

FirstNet Workgroups: Agenda

- A. Kentucky FirstNet - Project Update**
 - B. FirstNet Draft RFP & Consultation Process**
 - C. Kentucky Collection of Data Elements**
 - D. Data Collection Actions**
-



Kentucky FirstNet Project Update

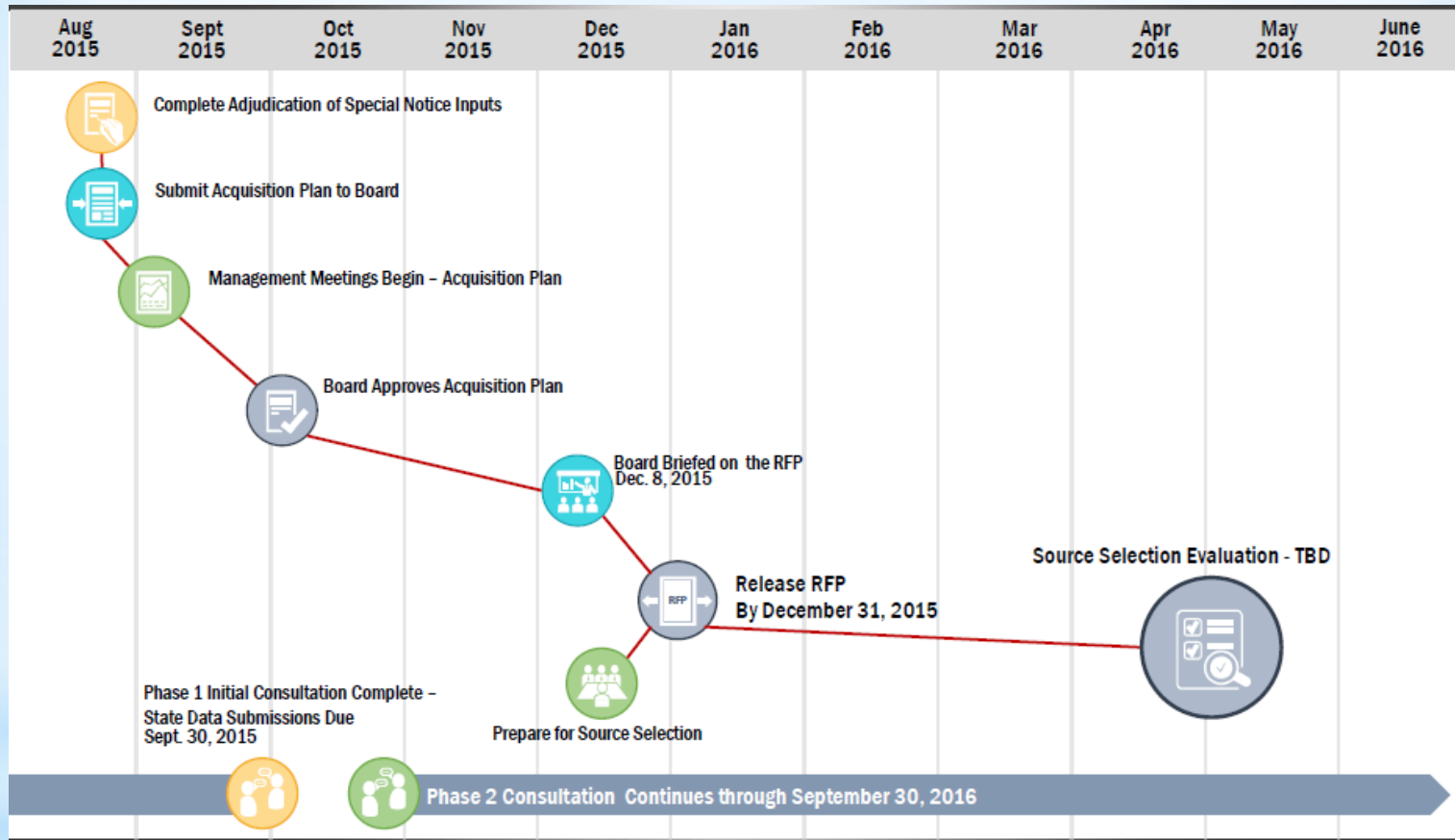


FirstNet Duties & Responsibilities

- 2012 Legislation created the First Responder Network Authority (FirstNet) to Administer the PS BB Network
 - Now a total of 20 MHz exists for PS BB
 - \$7B for the network build-out
- Develop and implement a nationwide system configuration
- Issue system construction RFP(s)
- Ensure the ongoing maintenance, operation and improvement of the network
- The NPSBN would be designed with broad input from public safety agencies at the state, territory, county, municipal, and tribal levels
 - Input will come during the consultation process



FirstNet High Level Timeline



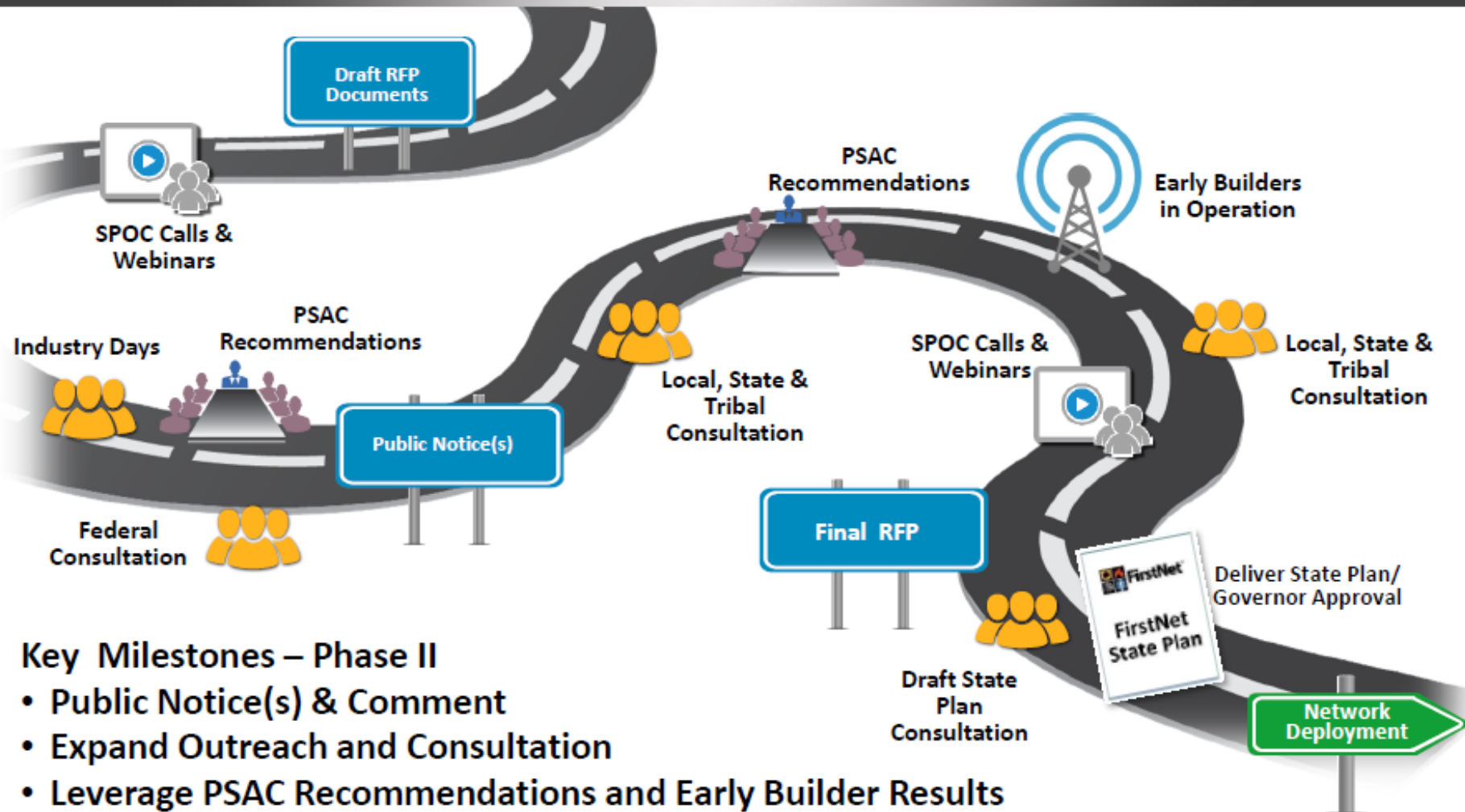
- RFP Release Targeted for End of 2015;
- Most of 2016 will be spent receiving RFP responses;
- FirstNet expects to provide governors with state plans in late 2016 or early 2017;
- Plans to begin making RFP deployment awards in 2017, with operations beginning in 2018;



FirstNet Draft RFP and Consultation Process



FirstNet Roadmap



Key Milestones – Phase II

- Public Notice(s) & Comment
- Expand Outreach and Consultation
- Leverage PSAC Recommendations and Early Builder Results
- Release Final RFP

FirstNet Draft RFP Elements

- **Special Notice with Draft RFP Documents**
 - Overview of contents of draft of RFP documents
 - Request for feedback on the approaches
 - Submission of capabilities statements
- **Section B Supplies or services and prices/costs**
- **Section C Statement of Objectives (SOO)**
 - C-1 Baseline Coverage Objective Map
 - C-3 Recommendations of the Interoperability Board (aka FCC Technology Advisory Board Report)
 - C-4 System View and Standard Views (SV-1 and StdV-1)
 - C-5 FirstNet Final Operational Capability– Features Standards Forecast (StdV-2)
 - C-6 Quality Assurance Surveillance Plan (QASP)
 - C-7 Operational Architecture Functional Descriptions
 - C-8 Initial and Final Operation Capability Target Timeline
 - C-9 NPSBN Use Case Definitions
- **Section J, Attachment J-3, Terms of Reference**

