



FirstNet in California Governance and Next Steps

September 24, 2014

This document was prepared by SAIC under contract with Cal OES using funds under award 06-10-S13006 from the National Telecommunications and Information Administration (NTIA), U.S. Department of Commerce (DOC). The statements, findings, conclusions, and recommendations are those of the author(s) and do not necessarily reflect the views of the NTIA, DOC, or FirstNet.

Topics

- **Vision**
- **Governance**
- **The Future is Now (LA-RICS progress)**
- **Education and Outreach**
- **Designing for Coverage**
- **Managing Expectations**



VISION:

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

“FirstNet will be a force multiplier, enabling collaboration to help save more lives, solve more crimes and keep communities safer.”

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

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FirstNet will Offer Public Safety Users:



Communication

- Video
- Voice (non-mission critical)
- Messaging
- SMS/Text
- Data (Internet)



Applications

- CAD, RMS, NLETS
- FirstNet applications (e.g., AVL)
- Syndicated applications
- Currently used Agency applications

Services

- Records management
- Data storage
- Audio storage
- Database inquiries



Capabilities

- Network monitoring and status
- Integrated solution and services
- Priority
- Hardened and secure
- Provisioning



Future Vision: Emergency Medical Response



FirstNet will enable Emergency Medical Applications

- Live one- and two-way video in vehicles or via handhelds
- Medical telemetry, incl. over-the-air real-time patient monitoring
- Large file transfer/download (high resolution diagnostic images, chem-bio data, CAD floor plans)
- Situational Awareness (incl. asset, vehicle, personnel tracking)
- Dynamic mapping, weather, traffic
- Next Generation (NG) 9-1-1 texts, photos, data
- Database queries
- Field reporting
- Non-Mission Critical Voice



Courtesy of FirstNet

FirstNet's high speed data network can dramatically improve situational awareness

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Governance

Governance – Federal Level

- **Federal Communications Commission**
 - 700 MHz public safety spectrum frequency holder
- **National Telecommunications and Information Administration (NTIA)**
 - Part of the Department of Commerce
 - Selected FirstNet Board of Directors

- **First Responder Network Authority (FirstNet)**
 - Managing entity for the public safety spectrum
 - Governing authority for the Nationwide Public Safety Network (NPSBN)



Governance – State Level

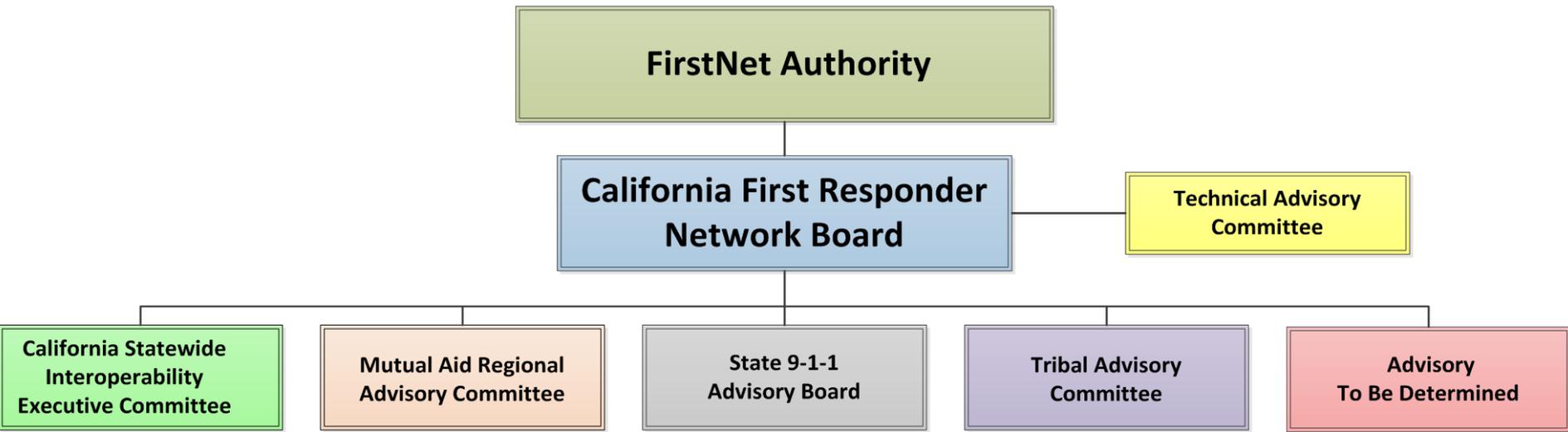
- **State of California Governor’s Office**
 - Per the Act, designates single officer or governmental body to coordinate with FirstNet
 - Makes the Opt-In/Opt-Out decision
- **California First Responder Network Board (CalFRN)**
 - State’s governing body for FirstNet
 - Engages key public safety stakeholders across California
 - Works with Cal OES
- **California Office of Emergency Services (Cal OES)**
 - Designated state point of contact (SPOC) to coordinate with FirstNet
 - Chairs the CalFRN Board
 - Acts as administrator and financial manager

