FirstNet Board Meeting

December 9, 2015

Public Safety Advisory Committee Update

Harlin McEwen
PSAC Chairman

December 9, 2015

PSAC Organization

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

PSAC Task Teams

- **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

PSAC Task Team Members

- 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.)

User Equipment (UE) Topics

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

Review of Charters

Jason Karp
Chief Counsel

December 9, 2015

Texas Public Safety Broadband Program

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

HARRIS COUNTY
1836
TEXAS

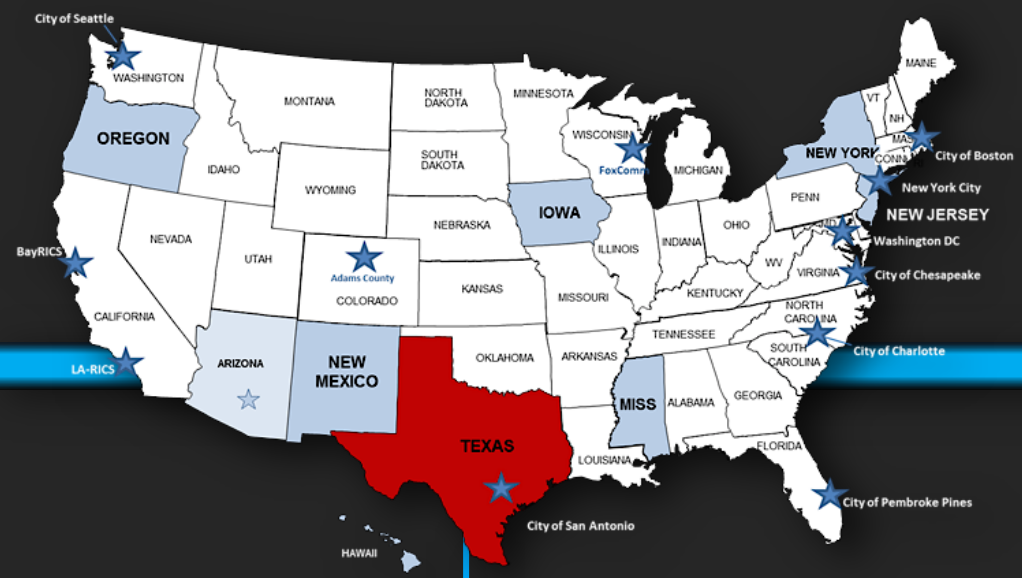
2009

DEPARTMENT OF PUBLIC SAFETY
TEXAS
COURTESY - SERVICE - PROTECTION

2010

Overcoming Congestion

Overcoming Congestion



2011

FirstNet™

2012

Texas SMLA

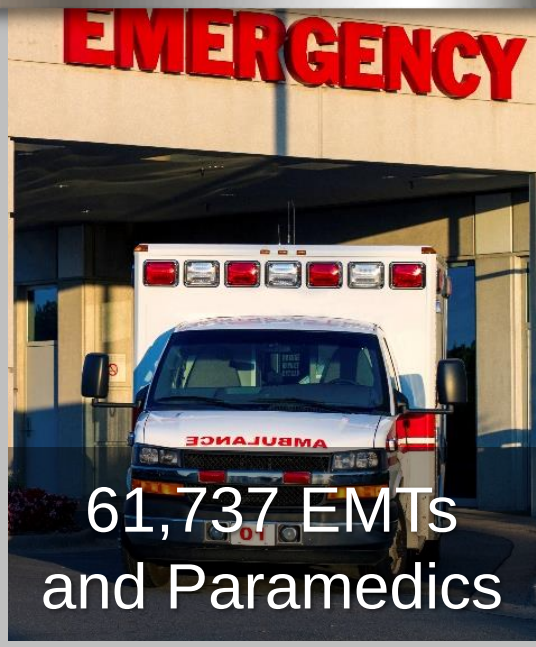
- SMLA signed in August 2014
- Includes 5 Key Learning Conditions (KLCs):
  1. Core Transition
  2. Data Analytics
  3. Special Events
  4. Extended Mode
  5. Training

The Texas Perspective

74,681 Certified Law Enforcement Officers

Critical Infrastructure

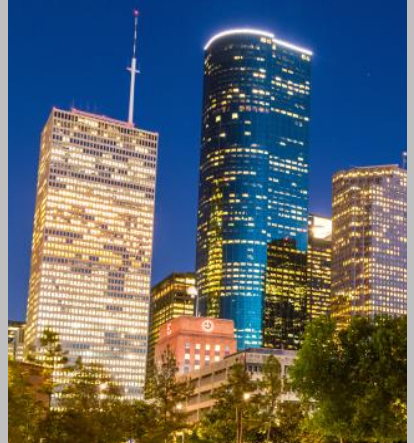
On its own power grid
27 Petroleum refineries
649 Hospitals
18 Ports
12 Hydroelectric dams
21 Wind farms



61,737 EMTs and Paramedics

78,000 Firefighters

1,462 Jurisdictions

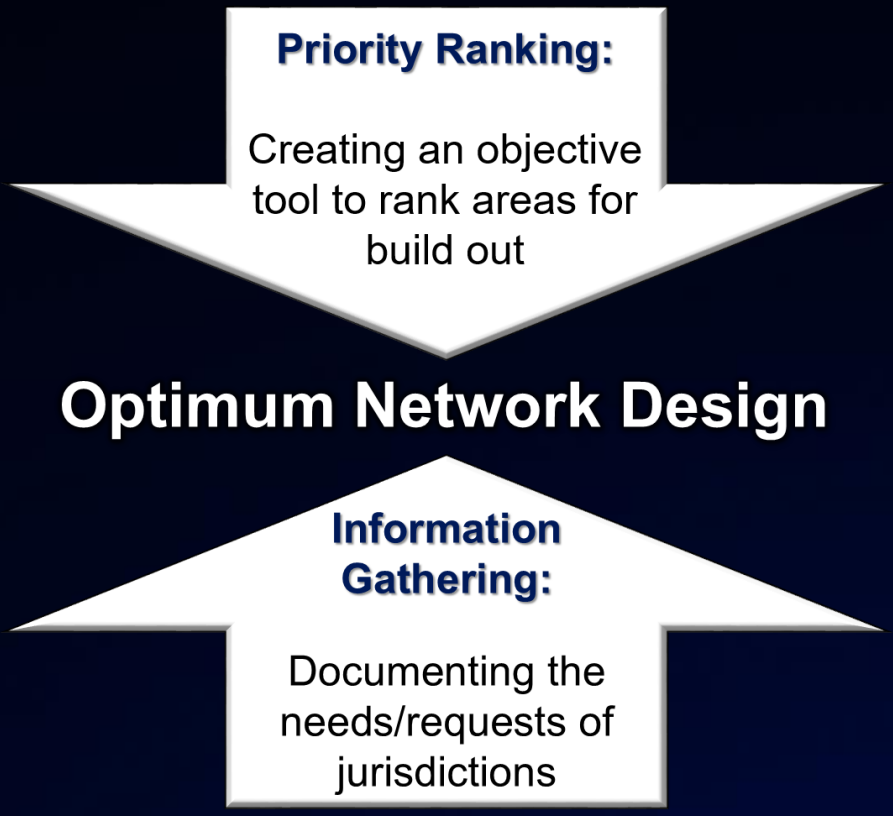


1,254 Miles of International Border

3 Tribal Nations

Texas Data Collection

Optimum Design in Texas begins with Texans!