666 Questions Received – Comments Due July 27, 2015

FirstNet Network Objectives



Build, Deploy, Operate and Maintain the NPSBN



Financial Sustainability



Compelling and Competitively Priced Services



Device Ecosystem



Application Ecosystem



Accelerate Speed to Market



User Service Availability



Service Capacity



Cyber Security



Priority Services



Integration Of Opt-out State RANs



Integrate Existing State/Local/Commercial/Federal Infrastructure To Support NPSBN Services



Lifecycle Innovation



Program and Business Management



Customer Care and Marketing



Facilitate FirstNet's Compliance With the Act and Other Laws

Draft Operating Capability Timeline

Operating Capability	IOC-1	IOC-2	IOC-3	IOC-4	IOC-5	FOC
Projected Timeline	6 months after RFP award	12 months after award	24 months after award	36 months after award	48 months after award	60 months after award
Projected Band-14 (PS) Build-Out	None	15% of objectives	60% of objectives	80% of objectives	95% of objectives	100% of objectives
Projected Rural Milestones	None	15% of rural objectives	40% of rural objectives	60% of rural objectives	80% of rural objectives	100% of rural objectives
Devices	Commercial Off The Shelf (COTS) non-Band 14 devices Initial Band 14 devices Band 14 device portfolio development	Band 14 device portfolio available	Device to device / Proximity Services (ProSe) Direct mode service	Mobile communications unit (MCU) Mission critical services	Feature Evolutions	Meets all Objectives

FirstNet Baseline Procurement Strategy

Nationwide Proposal

Nationwide Core Network								
Covered Leasing Agreements (CLA)								
Radio Access Network (RAN)								
State	State	State	State	State	State	State	State	Terr.

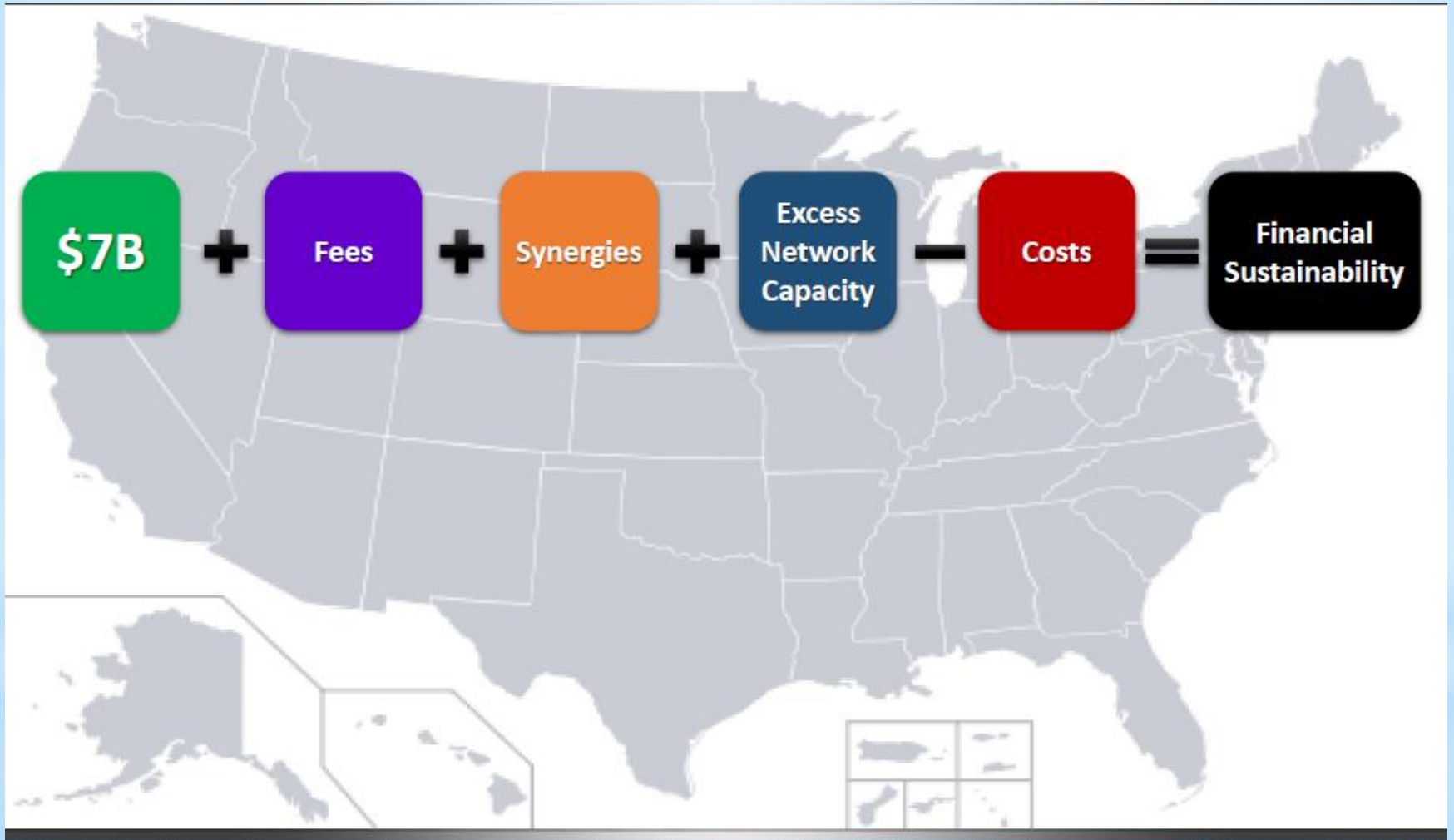
Regional Proposal

Nationwide Core Network								
CLA	CLA	CLA					CLA	
RAN	RAN	RAN					RAN	
State	State	State	State	State	State	State	State	Terr.

- Technical complexity
- Integration complexity
- Contracting complexity
- Competition
- Excess Capacity Value

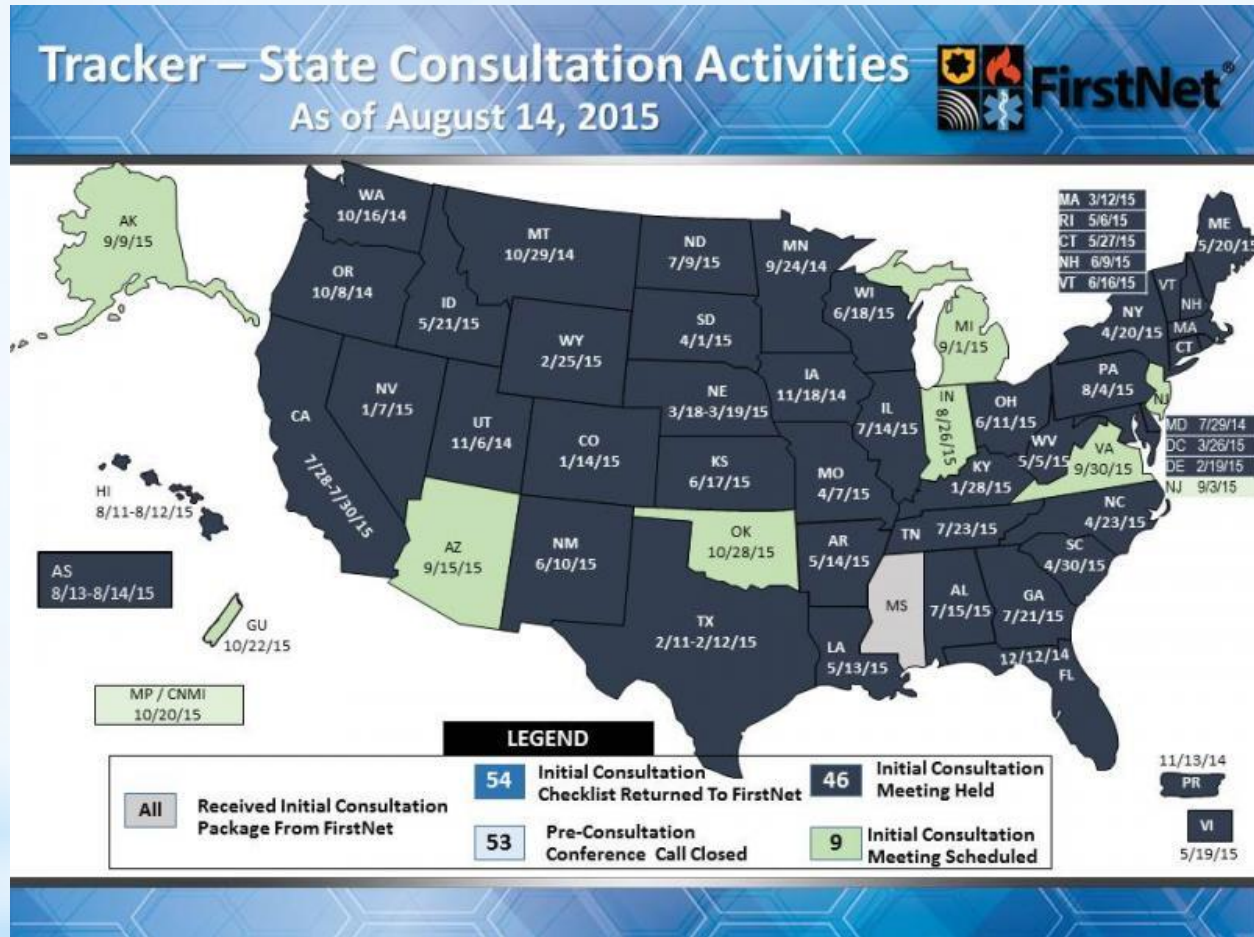
Teams are Encouraged/A Hybrid Approach may be Required

