to Public Safety Broadband**

## Welcome to Introduction to Public Safety Broadband

Choose your viewing needs to begin.



Desktop/  
Laptop



Assistive  
Device User

**Texas Public Safety  
Broadband Program**

# TxPSBP Online Learning Portal

### Differences

Select each characteristic below to learn more about the differences between commercial networks and the Public Safety Broadband Network.

#### Commercial Broadband

- Consumer oriented
- Not hardened
- Carrier band class

Number of Users

Devices

Network Resiliency

Priority

Security

Speed

Applications

Control

#### Public Safety Broadband

- Hardened devices available
- Band Class 14 only for public safety
- Potentially marginally higher priced than consumer devices



## Public Safety Broadband Network: Example Scenario

### Pitcher Bridge Collapse

At 7:34am an international vessel, The Curie, struck the pylons of the Pitcher bridge. At the time of impact, 12 cars were on the bridge with 17 passengers, and 100 crew members were on the ship with 24 seriously injured.

The number of responding agencies grows as more information is discovered. Interoperable communications is key in saving lives and property.

**Select the next button to review the communication efforts during this incident.**



# TxPSBP Online Learning Portal



## Introduction to Public Safety Broadband

### Public Safety Broadband Network: Example Scenario

This network will open the door to the possibility of applications that are region-specific, or incident-specific. For this exercise, the application is incident specific to the bridge impact and subsequent collapse. This is only an example of the capabilities the Public Safety Broadband Network could open up.







## Why TxPSBP?

The State of Texas Public Safety Broadband Program's (TxPSBP) mission is to work in conjunction with FirstNet to plan a dedicated broadband network for public safety across Texas.

[Read more »](#)

## Learn

- [What is public safety broadband?](#)
- [Who is FirstNet?](#)
- [What is TxPSBP?](#)
- [How is it funded?](#)
- [Who are Early Builders?](#)

## Get Involved

- [Regional Planning Meetings](#)
- [Broadband Planning Teams](#)
- [Strategic Advisory Groups](#)
- [Upcoming Events](#)
- [Sign up for the Newsletter](#)
- [Request a Speaker](#)

## Vision

- [Your Discipline](#)
- [Applications](#)
- [Benefits](#)
- [The Future](#)

# Deployment Planning

## Incidents, Events, Exercises

- SXSW
- Austin City Limits
- Rodeos
- Super Bowl
- Speedways
- Many Others...

# Key Points

- Texas has many public safety entities who can't afford devices/monthly service
- Border coverage is critical
- Broadband coverage to schools
- Rural deployment is critical to Texas
- Leverage existing infrastructure



# Harris County *LTE*

## Public Safety Technology Services



# Project Summary

- One of five first builders in the nation
- Not an original BTOP project
- Project consists off
  - Harris County Service Area
  - 1 Mobile Unit
  - 1 Site in Brazos County (extended range)



# Status and Strategy

## Current Status

- 18 Sites in Harris County service area
- 1 Site in Brazos County (Extended range test site)
- 1 Mobile Unit

## Move Forward Strategy

- Data First
- Mobile Coverage First (37 sites – Phase 1)
  - Funded for completion
- Portable Coverage to follow (+60 sites)
- Developing Voice(VoLTE) Strategy





# What's Next?

- Completing Process and Support System Development
- Continuing Build Out
  - Continuous site evaluations
  - Goal: Mobile Coverage Complete End Summer 2016
- Communication and Outreach
- Inter-Local Agreement discussions



# For More Information...



[www.firstnet.gov](http://www.firstnet.gov)



[www.TxLTE.com](http://www.TxLTE.com)



@TxLTE #TxLTE



[LTE@dps.texas.gov](mailto:LTE@dps.texas.gov)

# Texas and Harris County Public Safety Broadband Update to FirstNet Board

**Todd M. Early**

Texas Single Point of Contact (SPOC)  
Statewide Interoperability Coordinator (SWIC)  
Deputy Assistant Director  
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**Shing Lin**

Director, Public Safety Technology Services  
Harris County



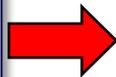
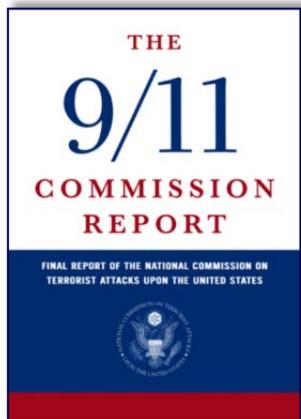
# FirstNet<sup>®</sup>