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

Texas Data Collection

Capacity

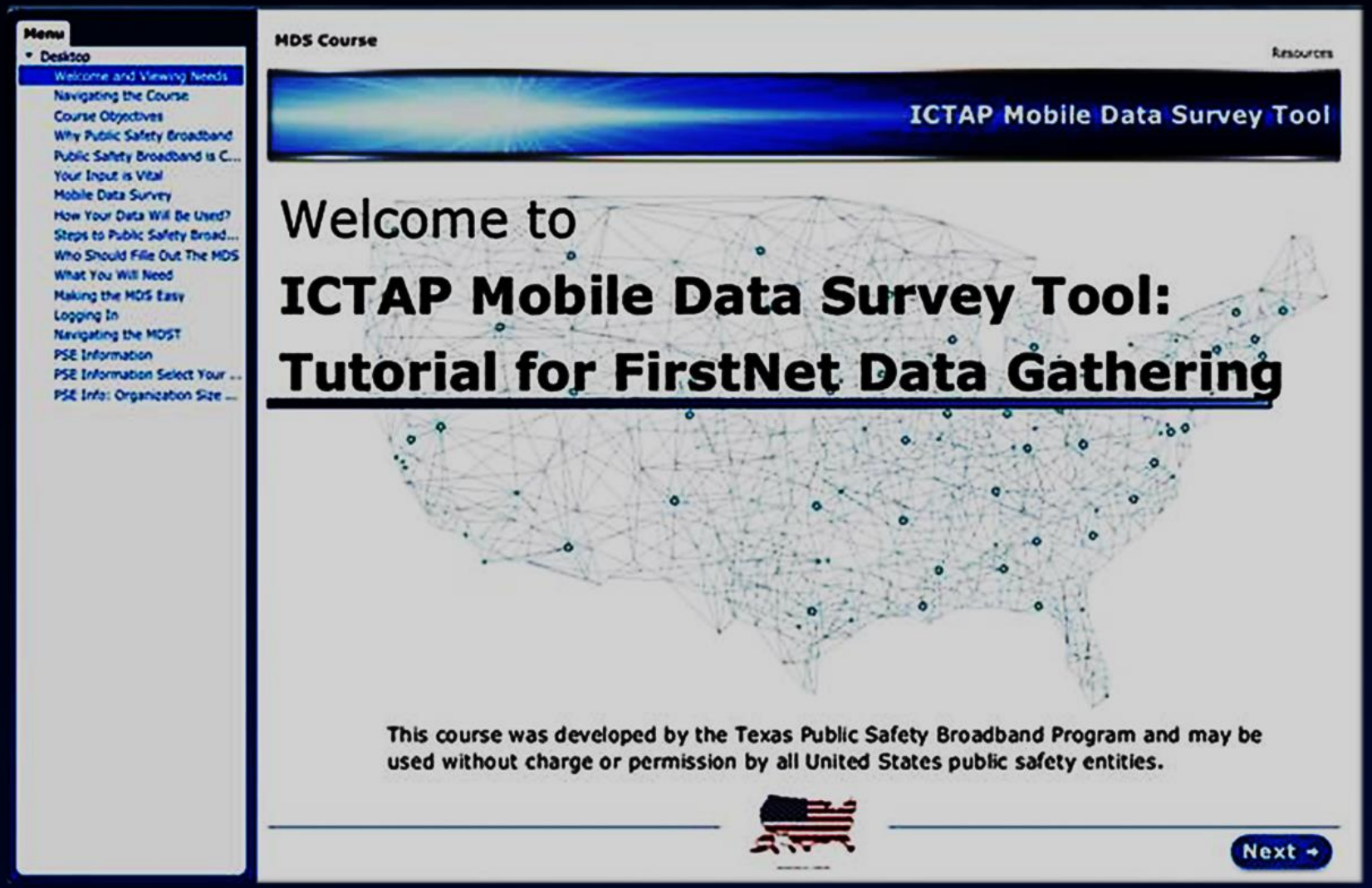
How Much?

- # 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



Texas Data Collection

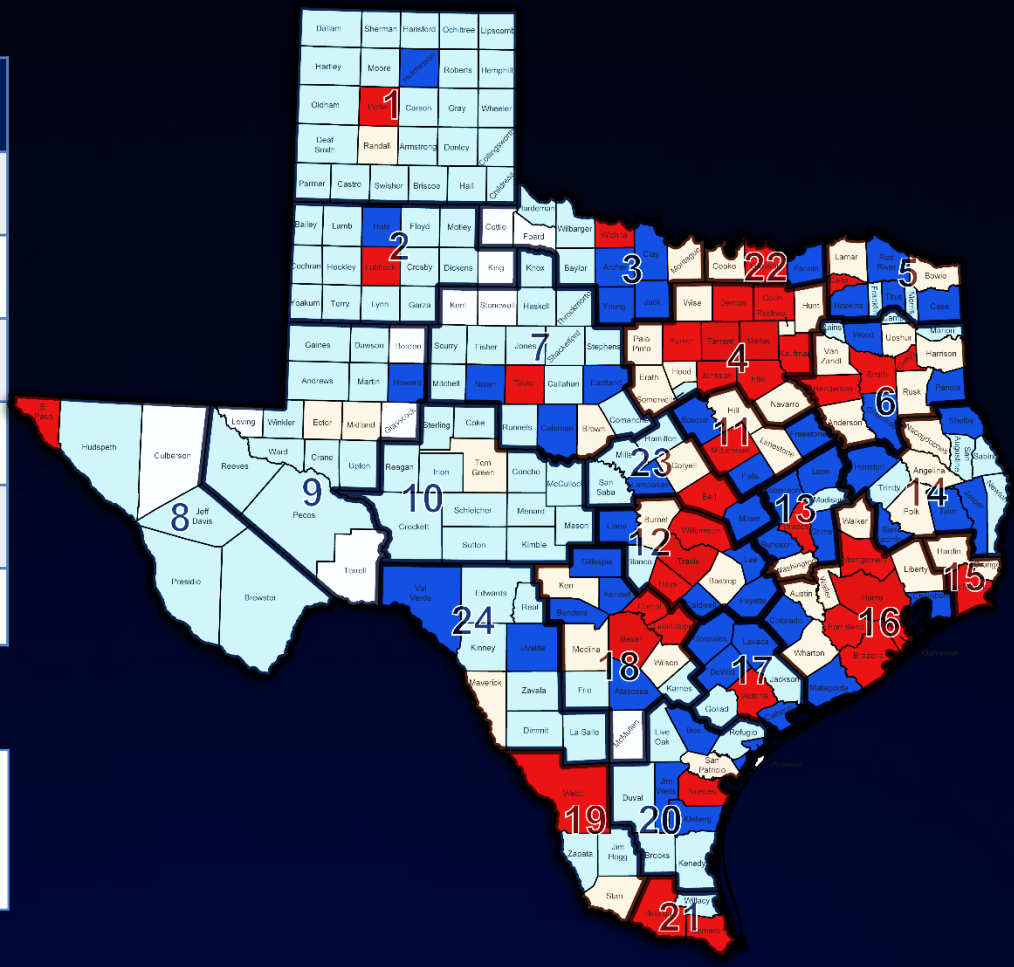
Coverage Objectives collected in two phases:

- 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	TotalSworn
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
TOTAL		214,120

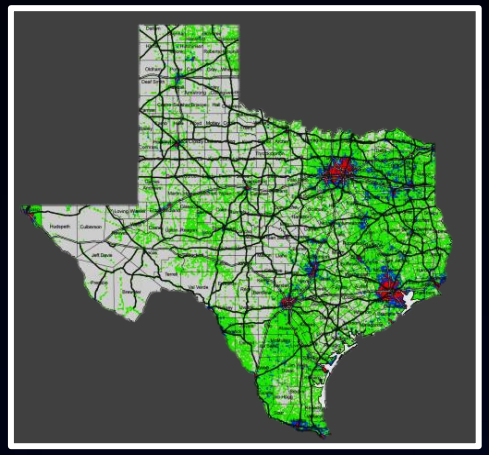


LEGEND

All Public Safety Users

3-49 | 50-249 | 250-499 | 500-999 | 1000-4999 | 5000+

Coverage Planning: TX Coverage Objective



FirstNet Coverage Objective Baseline

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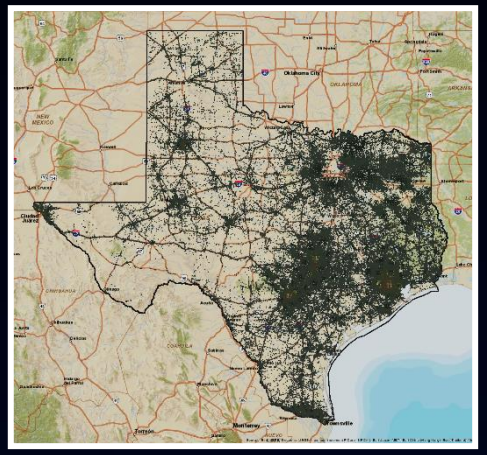

PSAP 911 call data

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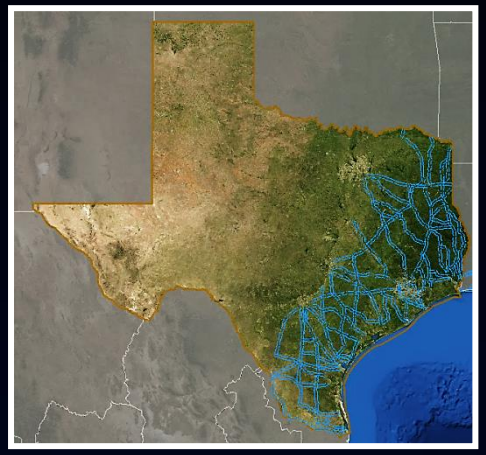

Hurricane evacuation routes

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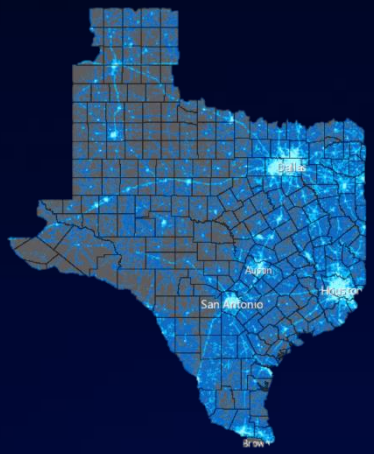