FirstNet Business Case Structure



Per Legislation, the Network Must be Sustainable

Consultation Tracker

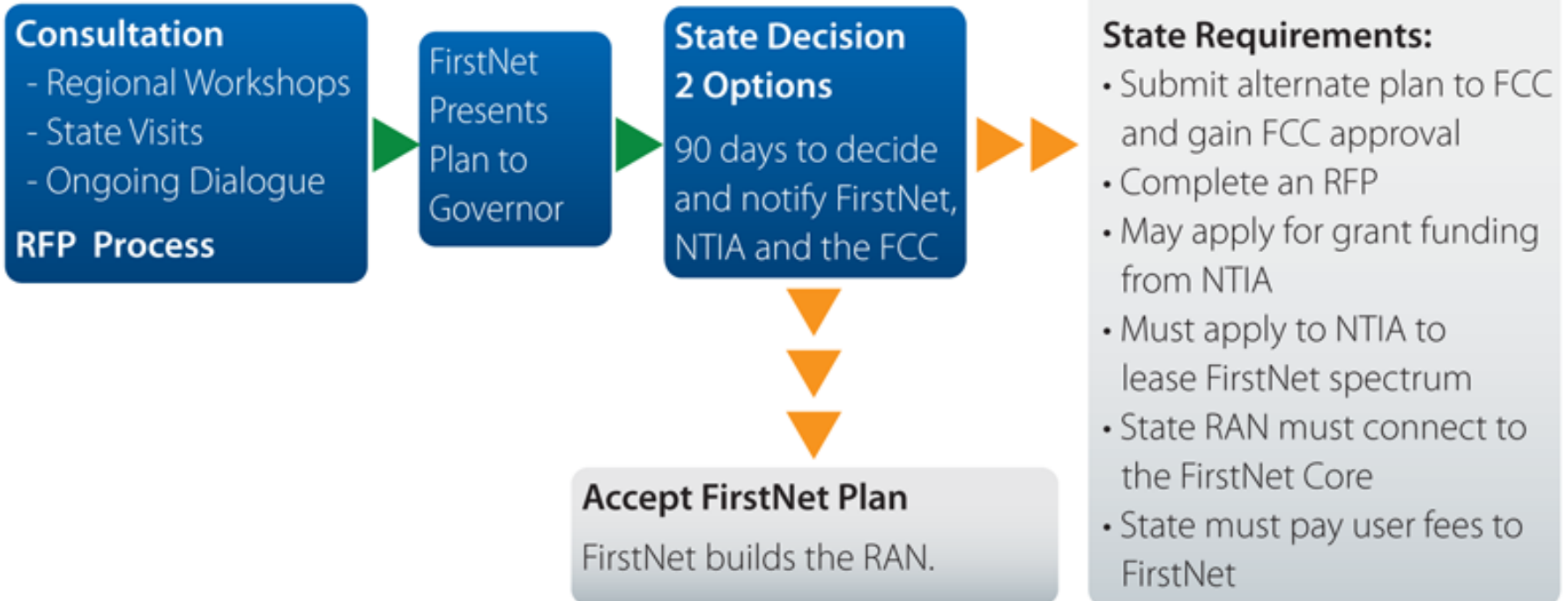


- FirstNet 1st Consultation Round in Progress
- Completion by 10/31/15
- Second round to begin early 2016

The Consultation Process

State Decision Process

FirstNet will collaborate with states to develop and deliver a RAN plan that meets their needs.



We Do Not Know When Plans Will be Delivered

Opting Out Will be a Big Challenge

- Upon notifying FirstNet of Opt-Out decision, states will have 180 days to “develop and complete requests for proposals for the construction, maintenance, and operation of the radio access network within the state”
- The FCC and NTIA must approve the state’s plan, which must show:
 - The technical capabilities to operate, and the funding to support, the state radio access network;
 - Has the ability to maintain ongoing interoperability with the nationwide public safety broadband network; and
 - Has the ability to complete the project within specified comparable timelines specific to the state;
 - The cost-effectiveness of the State plan submitted under subparagraph (C)(i); and
 - Comparable security, coverage, and quality of service to that of the nationwide public safety broadband network.
- Only following approval with the state be allowed to:
 - Apply for a funding grant; and
 - Begin negotiation of a spectrum lease,





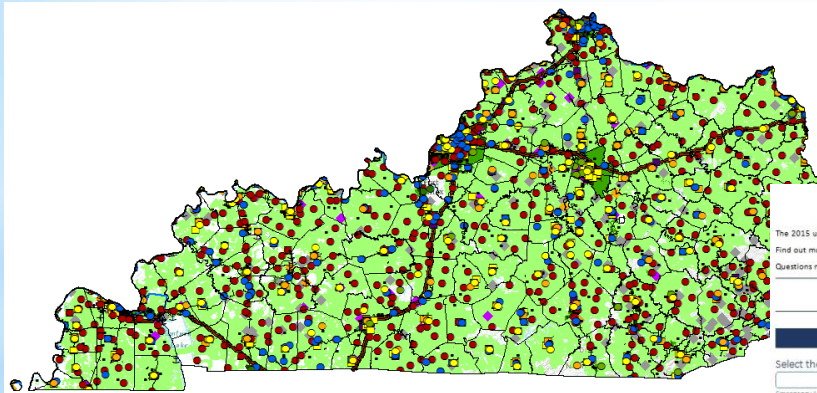
Kentucky Collection of Data Elements:

Data Collection Process



KY FirstNet Team Planning Activities to Date

- County work packets distributed (2014),
 - Initial OEC Coverage Suggestions,
- PSAP areas and incidents collection,
- Additional Public Safety Assessment in process,
 - Phone Outreach and follow-up



Current activities focused on Phase 2 Data Collection

Kentucky FirstNet Requirements Work Package McCracken County Proposed Coverage Checklist

Please check each item below as completed to assure that all required feedback is provided. The below checklist numbers are also shown at each work package area where the corresponding feedback is to be provided.

- 1 Note the delimiting factors and map symbologies for the OEC's baseline of In-Building, Handheld, Vehicular, and Satellite/Deployable levels of coverage.
- 2 Evaluate subsequent Map Pages and identify potential coverage differences based on your emergency management/public safety operational needs.
- 3 Check appropriate box indicating whether the proposed baseline meets your coverage needs with or without any changes required.
- 4 If changes are required, indicate those potential coverage differences to the baseline In-Building, Handheld, Vehicular, and/or Satellite/Deployable coverage by marking up the Map Pages and/or explaining in the subsequent Coverage Feedback section. Responses can be provided by:
 - Entering feedback directly in the electronic file and return via email
 - Print and note feedback directly on hard copies which may be:
 - scanned and returned via email
 - fax
 Add additional Feedback and/or Map Pages as required to thoroughly describe your potential coverage differences or provide other information pertinent to your emergency management/public safety operational needs.
- 5 Provide information on any special events.
- 6 Indicate types of current Commercial Service.
- 7 Check appropriate box indicating whether you are currently using the Kentucky IP Mobile Network.
- 8 Provide any other additional information.
- 9 Provide any missing Emergency Service or Public Service Agencies, and updates for any incorrect or estimates for any missing information.
- 10 Return completed coverage work package (see response contact information on last page of Work Package (before Attachment A))

Baker Page 2 of 14

FirstNet Kentucky Public Safety User Assessment: 2015

The 2015 user assessment is for collecting data for FirstNet Kentucky.

Find out more: <https://www.kyfirstnet.com/>

Questions marked with a red asterisk (*) are required to submit the Assessment

Agency Information

Your Agency and Contact Information

Select the discipline that best describes your agency: *

- Emergency Management
- Emergency Medical Services
- Fire Service
- Law Enforcement (Municipal Police, State Police, Sheriff, Highway Patrol)
- Public Safety Communications
- Specialized Law Enforcement (Investigations, Intelligence, Diplomatic Protection, Specific Jurisdiction or Mission)