## CEO Update

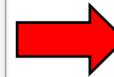
**Mike Poth**  
CEO

December 9, 2015



### Associations Supporting D-Block Reallocation

<i>National Governors Association</i>	<i>National Criminal Justice Association</i>
<i>National Association of Counties</i>	<i>National Association of Police Organizations</i>
<i>National League of Cities</i>	<i>National Volunteer Fire Council</i>
<i>United States Conference of Mayors</i>	<i>National Troopers' Coalition</i>
<i>Council of State Governments</i>	<i>National Organization of Black Law Enforcement Executives</i>
<i>International City/County Managers Association</i>	<i>Association of Air Medical Services</i>
<i>National Conference of State Legislatures</i>	<i>Advocates for Emergency Medical Services</i>
<i>International Association of Chiefs of Police</i>	<i>Emergency Nurses Association</i>
<i>International Association of Fire Chiefs</i>	<i>National Association of Emergency Medical Services Physicians</i>
<i>National Sheriffs' Association</i>	<i>National Association of Emergency Medical Technicians</i>
<i>Major Cities Chiefs Association</i>	<i>National Association of State Emergency Medical Service Officials</i>
<i>Metropolitan Fire Chiefs Association</i>	<i>National Emergency Medical Services Management Association</i>
<i>Major County Sheriffs' Association</i>	<i>American Probation and Parole Association</i>
<i>Association of Public-Safety Communications Officials</i>	<i>National Association of Regional Councils</i>
<i>National Emergency Management Association</i>	
<i>International Association of Emergency Managers</i>	
<i>Police Executive Research Forum</i>	