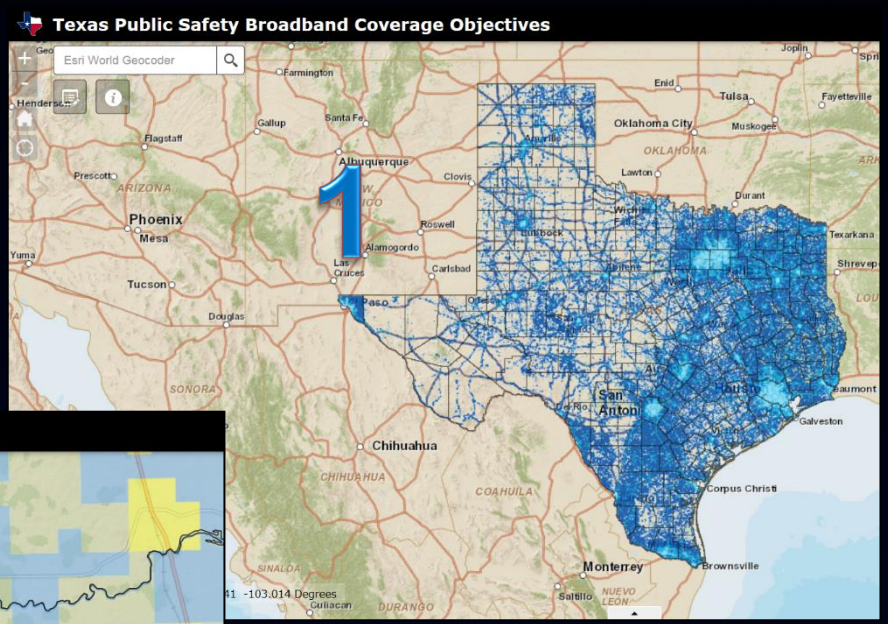
Texas Coverage Objective Baseline Q4 2015

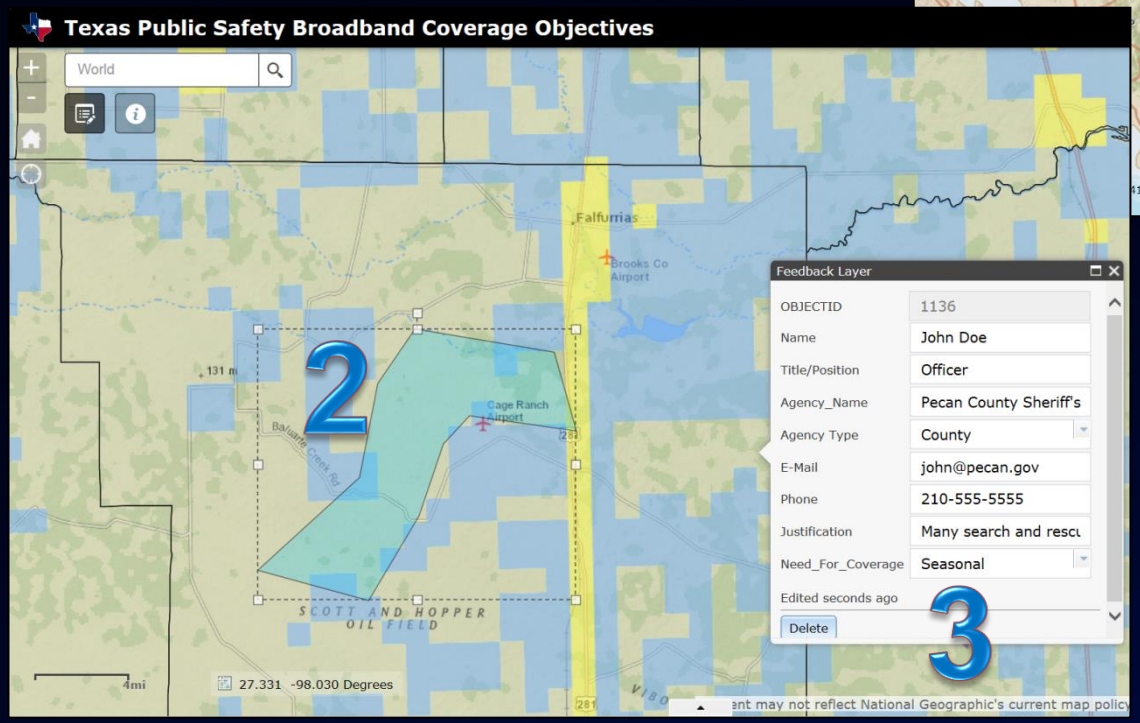
Standardized into FirstNet 1x1 mile grid

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

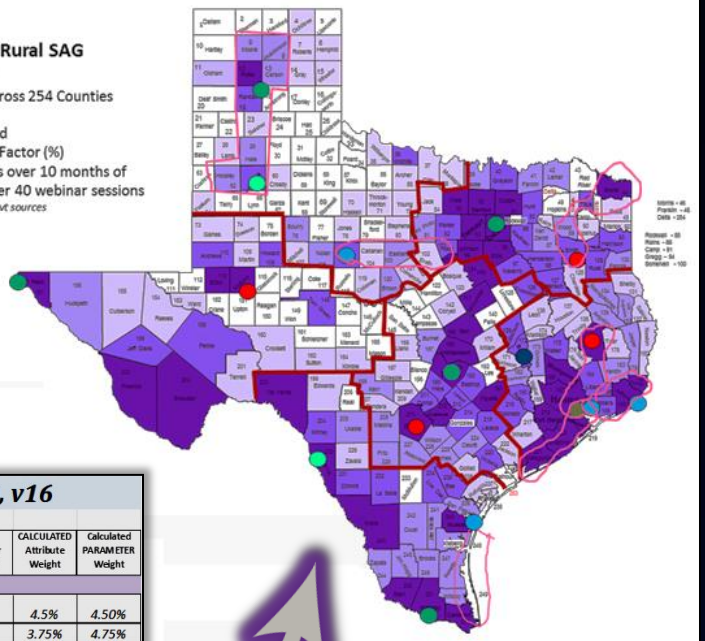
Objective decision-making tool, based on dozens of weighted datasets covering areas such as:

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 govt sources*



Texas Coverage Tool – County Level Needs MATRIX - v30, v16

CAT WEIGHT	Factors Req'd by PL 112-96 / Weighting Matrix, Public Safety NEED BY COUNTY	Current Rural SAG Consensus Baseline	Subfactor WEIGHT	CALCULATED Attribute Weight	Calculated PARAMETER Weight
		v30 - Version of TOOL, v16 - Version of CONTENT			
20%	**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	Kick-Maverick, YDSP- El Paso, A-C- Polk	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%
10%	**Tribal Interests By County**	Josh Garcia (YDSP), Willo Sylestine (A-C), Steve Esquivel (kttt)	Weighting Factor		
	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 Polk	10%	1.0%	
	6-Tribal Population Per County	*% of Total Texas Population of Tribal People who reside in each County, use US 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%	
16%	**Borders & Ports By County**				
	Mexican Border Risk, Traffic Volume				7.20%
	7- Mexican Border Risk Areas	Estimated from combination of types of activities, number of occurances 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	Estimated 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%	
31%	**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 Acre-Feet.	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 trans	7%	2.2%	2.17%
	19- Nuclear Hazards (all)	Estimated 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 TxDPS Data)	15.00%	4.7%	4.65%