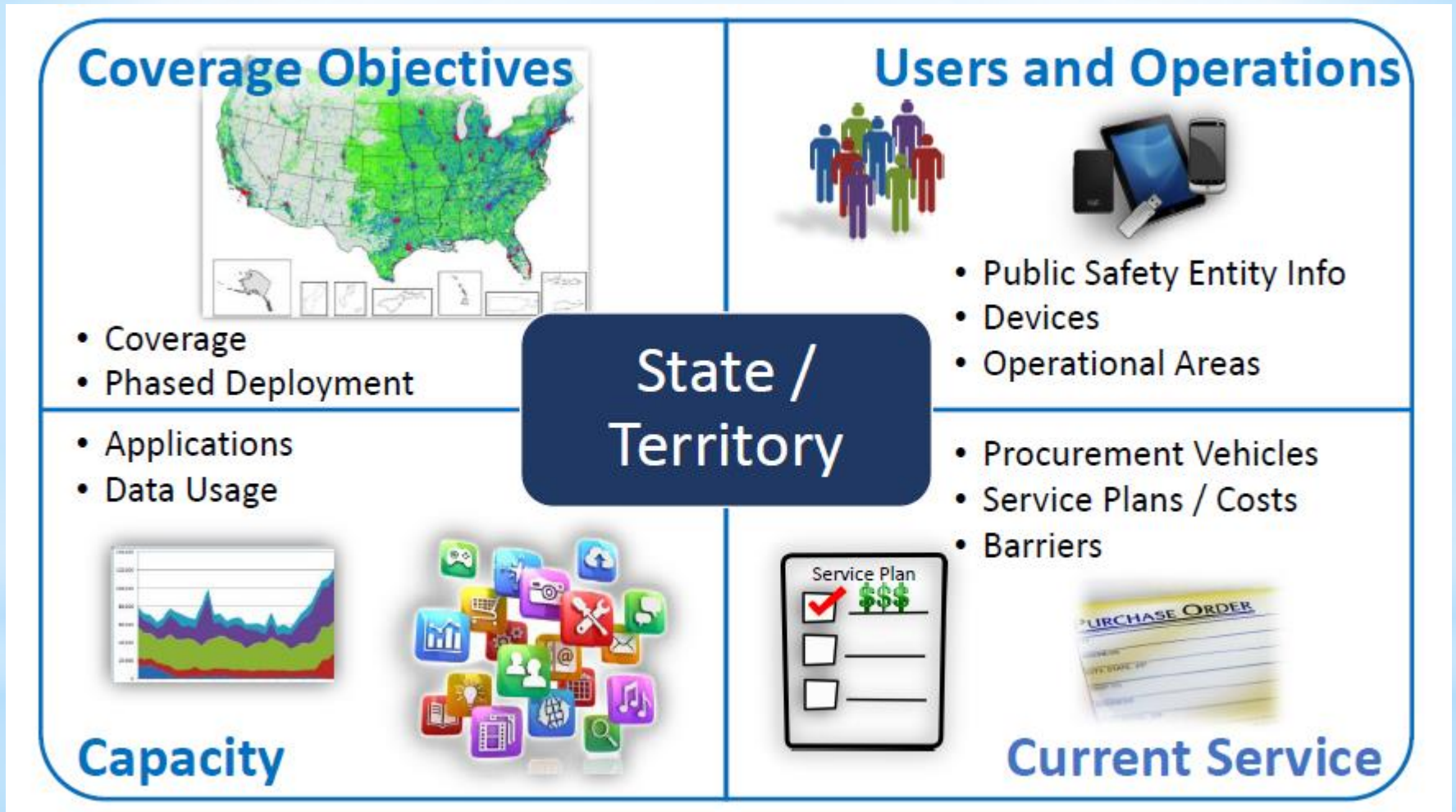
State:
NOTE: If you are responding from a neighboring jurisdiction outside Kentucky, please specify:

ky *

County:
Select the county where you work from the list below:

City or Town:
Select the city or town where you work from the list below (if applicable):

Data Collection Categories



Initial Response Due September 30, 2015

Data to be Compiled: Coverage

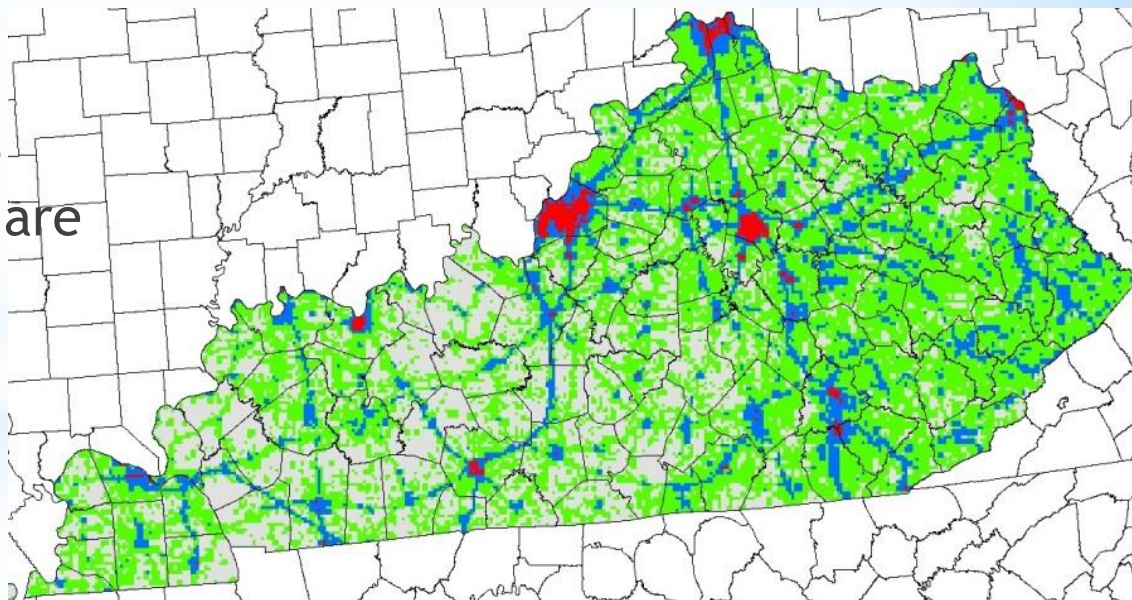
1. Coverage		Identify desired coverage and proposed deployment phases within the State/Territory
<u>1a.</u>	Coverage Objectives	Identify State/Territory coverage by developing a baseline or providing feedback and changes to the FirstNet baseline
<u>1b.</u>	Phased Deployment Approach	Provide recommendations on targeted areas or objectives for each deployment phase (suggest a minimum of 5 phases)


- Responses to the county work packages that were distributed in 2014 can be used to provide this input;

- Individual agencies will be contacted if clarifications are required;


- Initial criteria for phased deployment has been established - maps to be developed for delivery to FirstNet:

- High Concentration
- Medium Concentration
- Low Concentration





Kentucky Preliminary Phased Deployment (build out) Recommendations

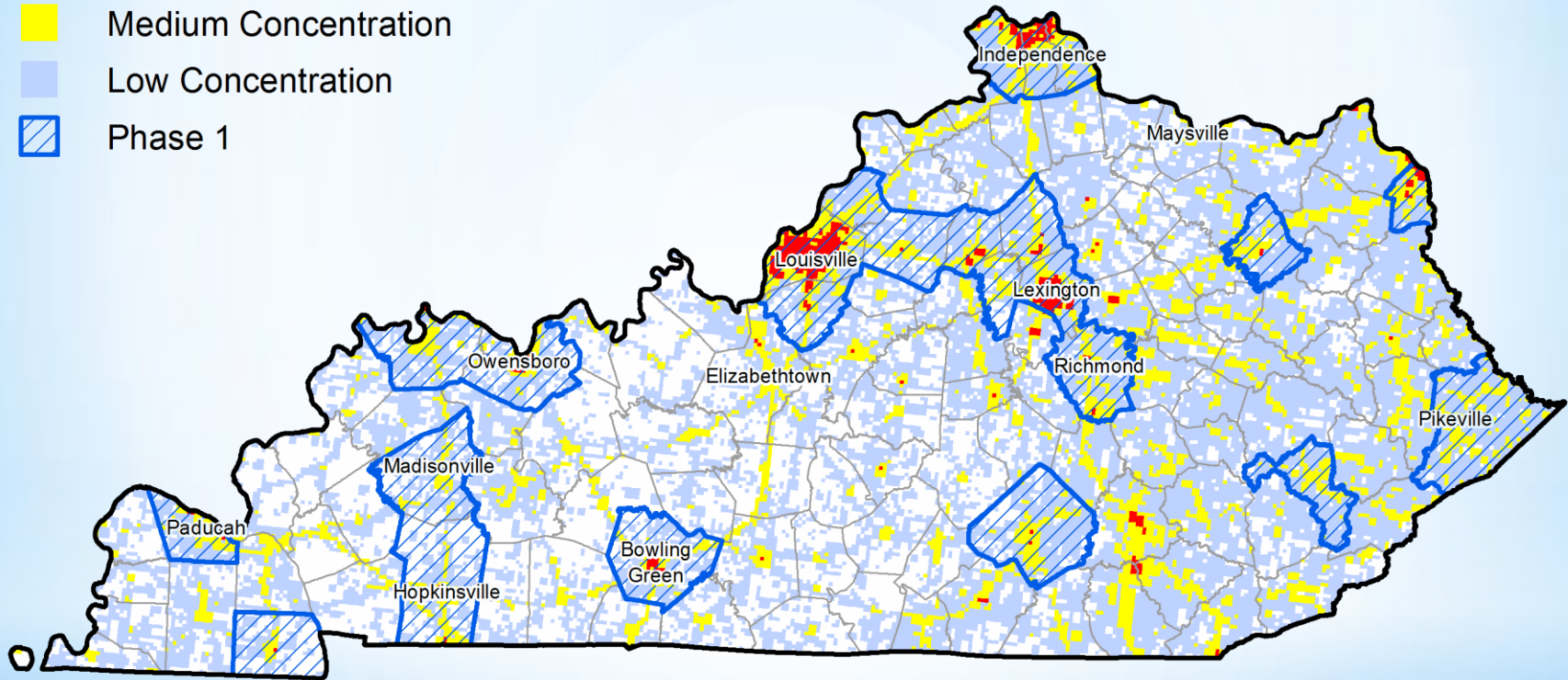


Coverage Build-Out -- *Suggestions*

Phase	FirstNet Guidelines (% of Objectives) from Draft RFP	Recommended Criteria
1	20% of total 20% of rural	High Concentration focus in target areas plus some rural coverage (addressed by county)
2	60% of total 40% of rural	Medium Concentration focus and additional rural (addressed by county)
3	85% of total 60% of rural	Interstate and major roads to connect High/Medium areas
4	95% of total 80% of rural	Address largest remaining gap areas
5	100% of total 100% of rural	Complete build-out of coverage objectives