California First Responder Network

Board includes representatives from:

- Public Safety Communications
- California Governor's Office of Emergency Services
- Department of Technology
- California Department Finance
- California Department of Forestry and Fire Protection
- California Highway Patrol (CHP)
- Emergency Medical Services Authority
- Bay Area Regional Interoperability Communications System (BayRICS)
- Los Angeles Regional Interoperability Communications System (LA-RICS)
- California Police Chiefs Association
- California Fire Chiefs Association
- California State Sheriffs Association
- Tribal, Governor's Office Tribal Advisor

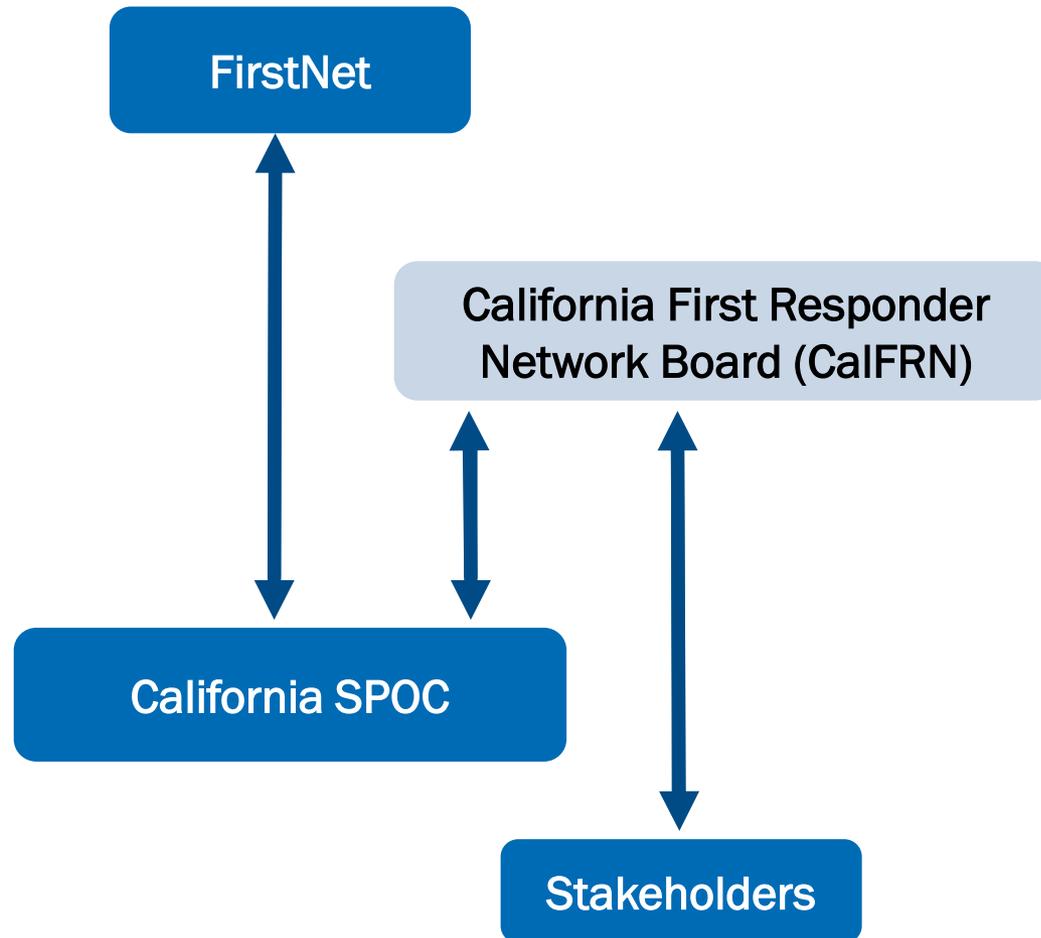
CalFRN Advisory Committees



Advisory committees add to the Board's operational strength



Communicating with FirstNet



The Future is Now

LA-RICS

Los Angeles Regional Interoperable Communications System Joint Powers Authority (LA-RICS)



PURPOSE:

To engage in regional and cooperative planning and coordination of government services to establish a wide-area interoperability public safety communications network.