2015 Initiatives

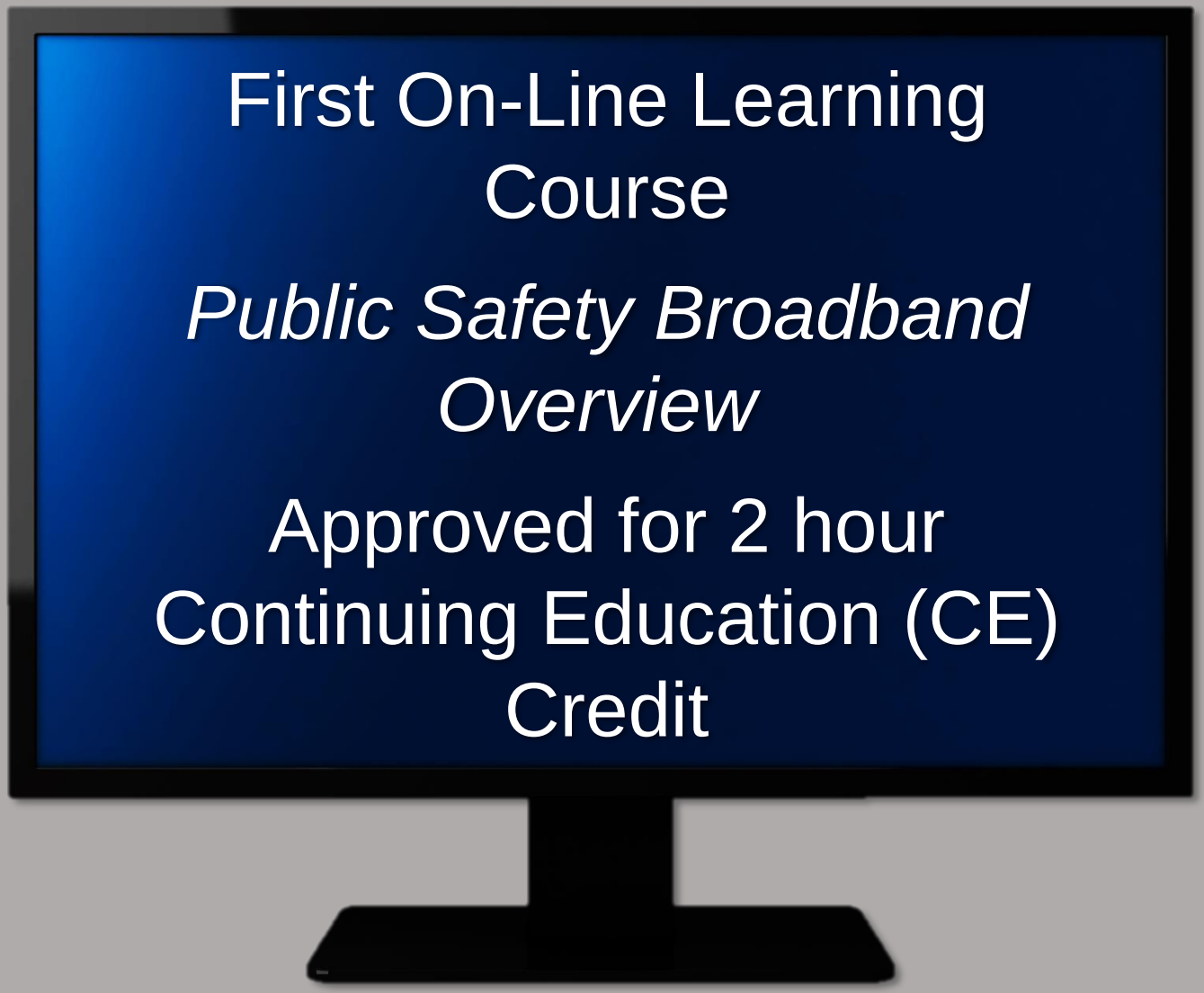
Texas Public Safety Broadband Program

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

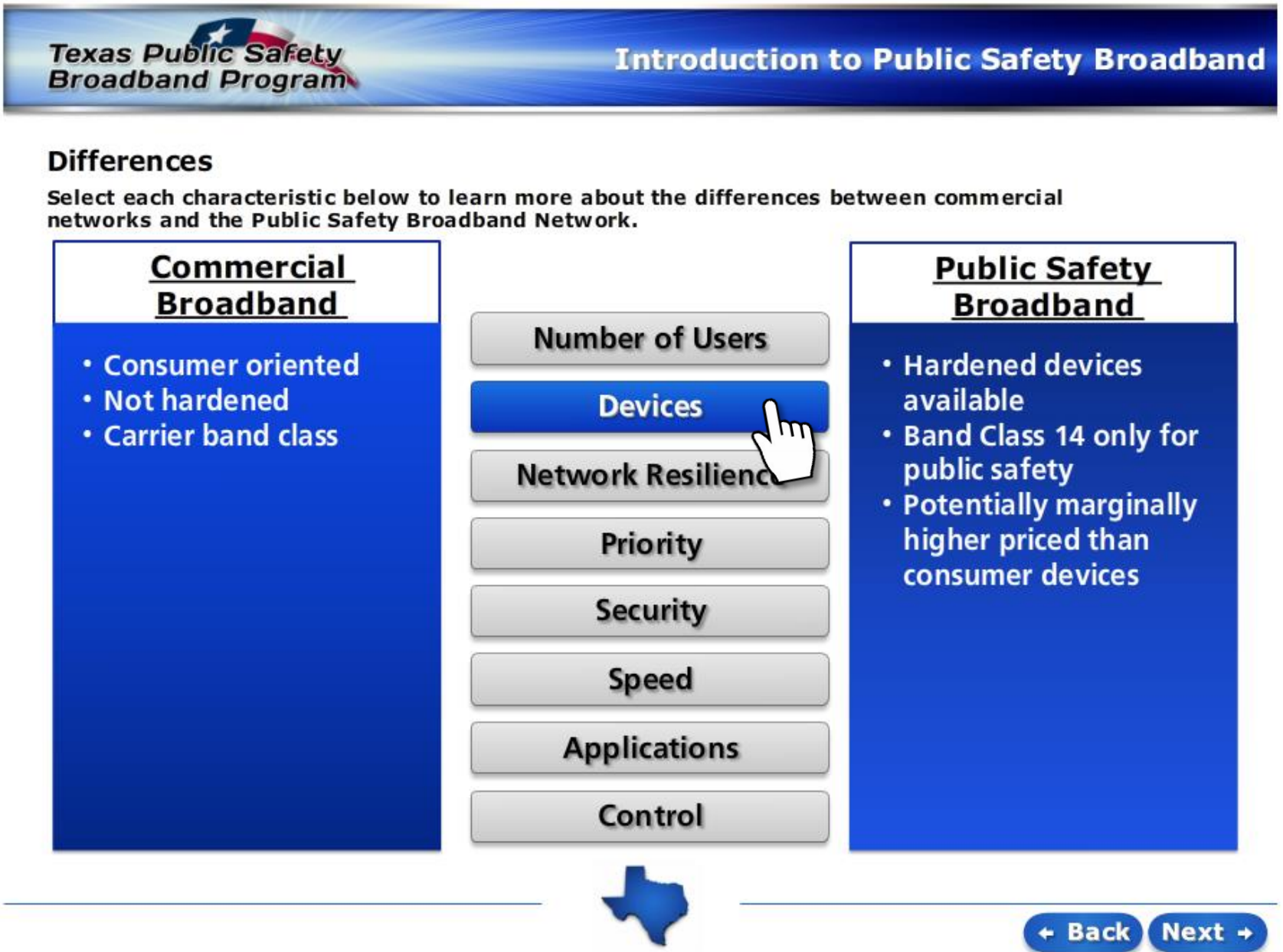
Online Learning



TxPSBP Online Learning Portal

Texas Public Safety Broadband Program

TxPSBP Online Learning Portal



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

Texas Public Safety Broadband Program

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.