Proposed Phase 1 Build-Out

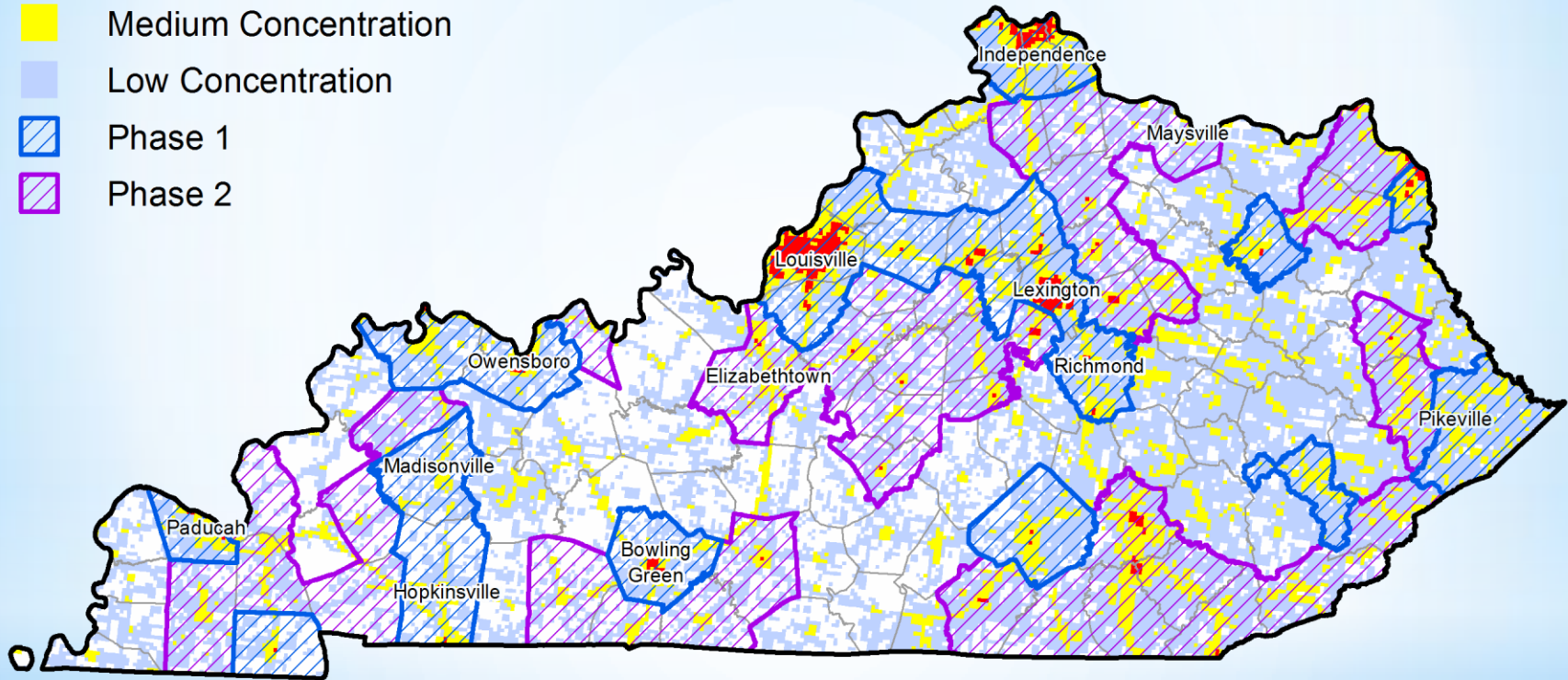
- High Concentration
- Medium Concentration
- Low Concentration
- Phase 1



	Percentage of Coverage
High Concentration	86.96%
Medium Concentration	36.13%
Low Concentration	21.90%
Total	25.82%

Proposed Phase 1 & 2 Build-Out

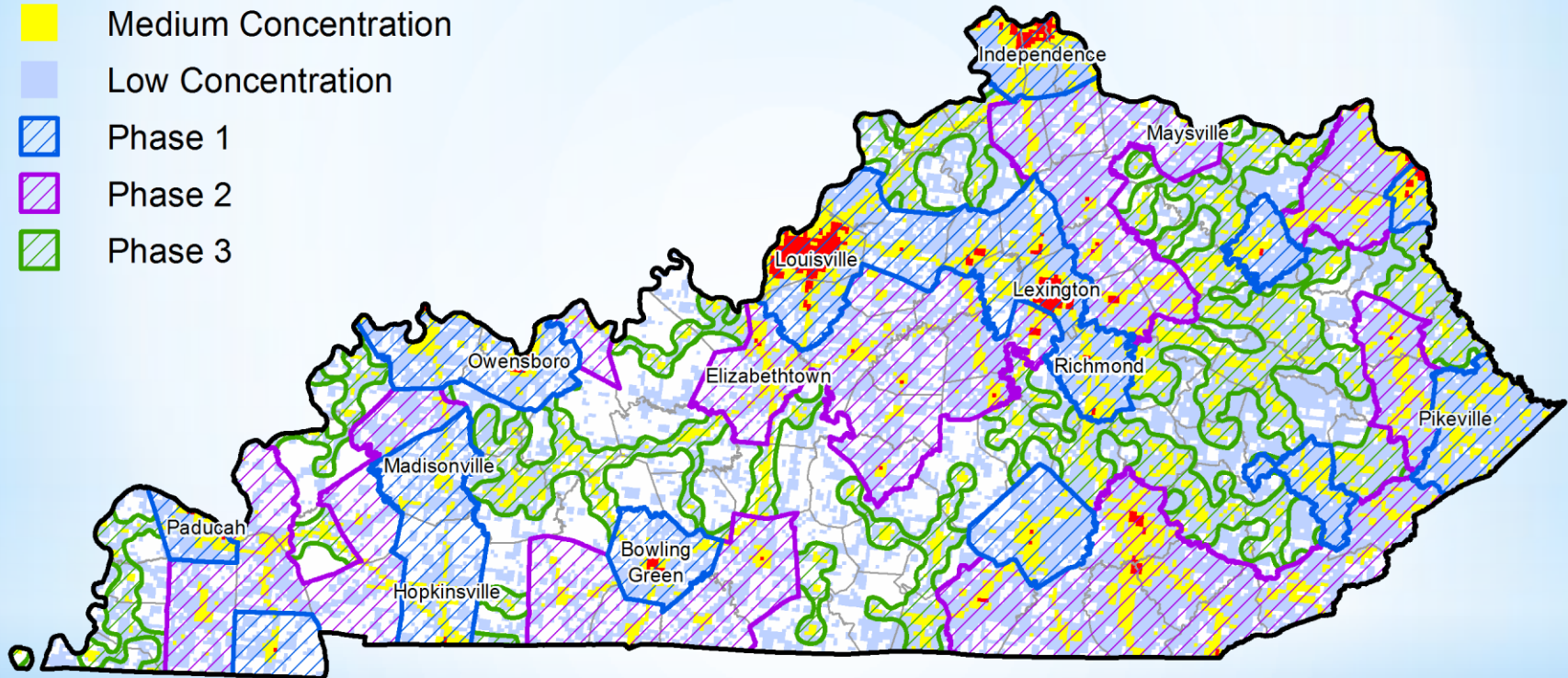
- High Concentration
- Medium Concentration
- Low Concentration
- Phase 1
- Phase 2



	Percentage of Coverage
High Concentration	100.00%
Medium Concentration	72.09%
Low Concentration	57.85%
Total	61.34%

Proposed Phase 1 - 3 Build-Out

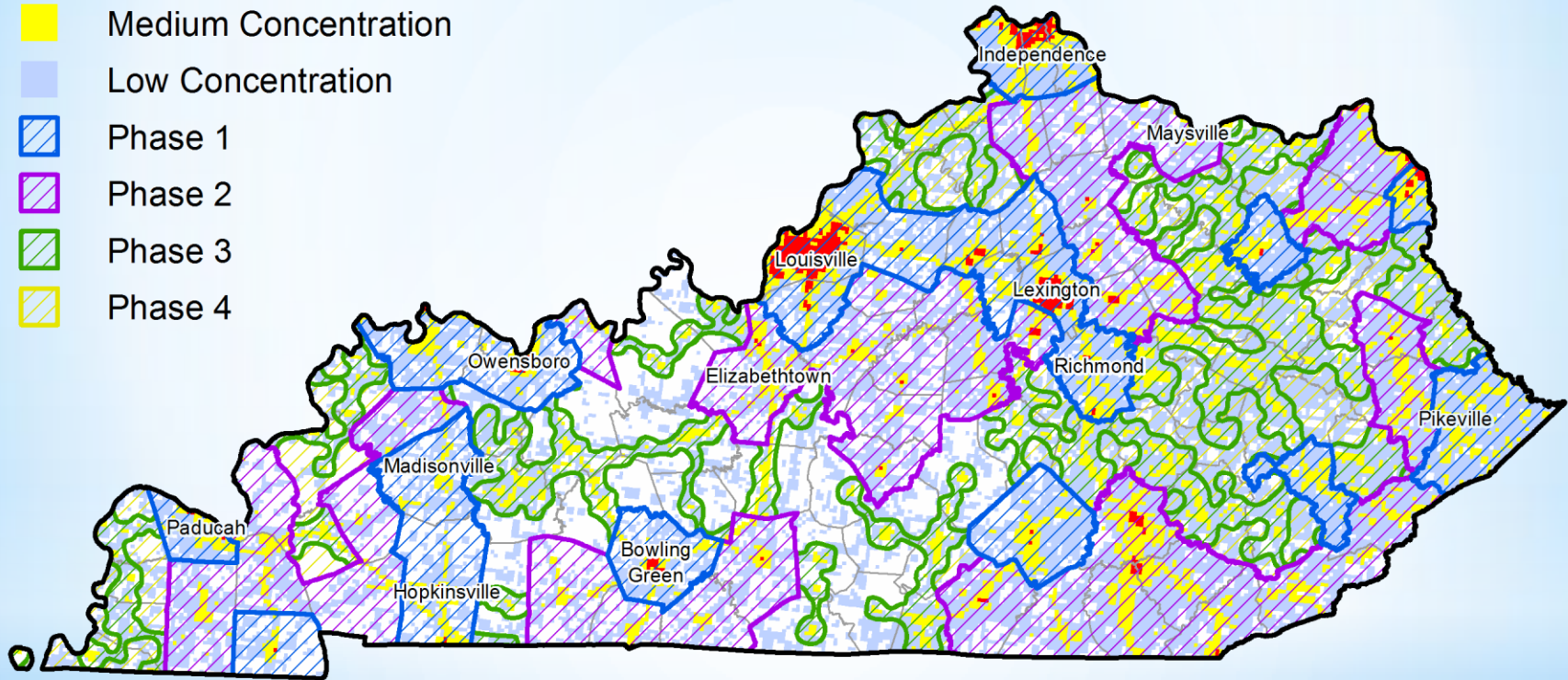
- High Concentration
- Medium Concentration
- Low Concentration
- Phase 1
- Phase 2
- Phase 3