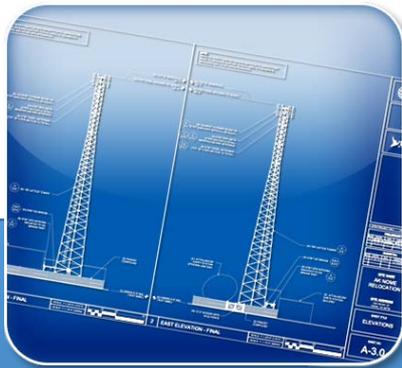
## THE LAW

**2.22.12**

FirstNet becomes law

PL 112-96

# Public Safety Consultation In All NPSBN Stages



**Planning**



**Deployment**



**Operations**

**CONSULTATION**

# RFP Inputs & Development



## OBSERVATIONS/RECOMMENDATIONS

Early Builder KLCs  
PSAC Assignments

## CONSULTATION

State/Tribal/Federal  
Data Collection  
Public Notices

## VENDOR OUTREACH

Market Research (incl RFIs)  
Industry Days





**FirstNet 5-Year  
Strategic Plan**



**State Plans**



**Consultation –  
States, Territories,  
Federal Agencies,  
Tribal Nations**



**Standards,  
R&D w/PSCR,  
Testing & Eval**

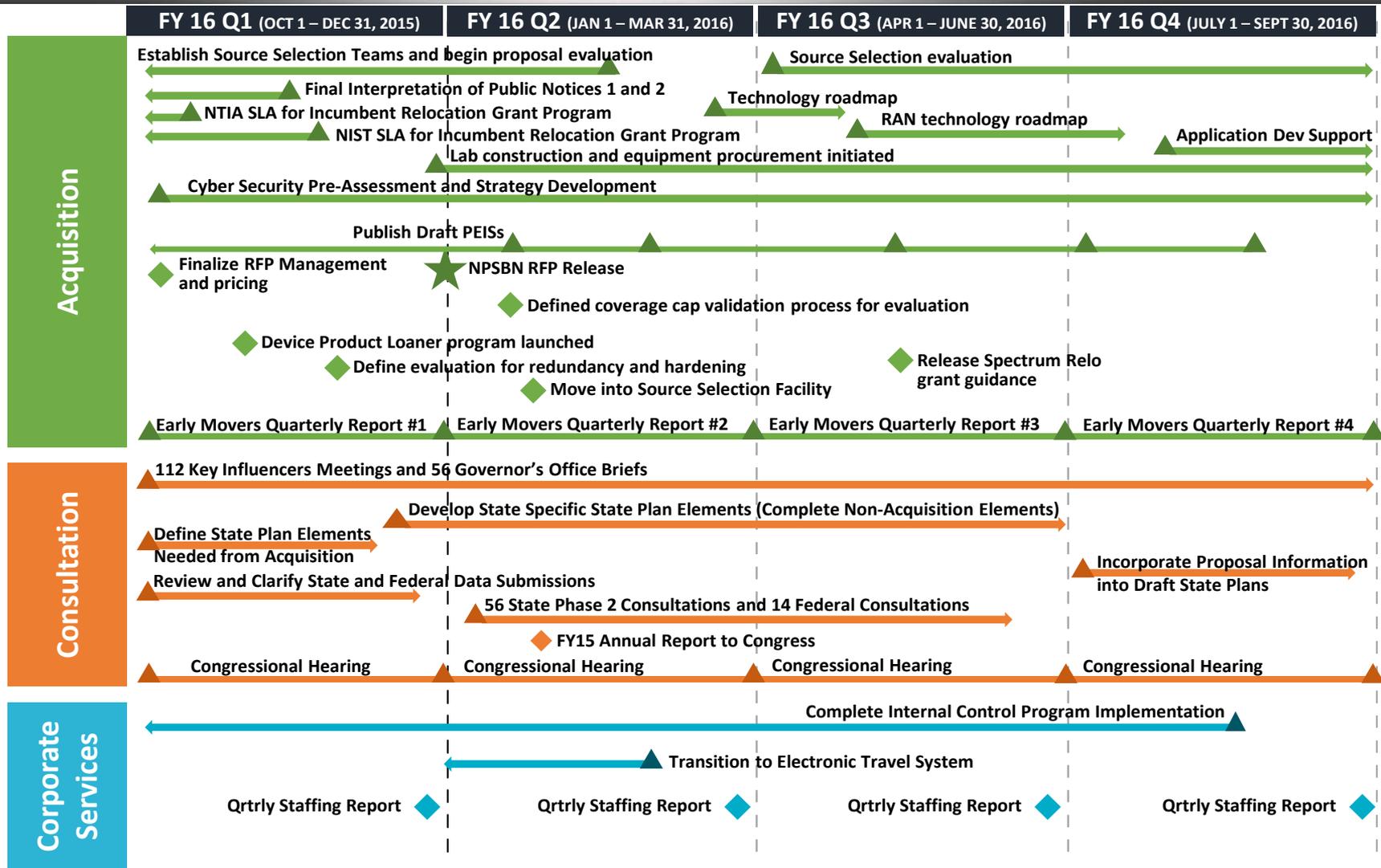


**PSAC Assignments**



**Early Builder KLCs**

# FY 2016 FirstNet Milestones



- Acquisition
- Consultation
- Corporate Services

**The Board is now in  
closed session**



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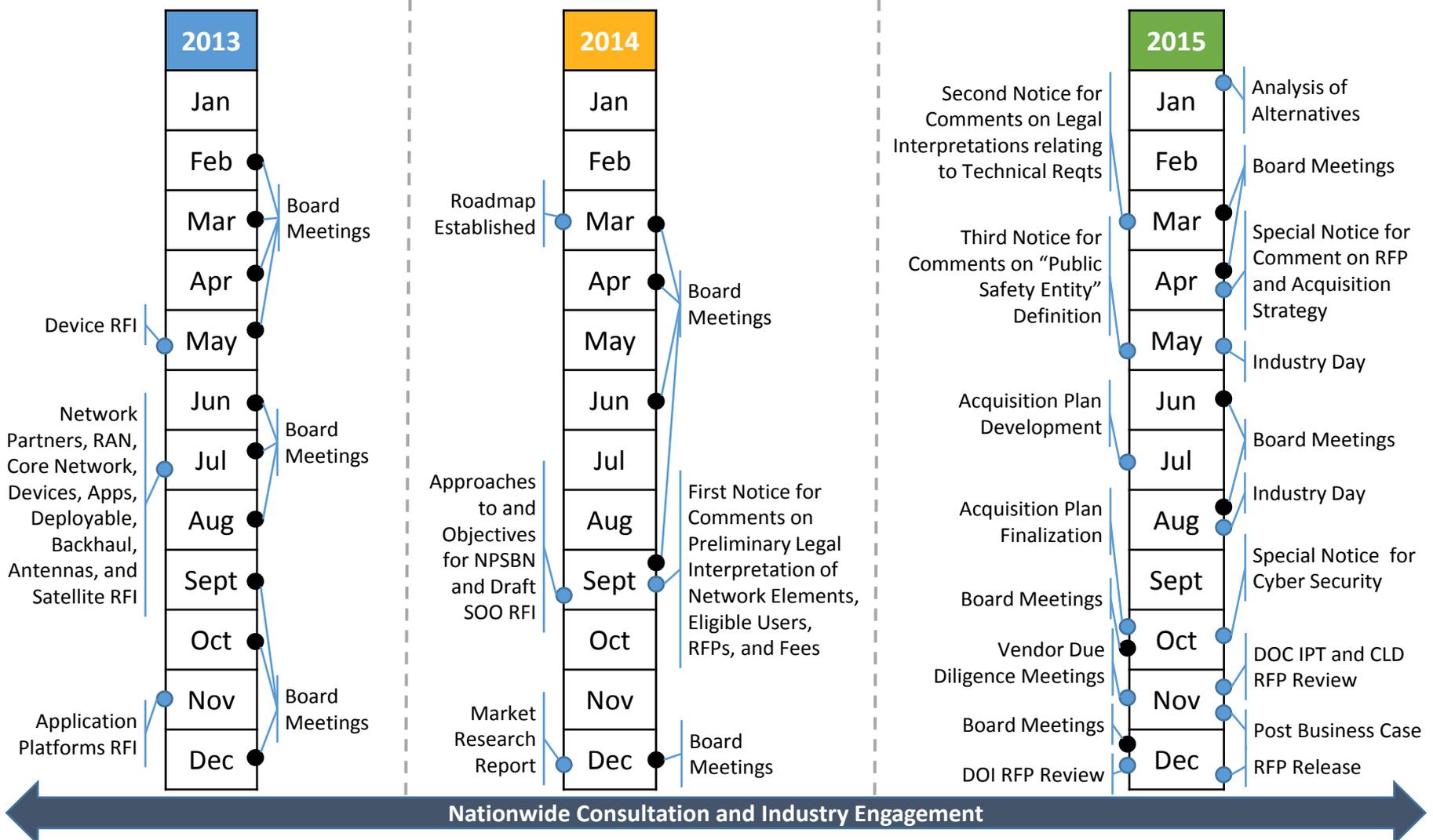