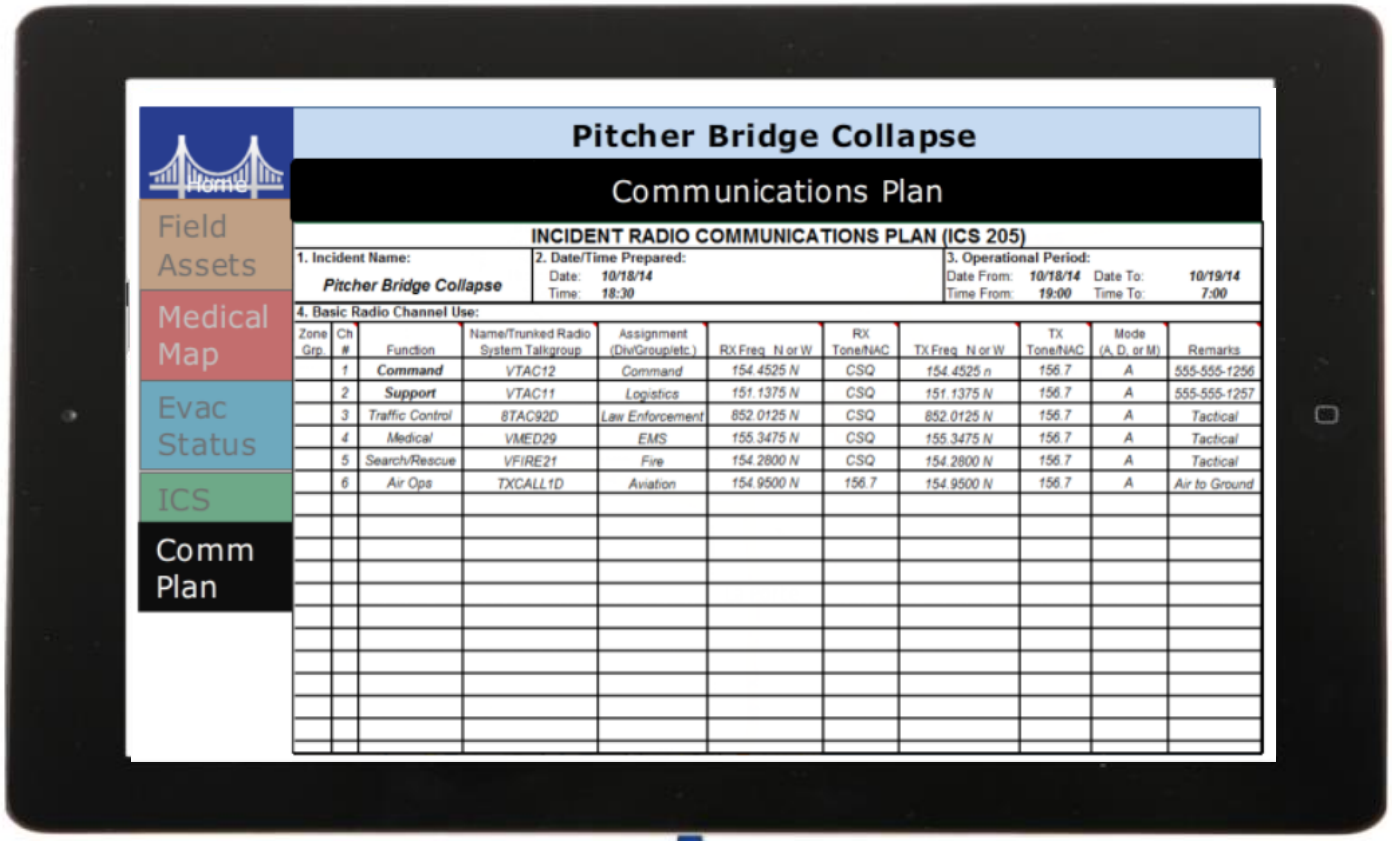
← Back Next →

TxPSBP Online Learning Portal

Texas Public Safety Broadband Program

Introduction to Public Safety Broadband

Public Safety Broadband Network: Example Scenario



INCIDENT RADIO COMMUNICATIONS PLAN (ICS 205)

1. Incident Name:	2. Date/Time Prepared:	3. Operational Period:
Pitcher Bridge Collapse	Date: *10/18/14* Time: *18:30*	Date From: *10/18/14* Time From: *19:00* Date To: *10/19/14* Time To: *7:00*

4. Basic Radio Channel Use:

Zone Grp.	Ch #	Function	Name/Trunked Radio System Talkgroup	Assignment (Div/Group/etc.)	RX Freq N or W	RX Tone/NAC	TX Freq N or W	TX Tone/NAC	Mode (A, D, or M)	Remarks
	1	*Command*	VTAC12	Command	154.4525 N	CSQ	154.4525 n	156.7	A	555-555-1256
	2	*Support*	VTAC11	Logistics	151.1375 N	CSQ	151.1375 N	156.7	A	555-555-1257
	3	Traffic Control	8TAC92D	Law Enforcement	852.0125 N	CSQ	852.0125 N	156.7	A	Tactical
	4	Medical	VMED29	EMS	155.3475 N	CSQ	155.3475 N	156.7	A	Tactical
	5	Search/Rescue	VFIRE21	Fire	154.2800 N	CSQ	154.2800 N	156.7	A	Tactical
	6	Air Ops	TXCALL1D	Aviation	154.9500 N	156.7	154.9500 N	156.7	A	Air to Ground

www.TxLTE.com

Texas Public Safety Broadband Program

Texas Public Safety Broadband Program

Home | TxPSBP | The Network | FAQs | Newsroom | Contact

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
TEXAS
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

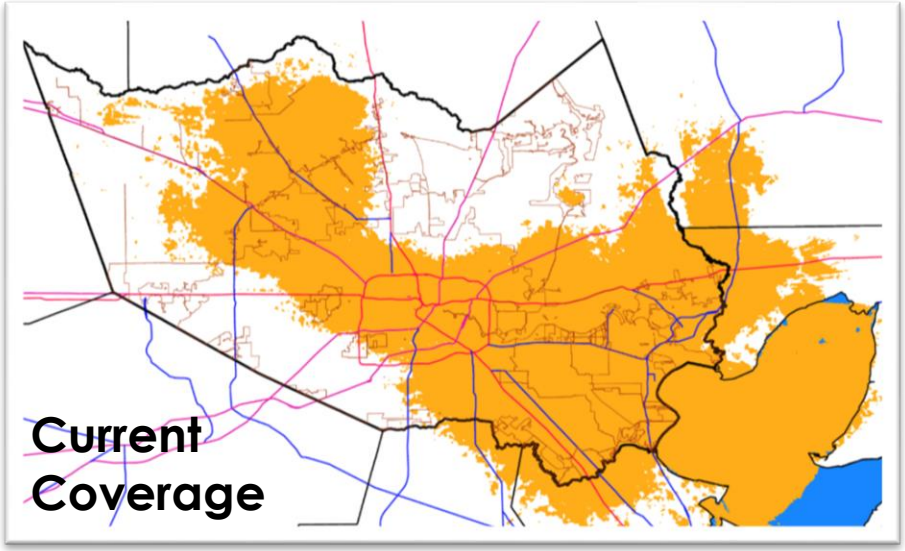
Current Status

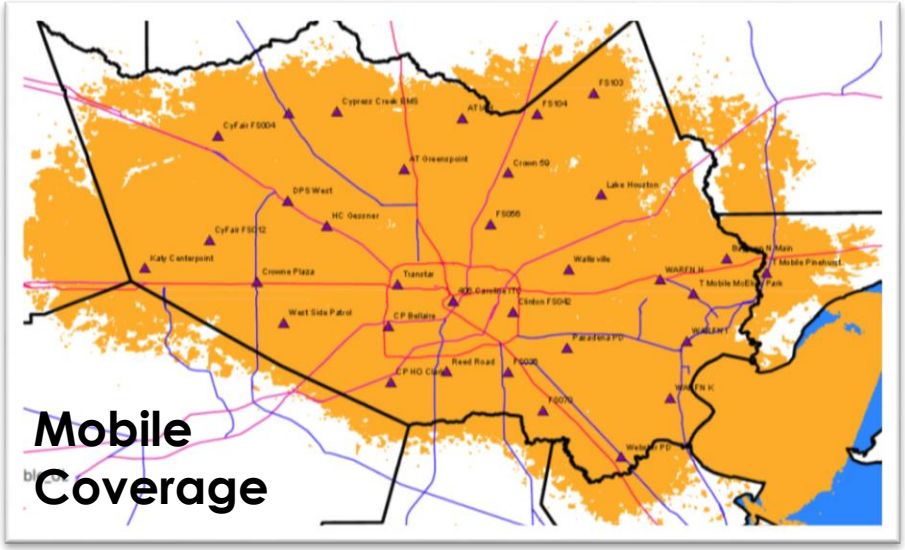
- 18 Sites in Harris County service area
- 1 Site in Brazos County (Extended range test site)
- 1 Mobile Unit