	Percentage of Coverage
High Concentration	100.00%
Medium Concentration	100.00%
Low Concentration	80.84%
Total	84.83%


Proposed Phase 1 - 4 Build-Out

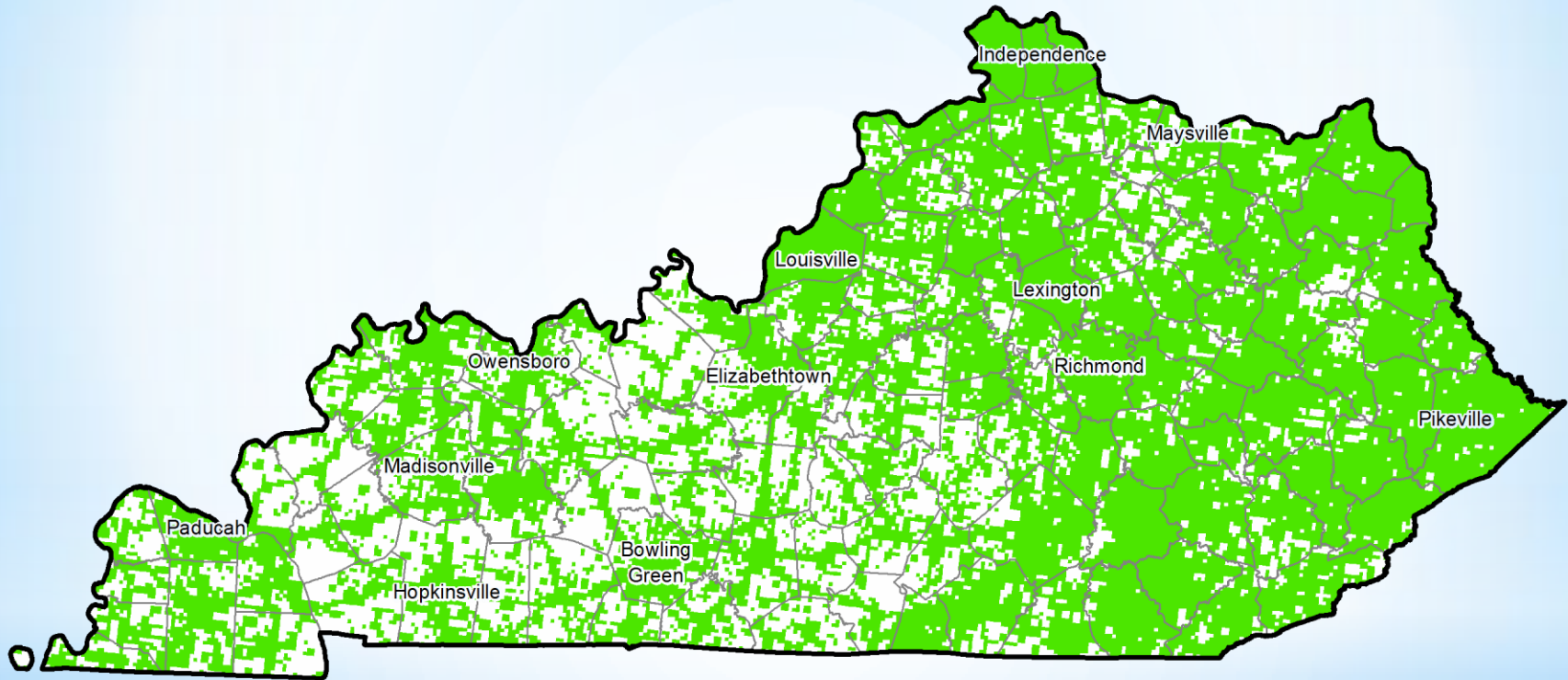
- High Concentration
- Medium Concentration
- Low Concentration
- Phase 1
- Phase 2
- Phase 3
- Phase 4



	Percentage of Coverage
High Concentration	100.00%
Medium Concentration	100.00%
Low Concentration	92.99%
Total	94.45%

Proposed Phase 1 - 5 Build-Out

 Terrestrial Coverage



	Percentage of Coverage
High Concentration	100.00%
Medium Concentration	100.00%
Low Concentration	100.00%
Total	100.00%

KY Public Safety Assessment -- *Respondent Information*

- Released early July 2015
- Email notification to 438 contacts in KY Public Safety
- Fire/EMS/Law Enforcement/EM and 911 Dispatch
- Assessment designed to gather info using straight-forward questions
- Info is for FirstNet data elements
- Data used by FirstNet as input into the network RFP process
- Additional data collection used for input into KY State Plan during the consultation process;



FirstNet Kentucky Public Safety User Assessment: 2015

The user assessment that follows provides the Commonwealth Public Safety community an opportunity to provide valuable information about current uses to help determine the future needs for developing the FirstNet Public Safety Broadband Network (PSBN) in Kentucky.

Please:

- Review the questions
- Update the current information as required
- Provide missing information
- Select your answer from the choices provided for some questions

Note:

- All questions marked with an * require an answer
- Find out more about FirstNet in Kentucky at: <https://www.kyfirstnet.com>

Respondent Information

Survey Respondent Contact Information

Official Position, Title, or Rank: _____

First Name: * _____

Middle Initial: _____

Last Name: * _____


Phone: _____

Email: * _____



Data to be Compiled: Users/Devices

- Data from the county work packages in 2014 provided initial info
- Specific information on devices and how they are assigned.



Agency Information

Your Agency and Contact Information

State: _____
Note: If you are responding from a neighboring jurisdiction outside Kentucky, please specify

County: _____
Enter the county where you work

City or Town: _____
Enter the city or town where you work

ZIP Code: _____

Street Address or Location: _____
Please do not enter PO Box Address



Select the discipline that best describes your agency: *

- Emergency Management
- Emergency Medical Services
- Fire Service
- Law Enforcement (Municipal Police, State Police, Sheriff, Highway Patrol)
- Public Safety Communications
- Specialized Law Enforcement (investigations, intelligence, Oignitary Protection, Specific Jurisdiction or Mission)


Enter your Agency Name: *

Department: _____
Note: Enter only if response applies to a specific department within the Agency, such as Predictics, Divisions, etc.

- Number of Employees at your Agency:** _____
- Number of Full Time Employees at your Agency:** _____
- Number of Part Time Employees at your Agency:** _____
- Number of Volunteers at your Agency:** _____
- Number of Agency-Owned or Personally Owed Vehicles used for Operations of your Agency:** _____
- Comments:** _____



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Devices

Agency Issued Devices - Personnel



- Number of Devices with Cellular Communication Capability Assigned to Personnel:** _____
(Smartphones, Cellphones)
- Number of Devices with LMR Communication Capability Assigned to Personnel:** _____
- Number of Devices with Data Capability Assigned to Personnel:** _____
(USB Modems, Vehicular Modems, Mobile Hotspots, Laptop or Tablet Computer Devices with Modems, Pagers)

Agency Issued Devices – Vehicles (not accounted for above)

- Number of Devices with Cellular Communication Capability Assigned to Vehicles:** _____
(Smartphones, Cellphones)
- Number of Devices with LMR Communications Assigned to Vehicles:** _____
- Number of Devices with Data Capability Assigned to Vehicles:** _____
(USB Modems, Vehicular Modems, Mobile Hotspots, Laptop or Tablet Computer Devices with Modems, Pagers)

Personally Owned Devices

- Are employees using personally owned devices to perform any type of work functions?** _____
- Are personally owned devices connecting to any official applications/services?** _____
(Example: email, internet databases, etc.)
- Is there any compensation provided to employees for use of personally owned devices?**
 - Yes – Fixed Amount
 - Yes – Based on Usage
 - Yes – Other Method
 - No
 - Unknown



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Data to be Compiled: Capacity Planning

- Usage data is critical for the design of the KY network/state plan;
- Number of users of specific applications are requested;
- Responses helps determine capacity and network needs

FirstNet in Kentucky

General

10. Does your agency use Machine to Machine (M2M) devices that use wireless connections? _____
M2M refers to machines that allow wireless and wired devices to communicate with other devices of the same type.
 Example: cameras, sensors, etc.

11. Number of Machine to Machine (M2M) Devices, if applicable: _____

12. Identify any planned changes in 2016 that could impact device counts significantly.
Example: Deployment of cellular network cables.

13. Comments on Devices: _____

Applications

Applications/Frequency of Use

1. Which data application does your Agency use primarily for communications? _____
This refers to mobile wireless data communications such as texting or paging using a smartphone, tablet, or similar device.
 Example: texting, paging, etc.

2. Frequency of Use (Communications):
 Daily
 Weekly
 Infrequently
 Not Used but Desired
 Not Used
 Unknown
Example: texting, paging, etc.