## RFP Update

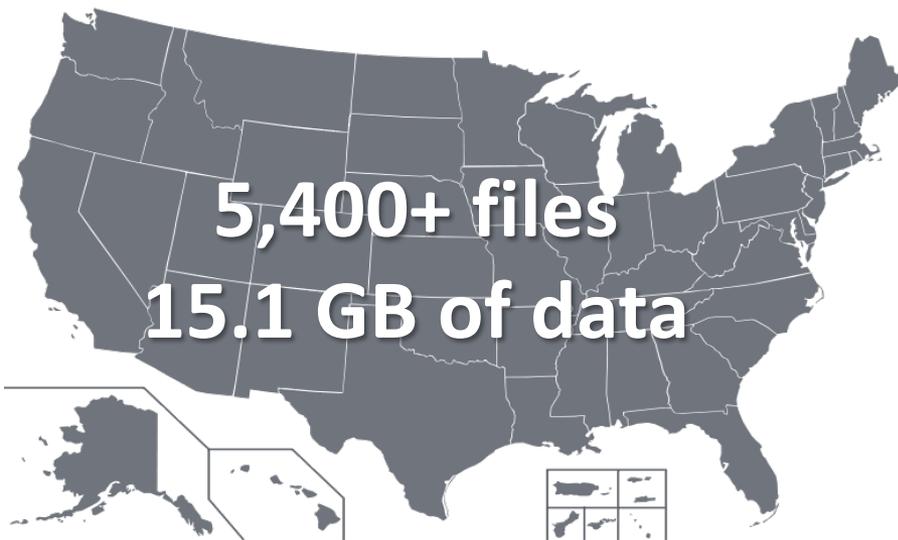
**TJ Kennedy**  
President

December 9, 2015

# RFP Development and Stakeholder Review Timeline



# Data Submission Summary

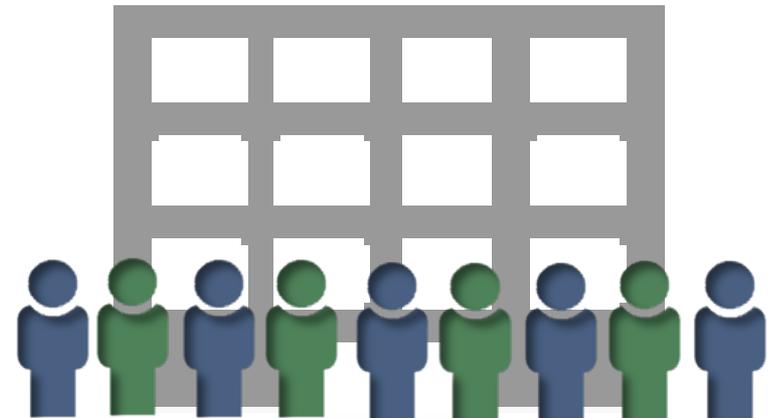


**54** States and Territories

**7** Federal Agencies

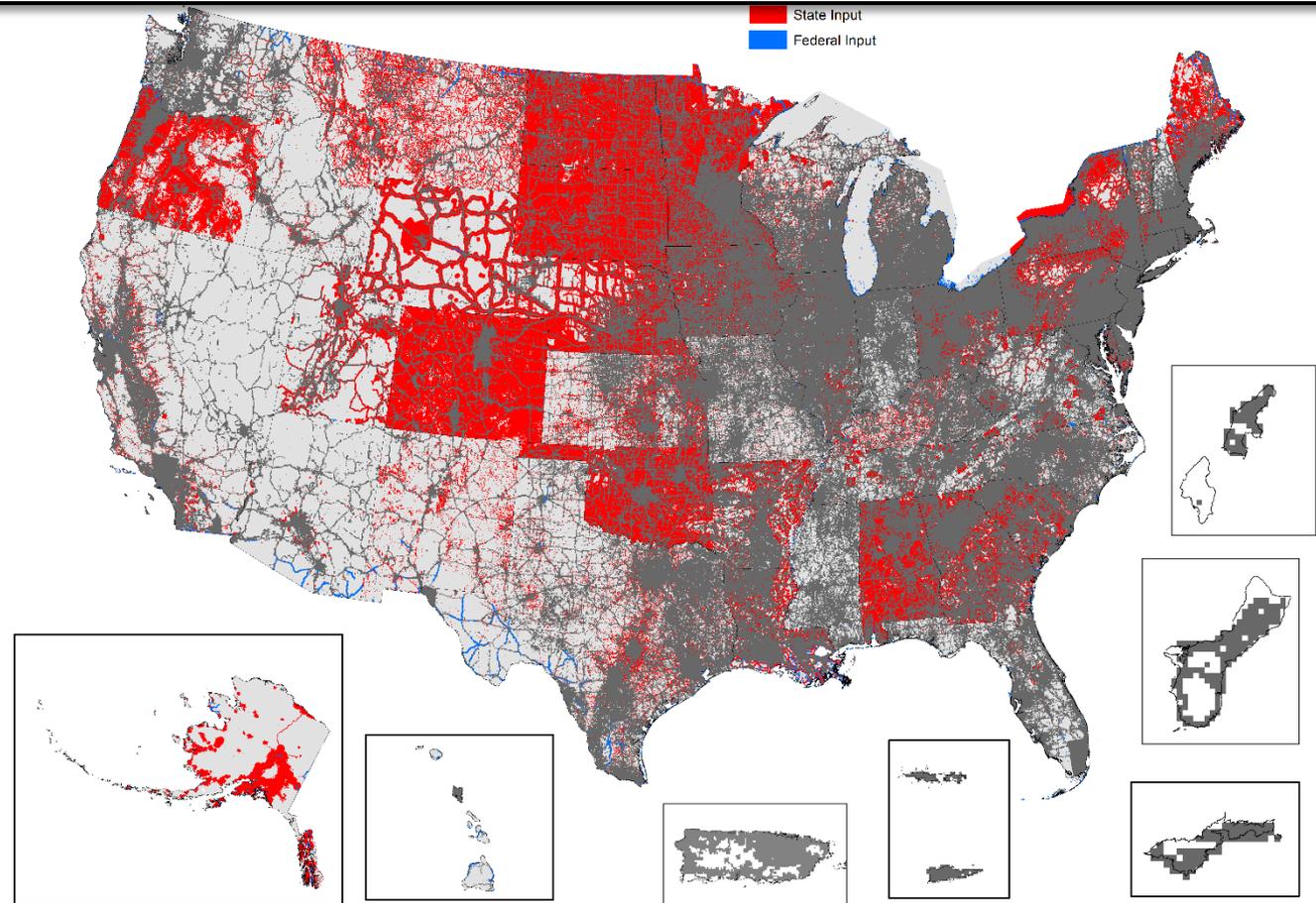
**11,600+** Entities Surveyed

**1.6m+** Personnel Represented



# Aggregating Coverage Inputs

FirstNet Baseline + **State Inputs** + **Federal Inputs**



# Section C: Statement of Objectives



**Building, Deployment, Operation & Maintenance of the NPSBN**



**Financial Sustainability**



**First Responder User Adoption**



**Device Ecosystem**



**Applications Ecosystem**



**Accelerated Speed to Market**



**User Service Availability**



**Service Capacity**



**Cyber Security**



**Priority Services**



**Integration Of Opt-out State RANs**



**Integration of Existing Commercial/ Federal/ State/Tribal/Local Infrastructure To Support NPSBN Services**



**Life-cycle Innovation**



**Program and Business Management**



**Customer Care and Marketing**



**Facilitation of FirstNet's Compliance With The Act & Other Laws**

# Evaluation Criteria in the RFP



## Business Management Factor

- Leadership and Program Management