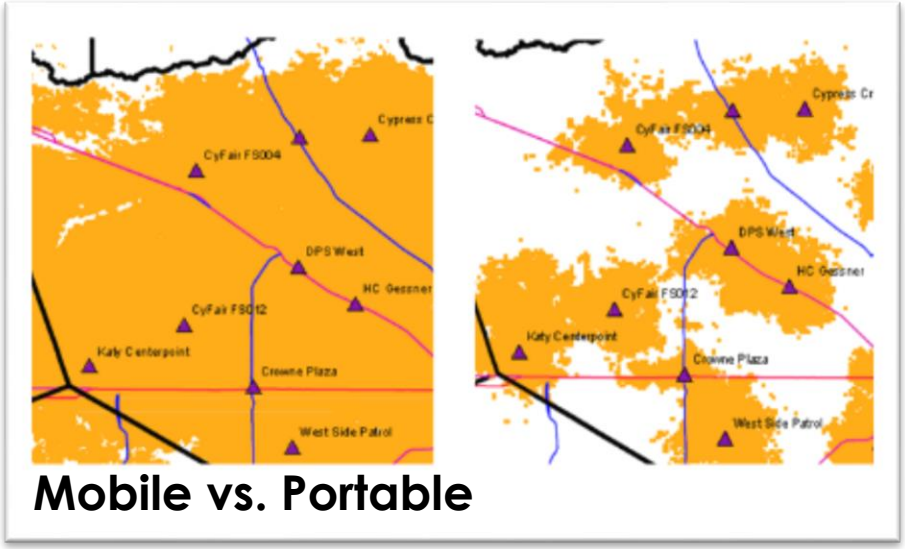
Move Forward Strategy

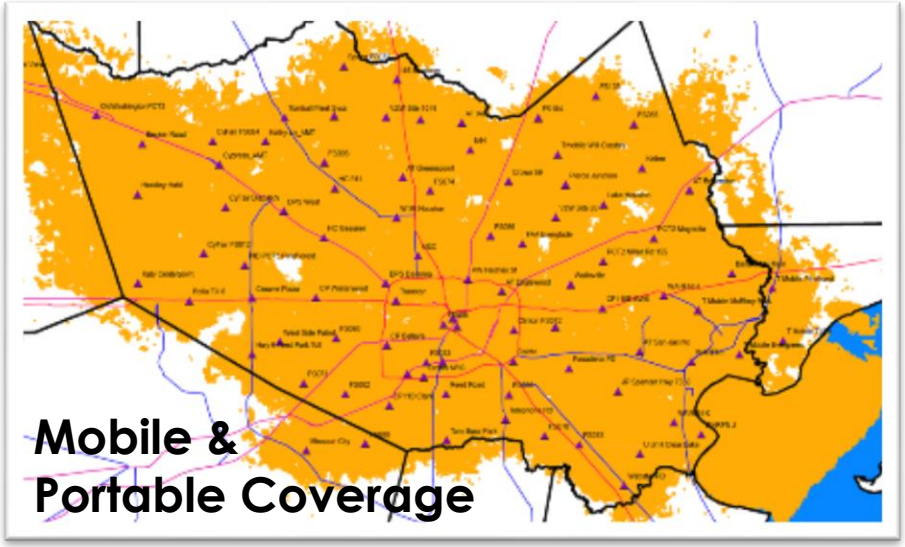
- Data First
- Mobile Coverage First (37 sites – Phase 1)
  - Funded for completion
- Portable Coverage to follow (+60 sites)
- Developing Voice(VoLTE) Strategy

Coverage 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

www.TxLTE.com

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LTE@dps.texas.gov

Texas Public Safety Broadband Program

Texas and Harris County Public Safety Broadband Update to FirstNet Board

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Texas Single Point of Contact (SPOC)
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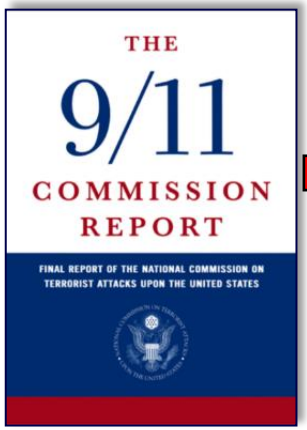
Director, Public Safety Technology Services
Harris County

CEO Update

Mike Poth
CEO

December 9, 2015

Public Safety's Network



Associations Supporting D-Block Reallocation

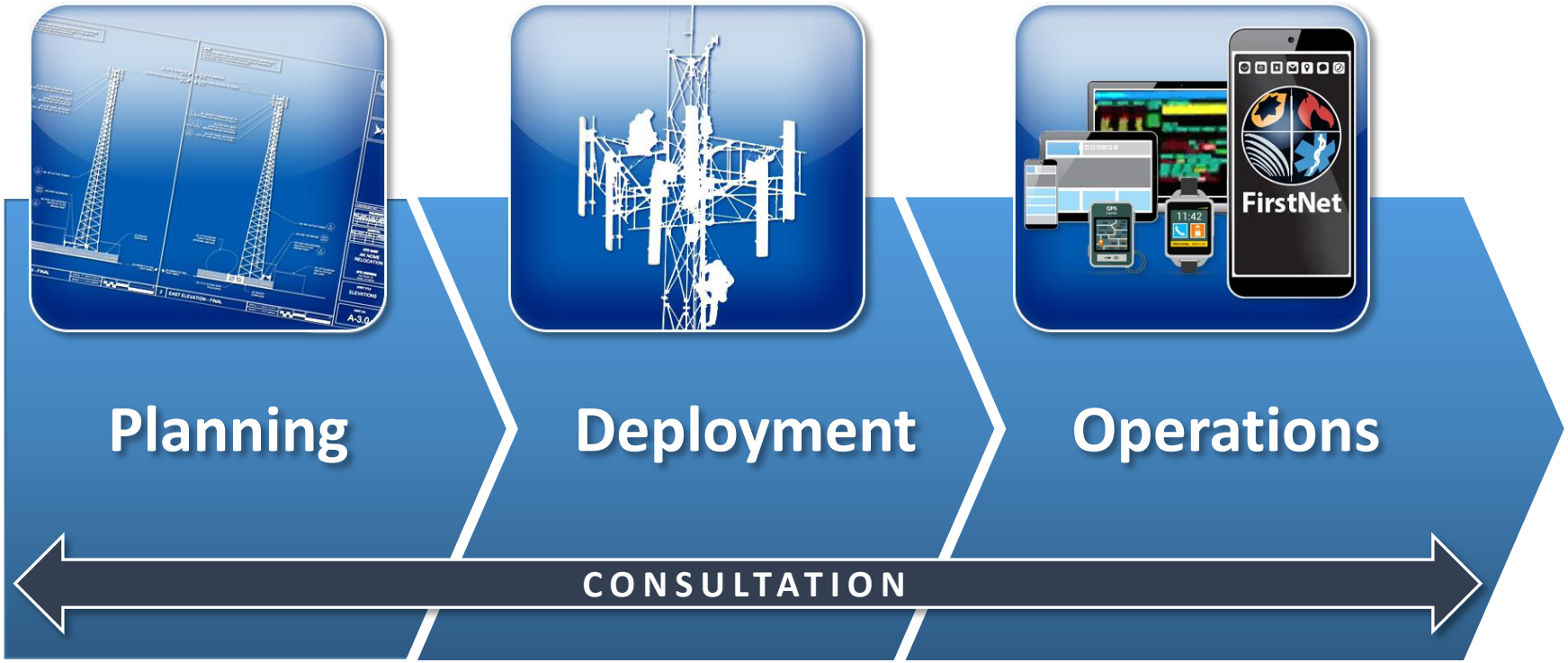
- *National Governors Association*
- *National Association of Counties*
- *National League of Cities*
- *United States Conference of Mayors*
- *Council of State Governments*
- *International City/County Managers Association*
- *National Conference of State Legislatures*
- *International Association of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

THE LAW

2.22.12

FirstNet becomes law
PL 112-96

Public Safety Consultation In All NPSBN Stages



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

2016 Outlook

FirstNet 5-Year Strategic Plan

State Plans

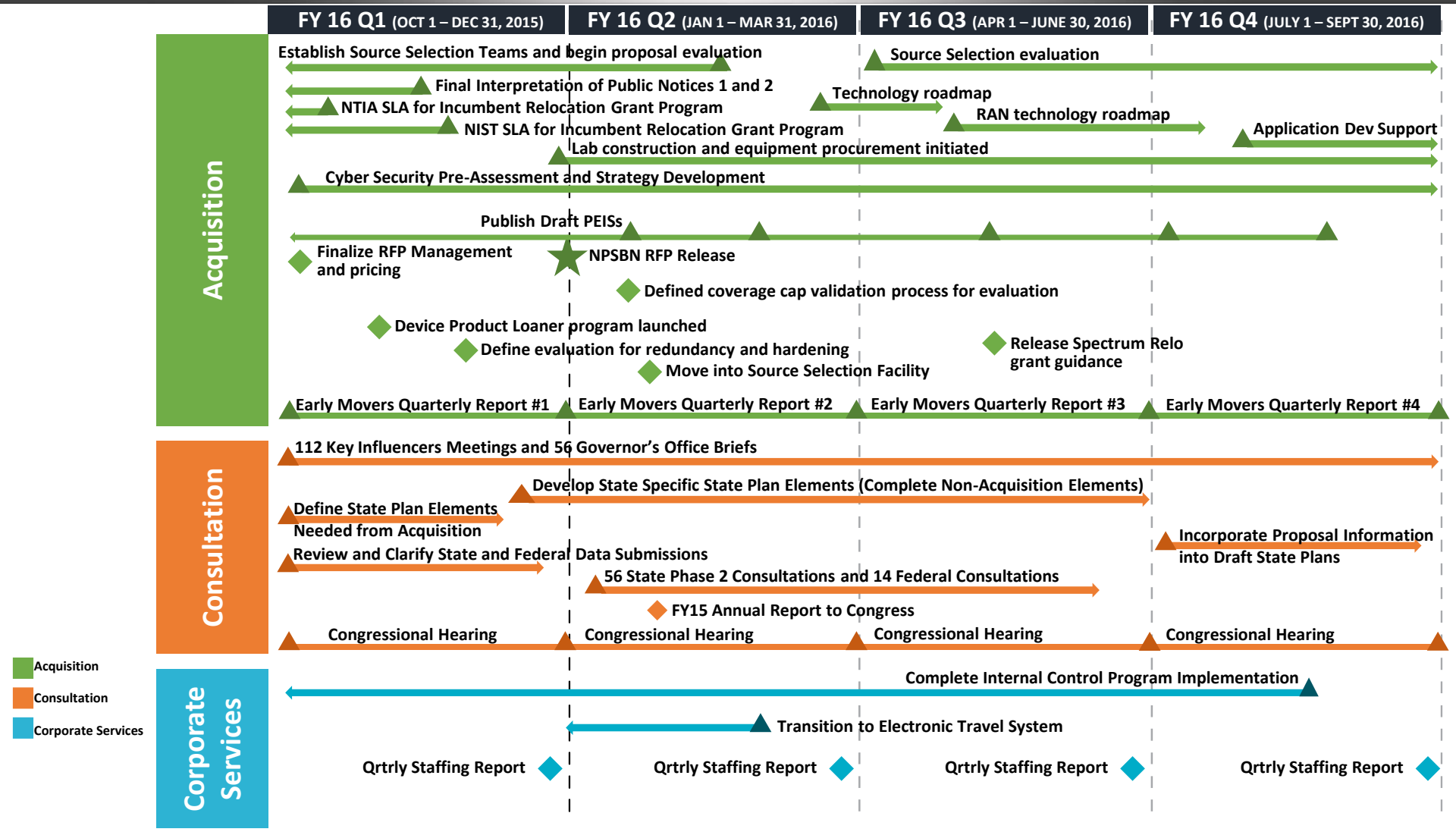
Consultation – States, Territories, Federal Agencies, Tribal Nations