LA-RICS Benefits to Public Safety

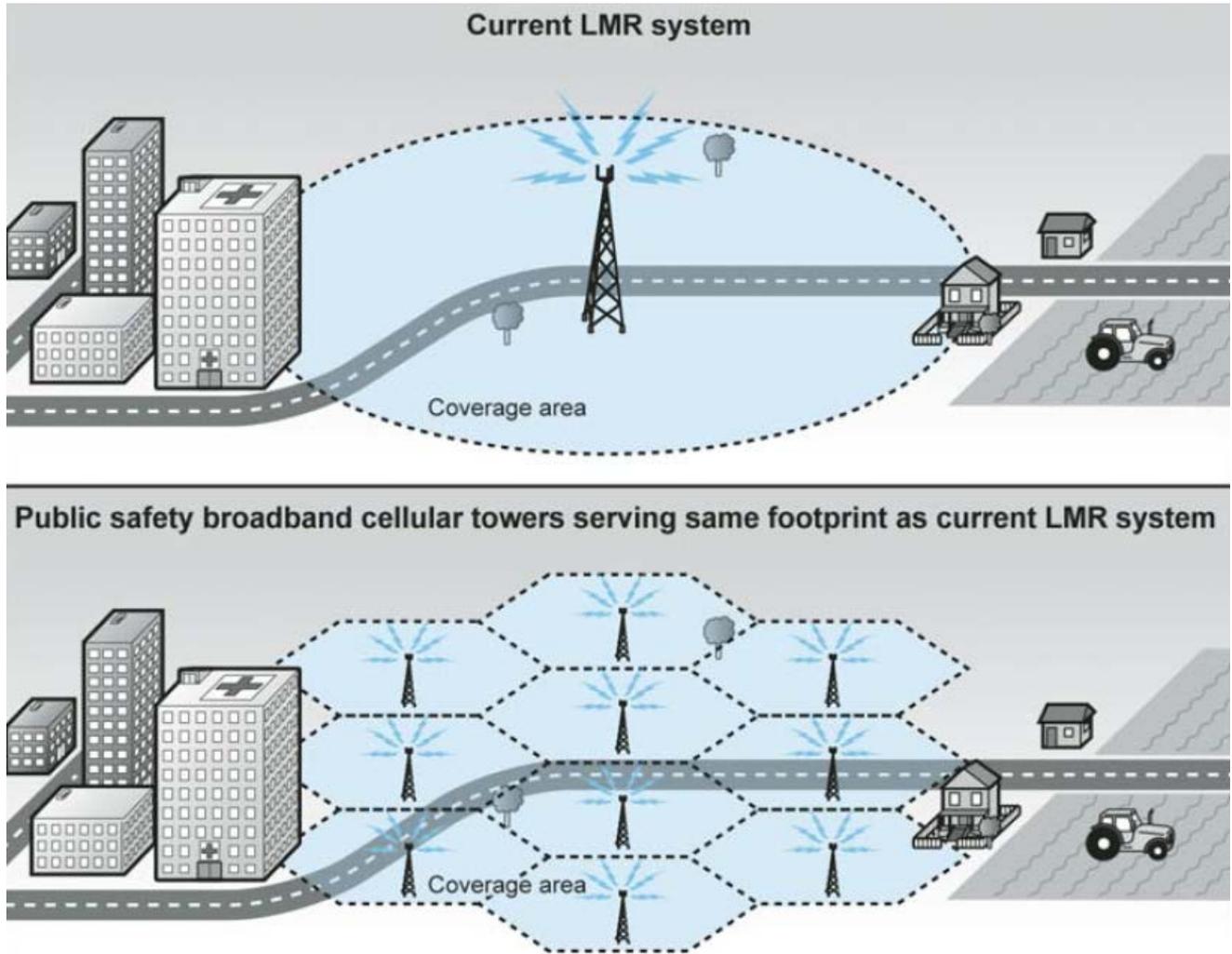


- Provides interoperable communications and shared data for multi-jurisdictional responses to small and large scale events
- Eliminates localized public safety communications systems and brings responders under a single interoperable system
- 4G LTE provides a secure private data network for public safety to provide high-speed video and data access to all local first and secondary responders in the region
- LMR and LTE improve operational efficiency of services by first and secondary responders

Project History

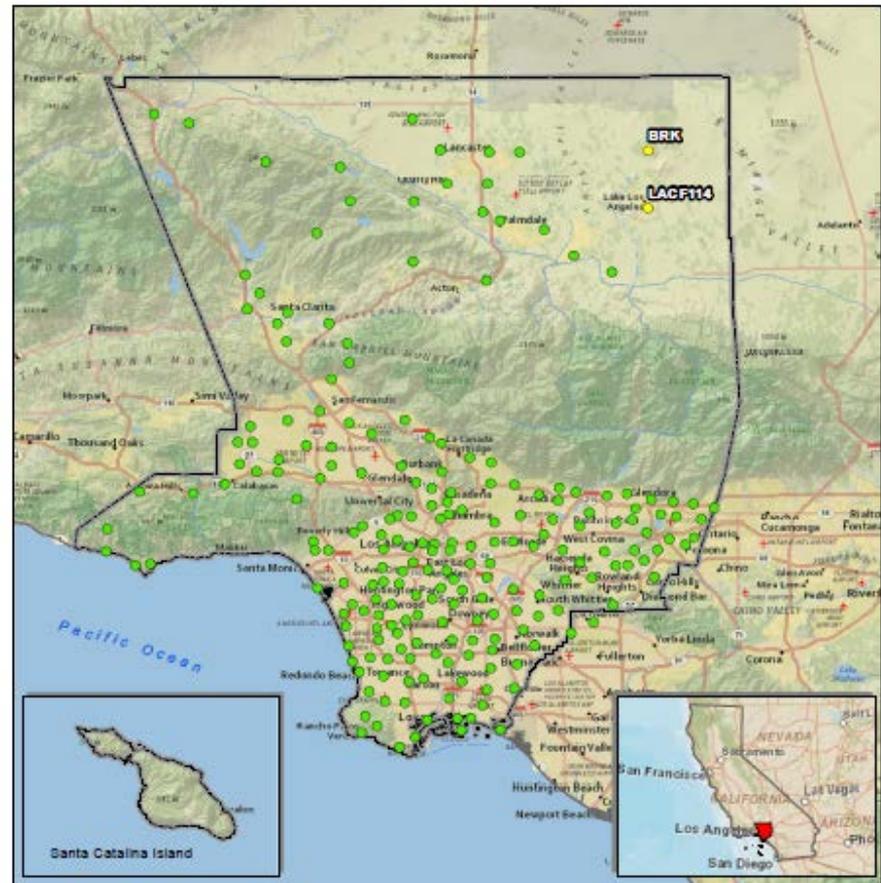
- **February 2012** Congress passed the Middle Class Tax Relief and Job Creation Initiative of 2012 (H.R. 3630)
- **April 2012** LA-RICS placed procurement on hold to further analyze impacts resulting from H.R. 3630
- **August 2012** LA-RICS Board of Directors voted to cancel RFP and issue two separate RFPs for LMR and LTE
- **September 2012** Assembly Bill 1486 (Lara) enacted allowing limited CEQA exemption
- **October 2012** New RFP for LMR released
- **January 2013** LMR Proposals received
- **August 2013** New RFP for LTE Network released
- **August 2013** LMR Contract approved by JPA
- **March 2014** LTE Contract approved by JPA