- Public Safety Customer Acquisition
- Customer Care and Lifecycle Sustainment
- Financial Standing
- Delivery Mechanism for State Plans



## Coverage & Capacity Factor

- Band 14 & Non-Band 14\* Coverage and Capacity
- RAN solutions
- IOC/FOC Milestones for Coverage and Capacity
- Ability to demonstrate rural partnerships



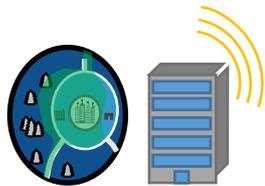
## Value Proposition Assessment

- Meets FirstNet sustainability objective
- Use of FirstNet's \$6.5B
- Demonstrated synergies & added value
- Unbalanced/unreasonable value determination



## Past Performance Factor:

- Successful project completion history (e.g., similar scope, within schedule, within budget, quality deliverables)
- Quality of cooperation and responsiveness
- Performance measure implementation and improvement



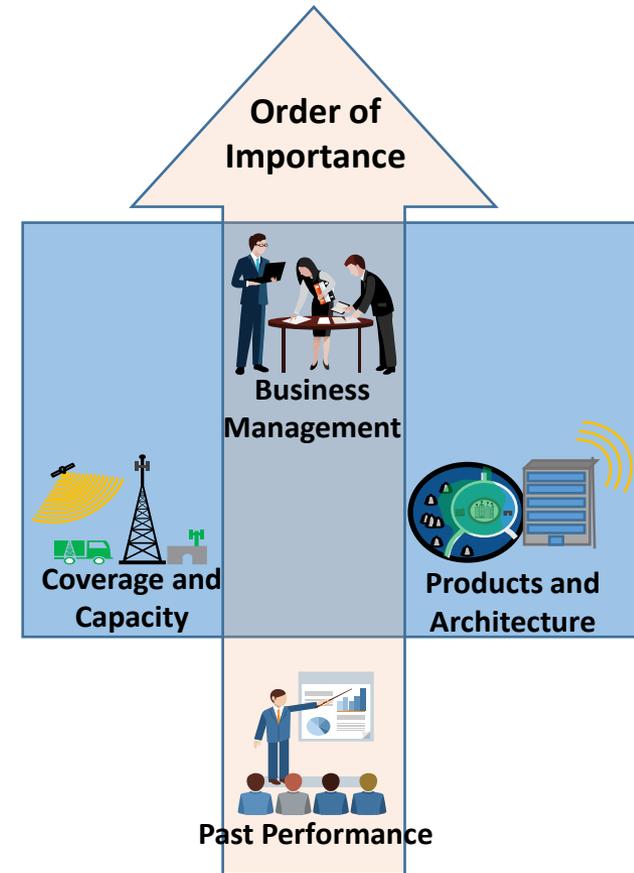
## Products & Architecture Factor

- Service (public safety features)
- Applications
- Device
- Architecture and Infrastructure
- Operations
- Security