3. Number of Users (Communications): _____

4. What application does your Agency use primarily for Over-The-Top voice communications?
 None
 Skype
 RingCentral
 CallFire
 Broadvoice
 Vonage
 Alliance
 Other _____
Over-the-Top (OTT) refers to delivery of voice communications over Internet, without a telecom carrier in control of the technology.
 Example: voice calls over Internet

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FirstNet in Kentucky

5. Frequency of Use (Over the Top Voice): _____

6. Number of Users (Over the Top Voice): _____

7. Which application does your Agency use for Automatic Vehicle Location (AVL)? _____
Automatic Vehicle Location (AVL) is a technology for automatically finding and transmitting the geographic location of a vehicle.

8. Frequency of Use (Automatic Vehicle Location):
 Daily
 Weekly
 Infrequently
 Not Used but Desired
 Not Used
 Unknown

9. Number of Users (Automatic Vehicle Location): _____

10. Which application does your Agency use for Location Services? _____
The ability to transmit and view map or aerial information and track for routing and assignment to a mobile workstation using a laptop, tablet, or similar device.

11. Frequency of Use (Location Services):
 Daily
 Weekly
 Infrequently
 Not Used but Desired
 Not Used
 Unknown

12. Number of Users (Location Services): _____

13. Which application does your Agency use for Computer Aided Dispatch (CAD)? _____
The mobile application of CAD which allows for the transmission of incident information to personnel in the field.

14. Frequency of Use (Computer Aided Dispatch):
 Daily
 Weekly
 Infrequently
 Not Used but Desired
 Not Used
 Unknown

15. Number of Users (Computer Aided Dispatch): _____

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FirstNet in Kentucky

16. Which application does your Agency use for database inquiries? _____
Mobile queries to database such as Criminal Justice Information System (CJIS) or National Crime Information Center (NCIC) using a laptop, tablet, or similar device.

17. Frequency of Use (Database Inquiries):
 Daily
 Weekly
 Infrequently
 Not Used but Desired
 Not Used
 Unknown

18. Number of Users (Database Inquiries): _____

19. Which application does your Agency use for general connectivity?
Using a wireless cellular connected device such as laptop, tablet, or smartphone to perform activities such as email, web searching and browsing, file transfers, etc.
 Example: email, internet, file transfers

20. Frequency of Use (General Connectivity):
 Daily
 Weekly
 Infrequently
 Not Used but Desired
 Not Used
 Unknown

21. Number of Users (General Connectivity): _____

22. Which application does your agency use for Field Based Reporting?
Mobile use of an incident reporting application to file reports using a laptop, tablet, or similar device.

23. Frequency of Use (Field Based Reporting):
 Daily
 Weekly
 Infrequently
 Not Used but Desired
 Not Used
 Unknown

24. Number of Users (Field Based Reporting): _____

25. Which application does your Agency use for Internet Access/Mobile VPN Networking?
Mobile access of a secure local network through the use of Virtual Private Network (VPN) application for accessing files, records, and databases.

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Data to be Compiled: Current Service and Barriers

- Specific issues or major procurement barriers are requested prior to the September deadline to provide input to the FirstNet RFP;
- Other info about plans and costs used for input into the State plan.

FirstNet in Kentucky

13. Frequency of Use (Other Applications):
 Daily
 Weekly
 Infrequently
 Not Used but Desired
 Not Used
 Unknown

16. Number of Users (Other Applications): _____

17. Do you have comments about the technology or applications mentioned in this section?

Agencies: Questions RFP flow online to the location of the wireless system (i.e., number of agencies or centrally, or only when pulled).
 Questions RFP: Agencies that do not use services will bring their questions.
 Questions RFP: Agencies that use services will bring their questions.

Current Commercial Providers



Agency Procurement of Technology Services

1. What procurement process was utilized?
 Master Contract – GS/A/Federal
 Master Contract – State
 Master Contract – Other
 Local RFP/RFI Based on price quotes
 Other _____
 Unknown

2. Are other procurement options available?
 Yes
 No
 Unknown

3. Describe additional procurement options available to you, if applicable: _____

4. Does your Agency have a direct sales/account relationship with the provider?
 Yes
 No
 Unknown

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FirstNet in Kentucky

14. What is the contract duration of your Agency's current plan?
 No Contract
 Short-term Contract
 Annual Contract
 3 Year Contract
 Over 3 Year Contract
 Other _____
 Unknown

15. What is your Agency's average monthly data usage per user?
 < 100 MB
 100 MB – 1 GB
 1 – 5 GB
 5 – 10 GB
 > 10 GB
 Other _____
 Unknown

16. Comments on Current Providers: _____

Barriers

Do the barriers below limit or prevent your Agency from using the full potential of mobile data services?

1. Costs: Does your Agency have a budget to purchase data plans or devices?
 Yes, Cost is a Barrier
 No, Cost is not a Barrier
 Unknown

2. Network Reliability: Is the speed and efficiency of data services from the network a problem for your Agency?
 Yes, Network Reliability is a Barrier
 No, Network Reliability is not a Barrier
 Unknown
Examples: slow speeds, congestion, frequent outages, etc.

3. Security: Does your Agency limit the use of data services due to security reasons?
 Yes, Security is a Barrier
 No, Security is not a Barrier
 Unknown
Examples: wireless, network security does not meet agency policy and data transmission is limited.

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FirstNet in Kentucky

4. Coverage: Does the coverage of your Agency's wireless data network fail to meet agency operational requirements?
 Yes, Coverage is a Barrier
 No, Coverage is not a Barrier
 Unknown
Example: dead spots through operational area

5. Expertise: Agency employees do not have the technical knowledge to fully utilize available wireless data services: _____
 Yes, Expertise is a Barrier
 No, Expertise is not a Barrier
 Unknown

6. Are there Other Barriers? Please explain: _____

7. Comments on Barriers: _____

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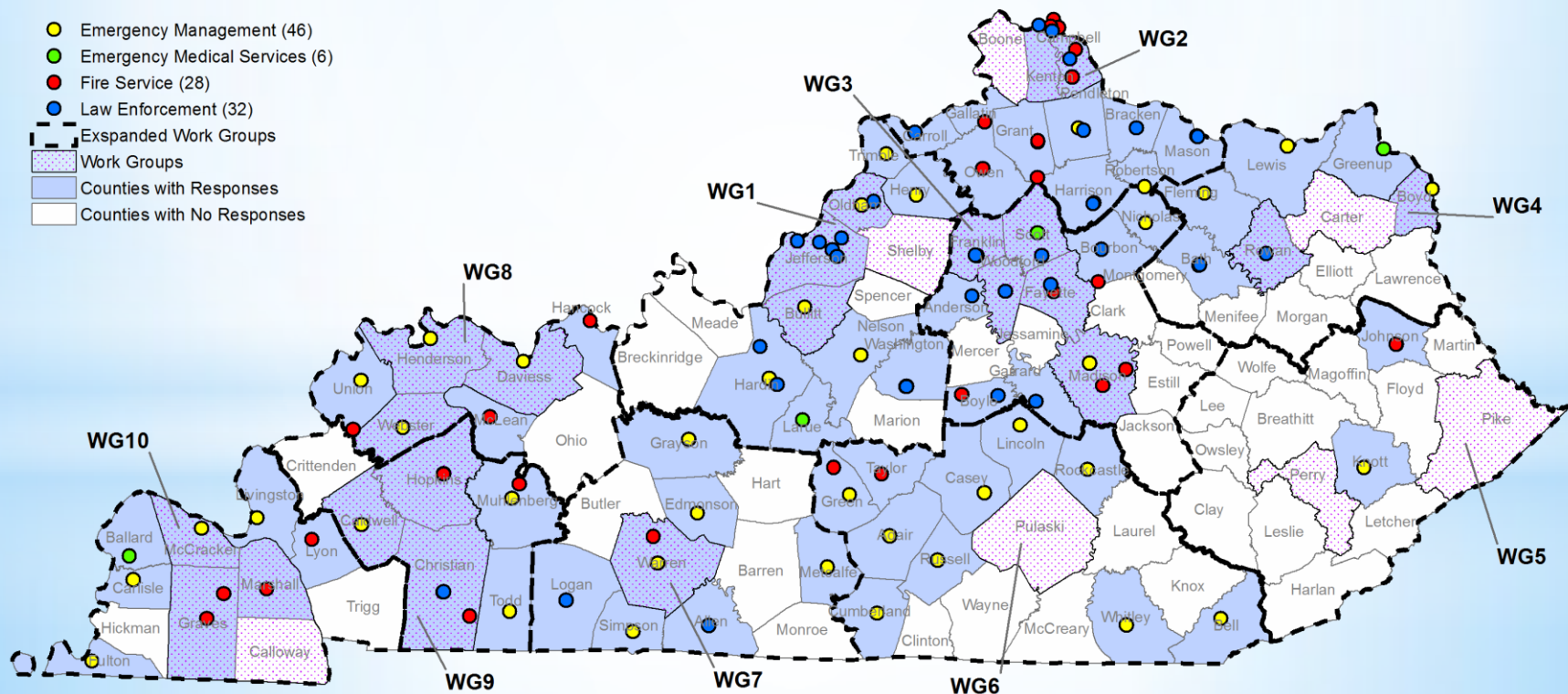
Progress Report on Data Collection