Land Mobile Radio and LTE Cellular Coverage Differences



LTE Sites in LA County

- There are 229 monopole sites identified for the LTE network in all of Los Angeles County
 - All sites meet criteria for CEQA exemption
 - NEPA clearance required for all sites
 - Heights will vary from 28' – 70' depending on community
 - Stealth and standard monopoles will be deployed
- 27 monopole sites will have both LMR and LTE



LMR Deployment:

Five Year Program deployed in five Phases:

- Phase 1 – System Design (Aug 2013 – Jan 2015)
- Phase 2 – Site Construction (Oct 2014 – Mar 2016)
- Phase 3 – Supply Telecomm. System (Feb 2015 – Nov 2015)
- Phase 4 – System Implementation (Nov 2015 – Oct 2017)
- Phase 5 – System Maintenance (May 2018)



Topanga Peak – LA-RICS LMR Network

LTE Deployment:

18 Month Program deployed in five Phases:

- Phase 1 – System Design (Mar 2014 – Jun 2014)
- Phase 2 – Site Construction (Jun 2014 – Mar 2015)
- Phase 3 – Supply LTE Equipment (Aug 2014 – Mar 2015)
- Phase 4 – System Implementation (Oct 2014 – Aug 2015)
- Phase 5 – System Maintenance (Aug 2015)

BTOP funds expire in August 2015



Next Steps for California

Cal OES PSBN Education and Outreach

- Governor's Office Cal OES is responsible for representing California public safety at the federal level
- Under the NTIA SLIGP grant, Cal OES is responsible for building NPSBN and FirstNet awareness in California



Cal OES PSBN Education and Outreach

In executing the outreach requirements of the grant,

- Cal OES has formed a core team
- Hired public safety broadband consultant
- Held team kick-off/planning workshop
- Developed Education and Outreach Plan
- Developing presentations, flyers, and outreach materials
- Conducting town hall meeting webcasts
- Engaged DHS OEC to conduct coverage objectives workshops
- Developing California Roadmap

FirstNet by the Numbers

VISION
To provide emergency responders with the first nationwide, high-speed, wireless broadband network dedicated to public safety

THE LAW
2.22.12
FirstNet becomes Law PL 112-96

FUNDING
\$7B authorized to build the FirstNet Network. Funded by spectrum auctions through 2022. The first auction netted \$1.6B

GOVERNANCE
FirstNet Board of Directors: 15 members have backgrounds in police, fire, sheriff, emergency medical, city government, and commercial telecommunications. Governor appoints 1 single Point of Contact and governing body to represent the state's interests to FirstNet. 41 member Public Safety Advisory Committee (PSAC) advises FirstNet on public safety intergovernmental matters.

WHO WILL USE FIRSTNET
5.4 Million Potential FirstNet public safety users nationwide

Law Enforcement	Fire Services	Medical Services	Federal Gov't	State Gov't	Utilities	3,800,000 Square Miles
60,000 Public Safety Agencies	3,250 Counties	566 Tribes				

FirstNet must provide service in all 50 US states, 5 territories, and Washington, DC.

THE COVERAGE CHALLENGE
FirstNet coverage challenge: geography is divided into 5 categories. Dense urban, urban and suburban are where most people live, but make up only 5% of the US land mass.

5%	68%	27%
Dense Urban Urban Suburban	Rural	Wilderness

FIRSTNET NETWORK
To meet this challenge, FirstNet is considering a 3-in-1 network architecture using land-based cellular, satellite and deployable systems to provide coverage.