## Risk

- Proposal Risk
- Performance Risk



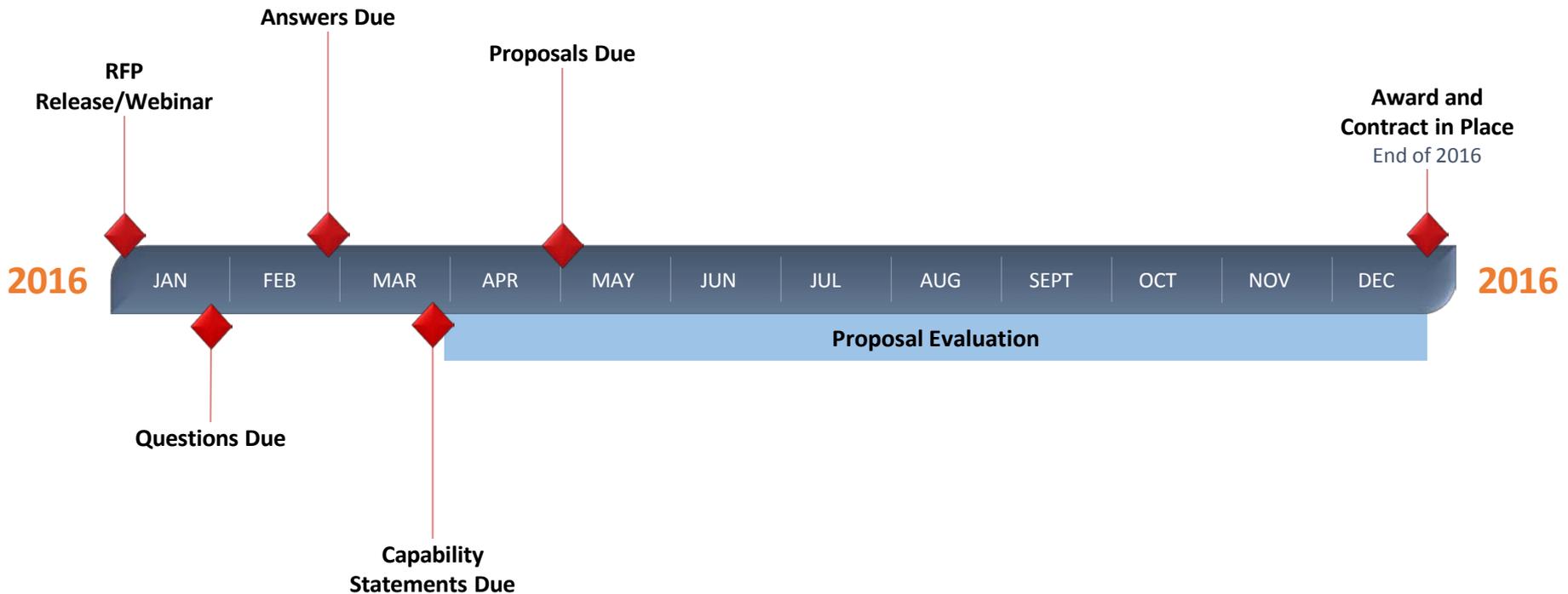
\* Where applicable

# RFP Sections



Section Title	Page Count
Section A: Solicitation, Offer, and Award	1
Section B: Pricing	7
Section C: Statement of Objectives	7
Section D: Packaging and Marking	2
Section E: Inspection and Acceptance	3
Section F: Deliverables and Performance	13
Section G: Contract and Task Order Administration	8
Section H: Special Contract and Task Order Requirements	17
Section I: Contract Clauses	25
Section J: List of 26 Attachments – includes FCC TAB Report	339
Section K: Representations and Certifications	8
Section L: Instructions, Conditions, and Notices to Offerors	55
Section M: Evaluation Criteria	23
<b>Total</b>	<b>508</b>

# Draft Evaluation Schedule





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## CEO Recap

**Mike Poth**  
CEO

December 9, 2015