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

PSAC Assignments

Early Builder KLCs

FY 2016 FirstNet Milestones



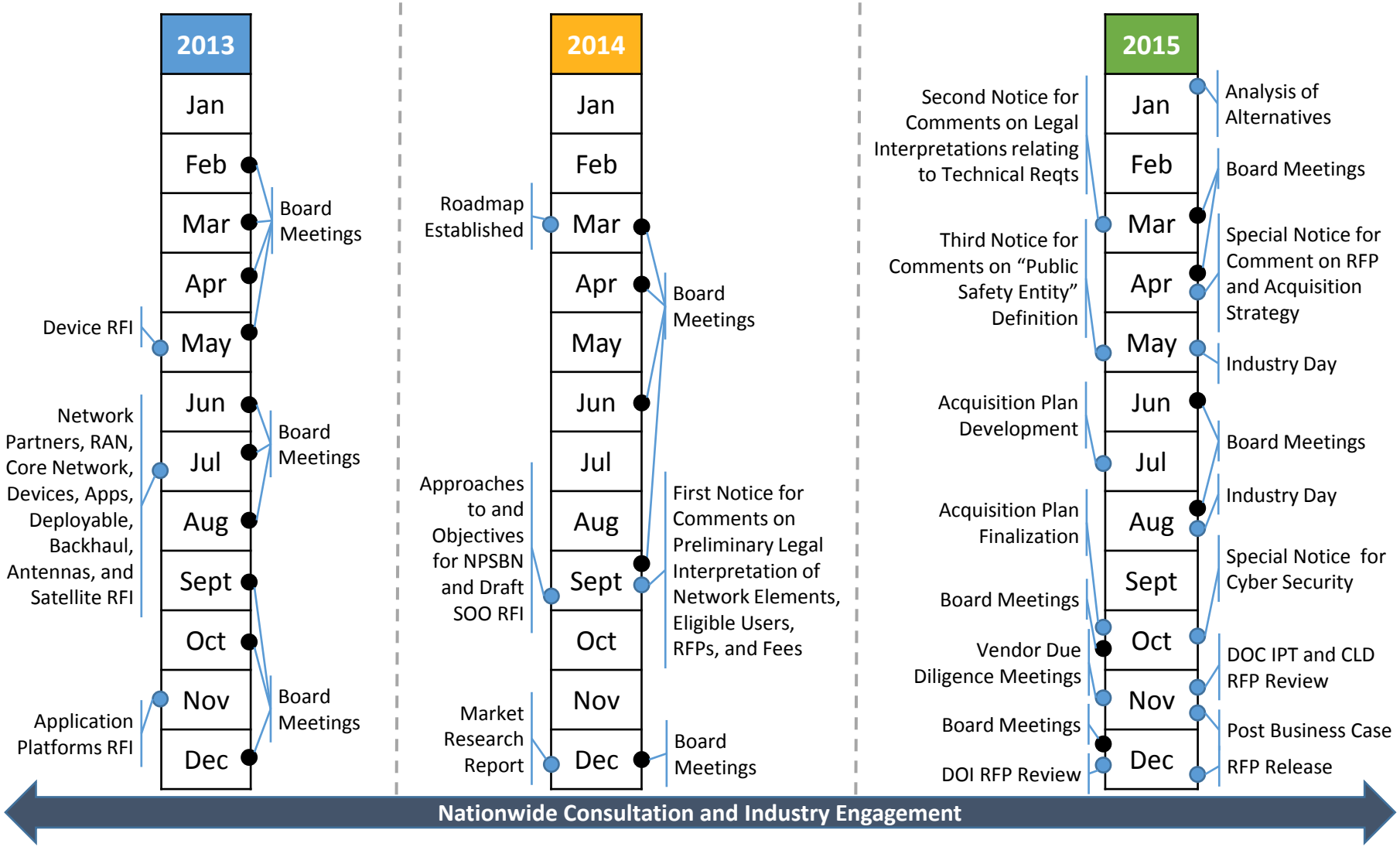
The Board is now in closed session

RFP Update

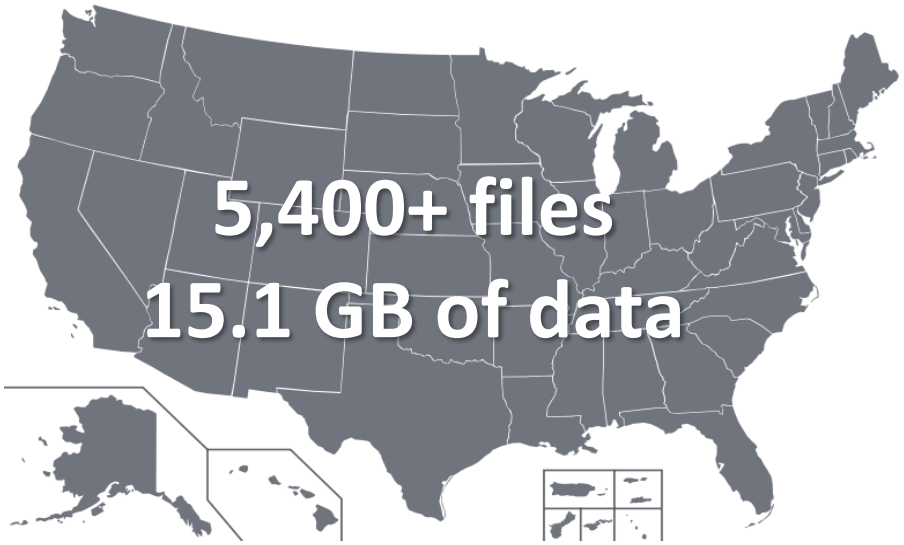
TJ Kennedy
President

December 9, 2015

RFP Development and Stakeholder Review Timeline



Data Submission Summary

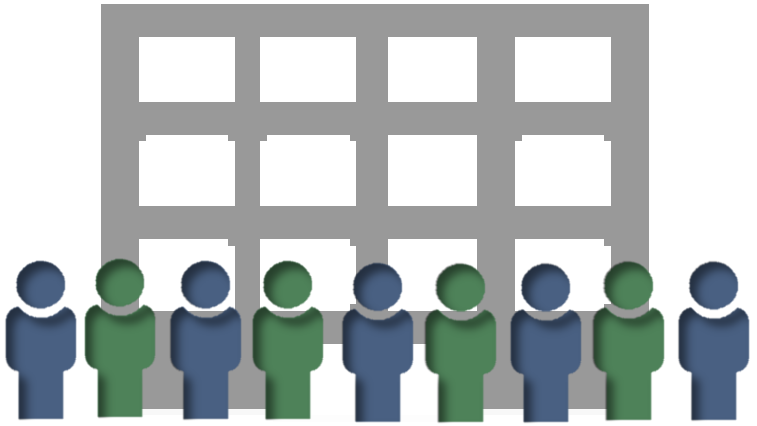


54 States and Territories

7 Federal Agencies

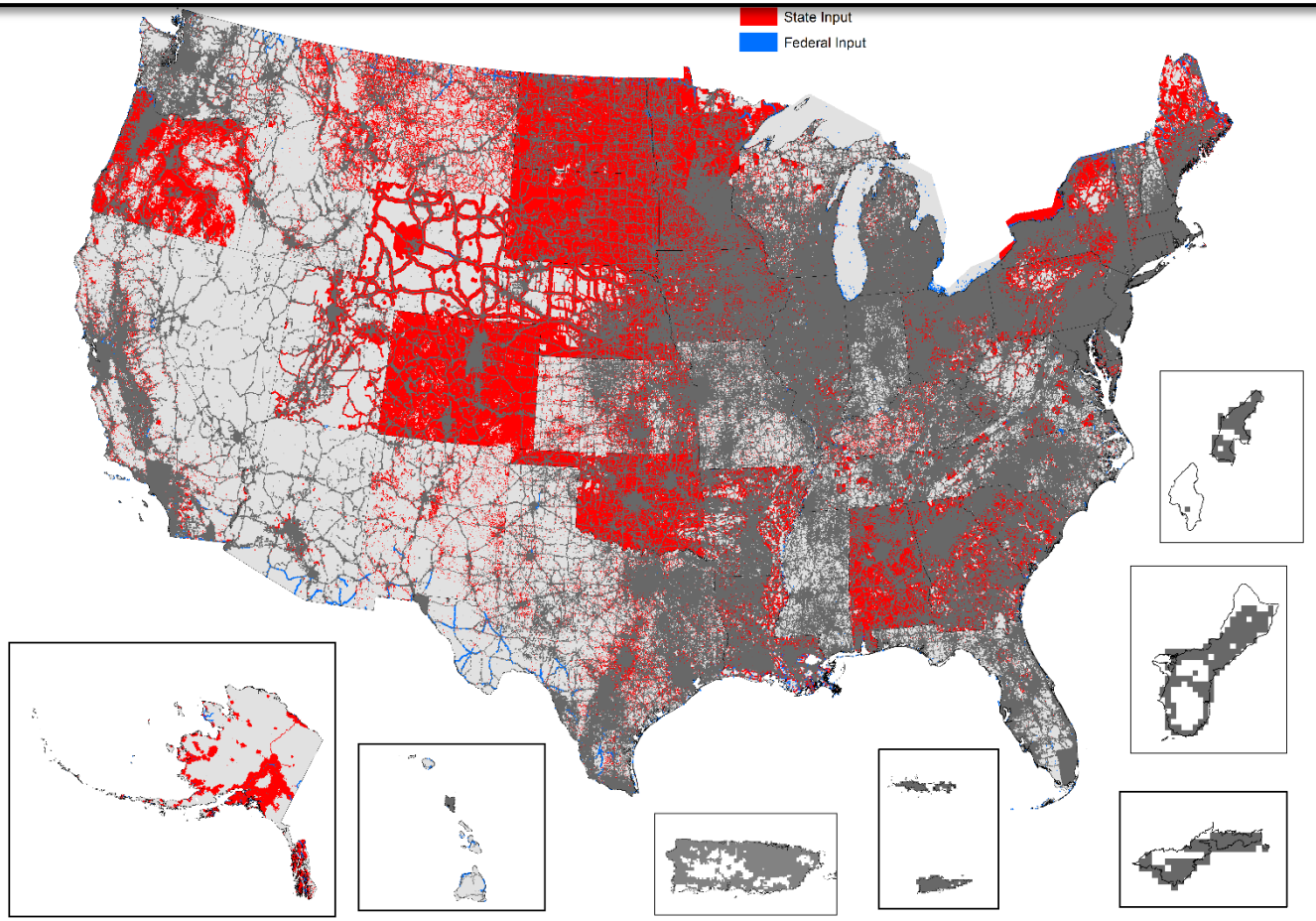
11,600+ Entities Surveyed

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