4G LTE is 10x faster than 3G wireless service

2014-2016
Business plan
Outreach and awareness
Collect local data and design network
Develop and award supplier RFP
Establish network core

THE ROAD TO FIRSTNET

2016+
Governor reviews design offer and opts in or out of FirstNet network deployment
Integrate Next Generation 9-1-1

HOW MUCH WILL IT COST?
To offer public safety grade services at a cost that's competitive and compelling to users.
- FirstNet Tenet

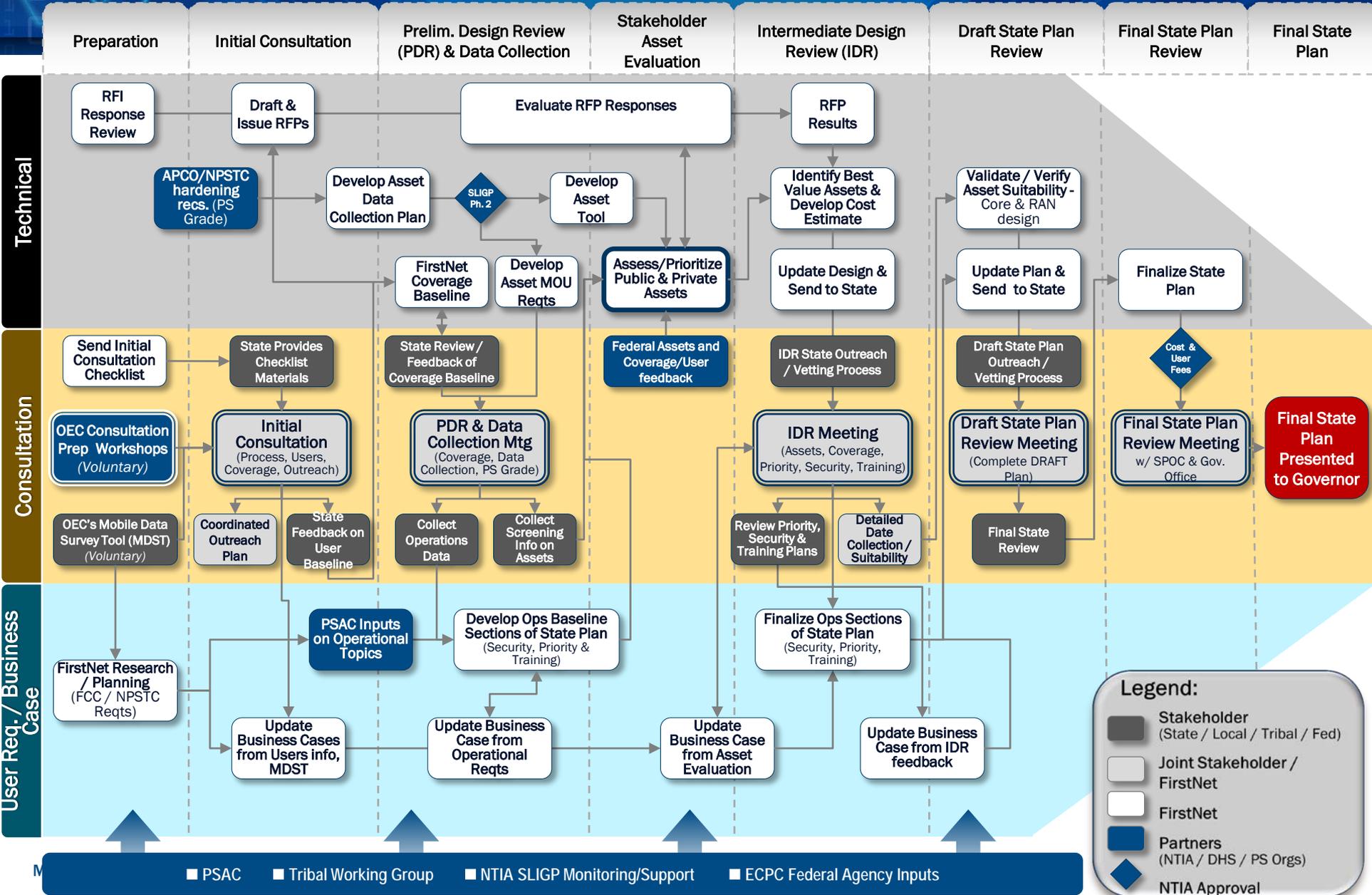
2022
Last spectrum auction
Network substantially in operation

FirstNet in California
For more FirstNet facts visit: www.firstnet.gov

Major Sources: Public Law 112-96, "Middle Class Tax Relief and Job Creation Act of 2012." Further reformed in Title XI of PL 113-96, entitled "Public Safety Communications and Emergency Services Act of 2015." House Report 113-107, "The First Responder Network and Next-Generation Communications for Public Safety, Issues for Congress." Congressional Research Service 4/16/15.