Data Collection Respondents - 2014

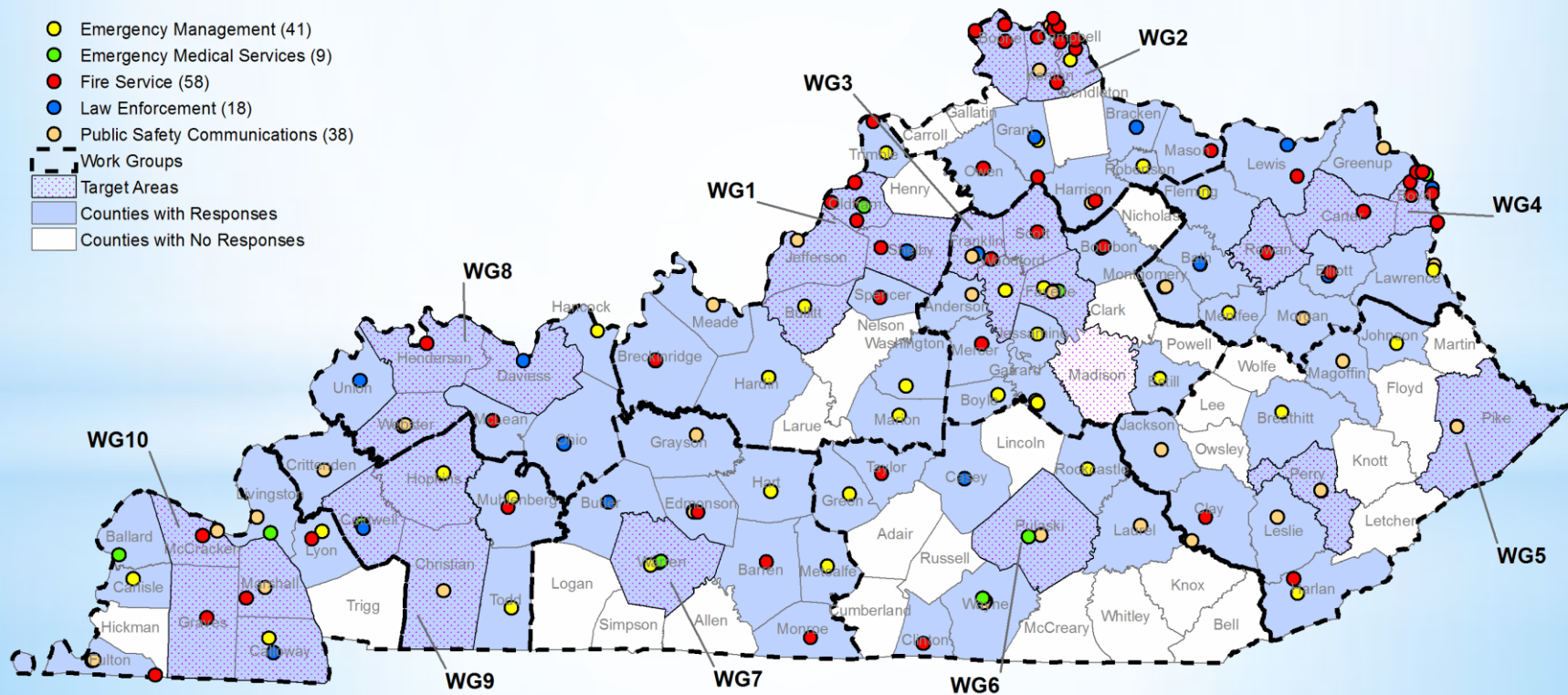
■ Data Collection Work Packages from 2014

- Work packages collected feedback on coverage needs; locations of facilities; special events; etc.
- Some national data is out of date - need local input/updates



Data Collection Respondents - 2015

- Current Data Collection Survey to provide input to FirstNet
 - Updates on number of users and data devices
 - Procurement practices
 - Applications and capacity needs



PSAP Respondents - 2015

- CMRS Request to PSAPs for:
 - Jurisdictional Boundaries
 - ESN Boundaries
 - Incident Data
- Credit for Annual GIS Data Submission to the CMRS Board

Data Request Status

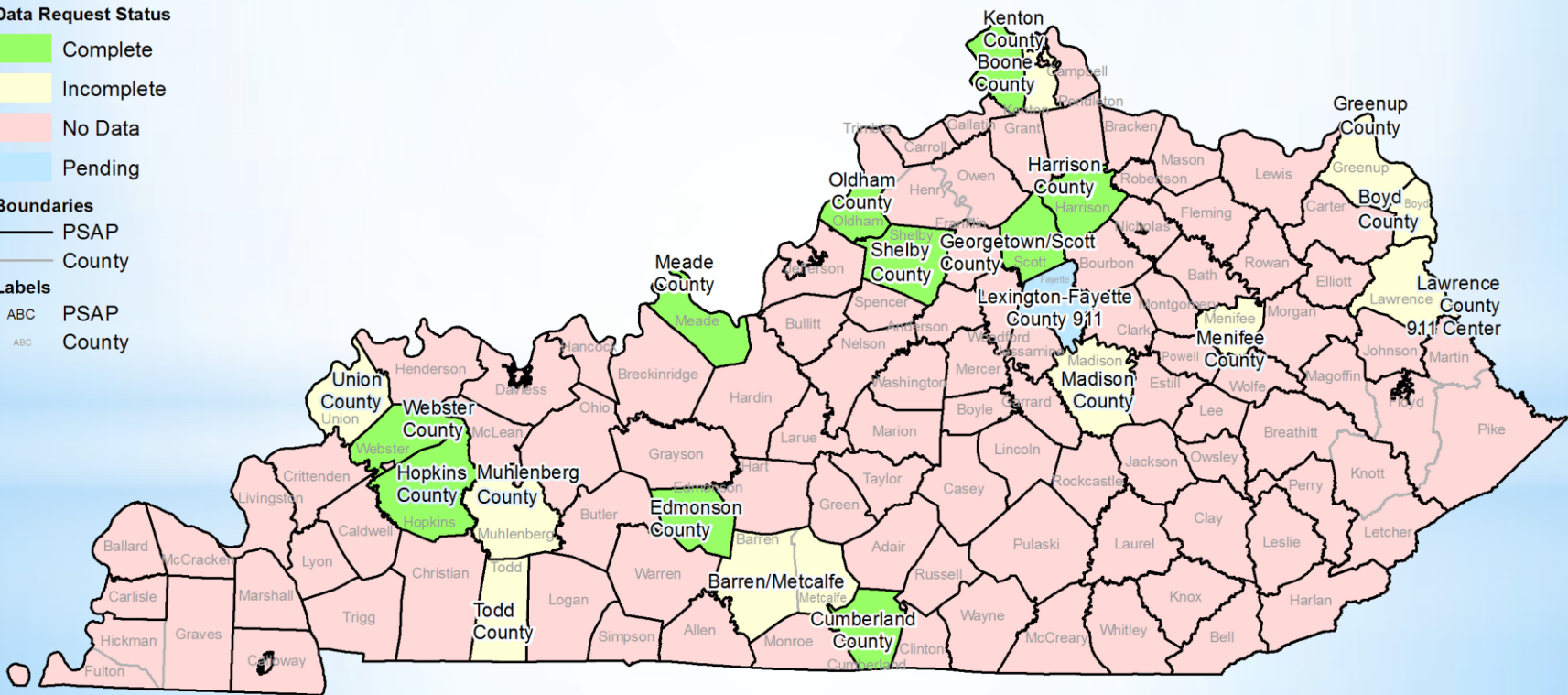
- Complete
- Incomplete
- No Data
- Pending

Boundaries

- PSAP
- County

Labels

- ABC PSAP
- ABC County



Data Collection Responses: Device Usage

Agency Type	# of Responders Statewide/Local	Data Devices Statewide/Local	Ratio
EMA	624/69	190/15	0.3/0.2
EMS	399/0	137/0	0.3/0
Fire	3619/60	727/2	0.2/0
Law Enforcement	438/111	187/32	0.4/0.3
911/Dispatch	6575/10	389/0	0.1/0
State Users	0/0	0/0	0/0
Other	0/0	0/0	0/0

- Need input from law enforcement and state users;
- How does cumulative data compare with local data?

Data Collection Responses: Personal Devices

Agency Type	# of Responders Statewide/Local	# that are Volunteers	Use Personal Data Devices (Y/N)
EMA	297/26	352/43	23/2
EMS	418/0	34/0	6/0
Fire	2437/90	1340/30	41/2
Law Enforcement	431/103	27/8	10/2
911/Dispatch	6508/10	101/0	20/0
State Users	0/0	0/0	0/0
Other	0/0	0/0	0/0

- How important for adoption will it be for the network to allow use by a non-agency supplied, but approved device?
- Use of personal devices will drive the need for a FirstNet BYOD policy.

Data Collection Responses: Technology Applications

AT	Txt	OTT	AVL	Map	CAD	Db	Rpt	Inter	Intra	Vid	Tlm
EMA	444	72	12	63	91	60	77	289	37	10	3
EMS	295	0	59	85	17	34	148	100	85	2	100
Fire	2089	179	144	437	563	189	393	772	282	7	9
Law	229	0	47	76	262	65	163	204	39	65	0
911	1377	15	205	706	398	357	64	325	3616	42	4
State	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0

- What applications are important locally?
- Are there additional applications in use?
- What is average data usage per month?

Data Collection Responses: Barriers

Agency Type	Cost	Reliability	Security	Coverage	Expertise
EMA	25	14	8	16	12
EMS	7	5	3	4	2
Fire	24	17	12	17	10
Law Enforcement	13	8	6	5	5
911/Dispatch	13	9	7	12	4
State Users	0	0	0	0	0
Total	82	53	36	54	33

- What drives adoption most?
- How important is a fixed rate plan?

Data Collection Actions

- Gaps Identified In-Region:
- Critical Areas Where Data is Needed
- Workgroup knowledge of area
- Outreach POC within Workgroup Membership
- Set Response Timeline and Project POC for Workgroup



Questions/Feedback?