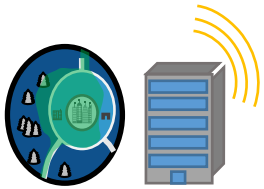
Program and Business Management

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



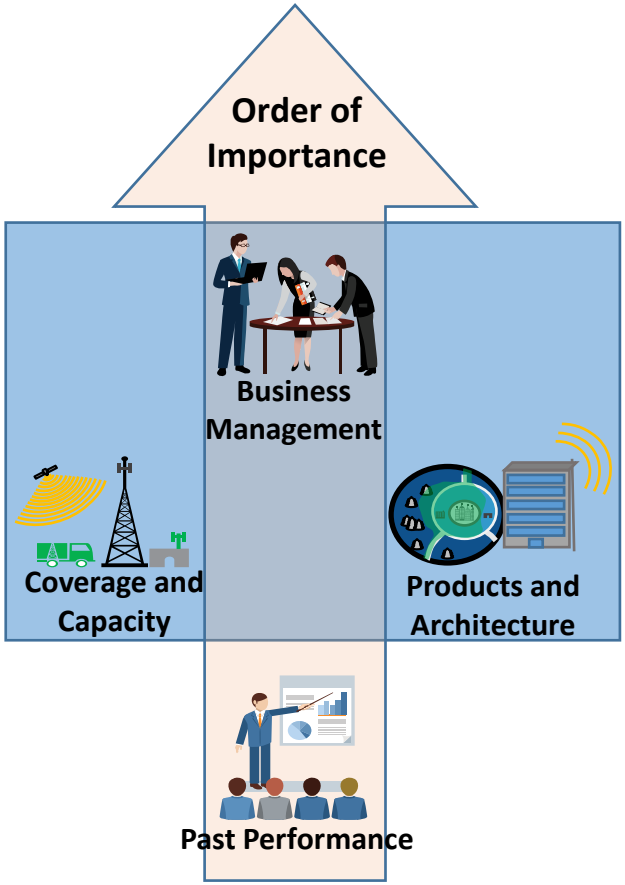
Products & Architecture Factor
- Service (public safety features)
- Applications
- Device
- Architecture and Infrastructure
- Operations
- Security

Risk
- Proposal Risk
- Performance Risk

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

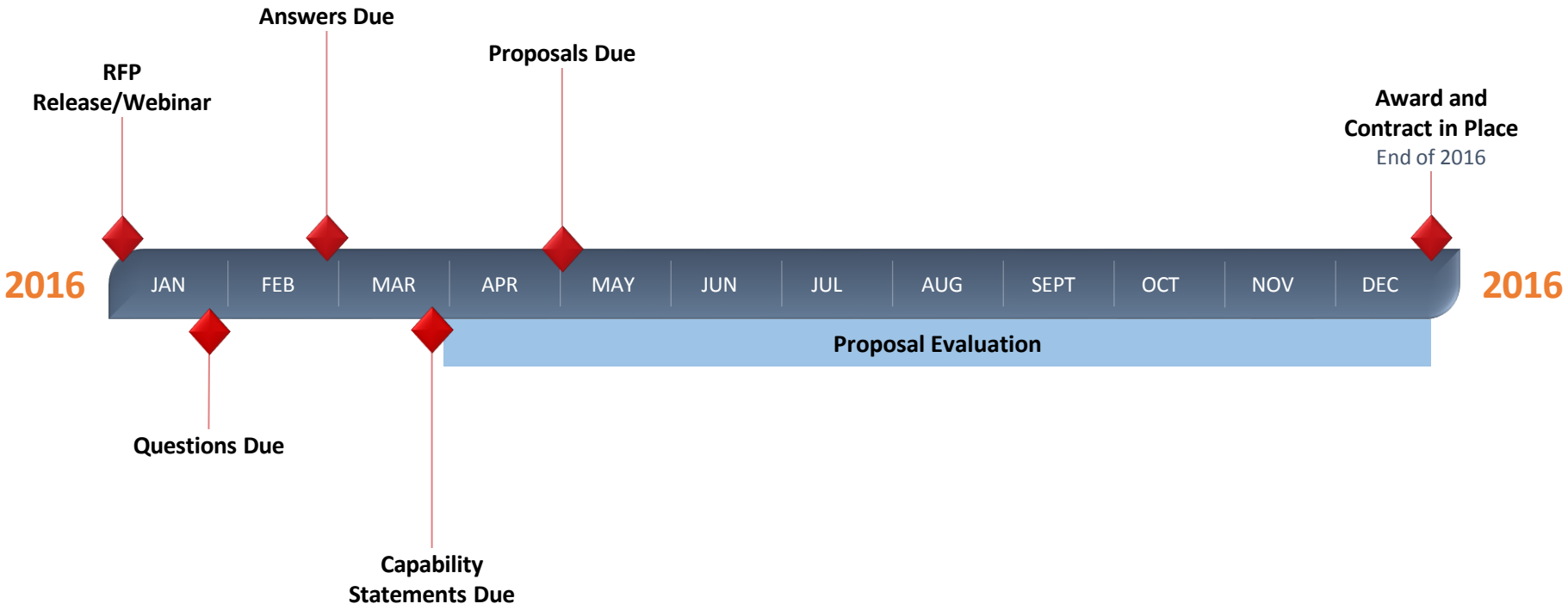


* Where applicable

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
Total	**508**

Draft Evaluation Schedule



CEO Recap

Mike Poth
CEO

December 9, 2015