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Preliminary Consultation and State Plan Process



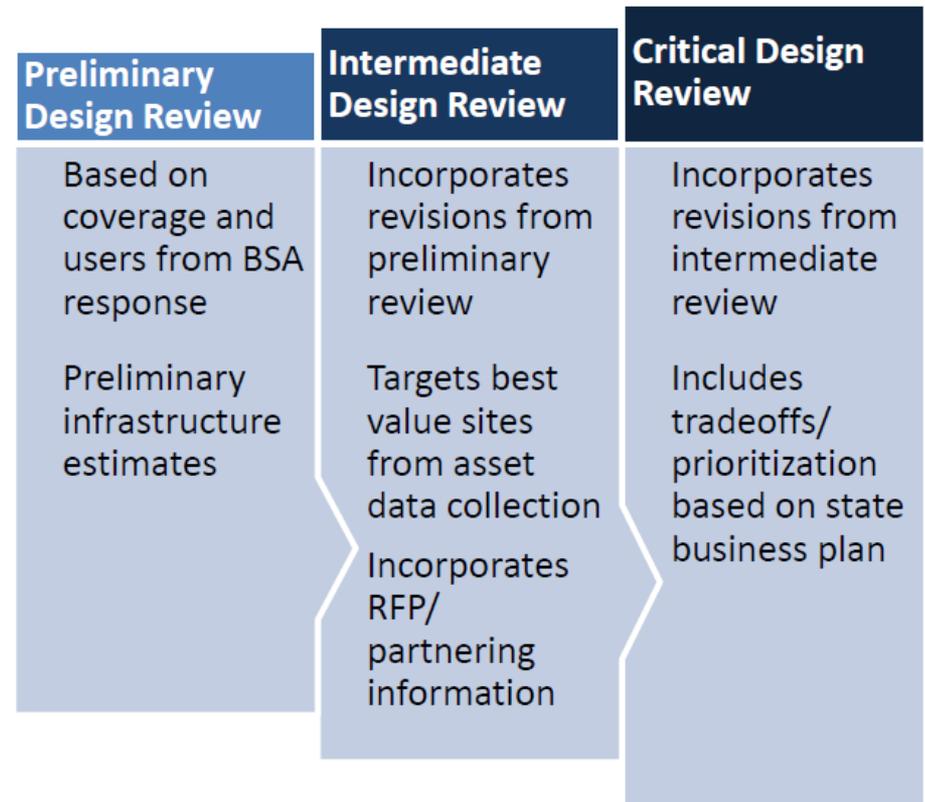
State RAN Design Process

Key Steps

- Multi-phase (preliminary/intermediate/critical design) reviews with state to refine design based on identified priorities
- Incorporate feedback and additional data as it is collected (SLIGP Phase 2/RFP Process)

Guiding Principles

- Ensure on-going review/refinement process with state
- Jointly develop tradeoffs and priorities



OEC Coverage Objectives Workshop

Interstates, major U.S. highways and non-CDP areas with more than 5 people per square mile (using census blocks)

All other areas would use Satellite/ Deployable coverage.

-  In-Building
-  Handheld/Partial In-Building
-  Vehicular Modem/ Partial handheld
-  Satellite/Deployable



Adjusting Coverage for Public Safety Needs

Agencies

- EMS Departments
- Federal
- Military
- Emergency Management
- Law Enforcement
- Fire Departments

Facilities

- Major State Government Building
- Court Houses
- ▨ Prison Areas
- ▨ Corrections
- ▨ Airport
- + Airports
- Local Emergency Operations Centers
- State Emergency Operation Centers
- Urgent Care Facilities
- Hospitals
- PSAP
- Schools
- ⚓ Ports
- Amtrak Stations
- Air National Guard (ANG) Sites
- ▨ Army National Guard (ARNG) Installat
- Canada and Mexico Border Crossings

Critical Infrastructure

- ◆ Manufacturing
- Hazardous Materials Routes
- ◆ Energy
- ☢ Nuclear Plants
- ◆ Dams
- ◆ Public Venues



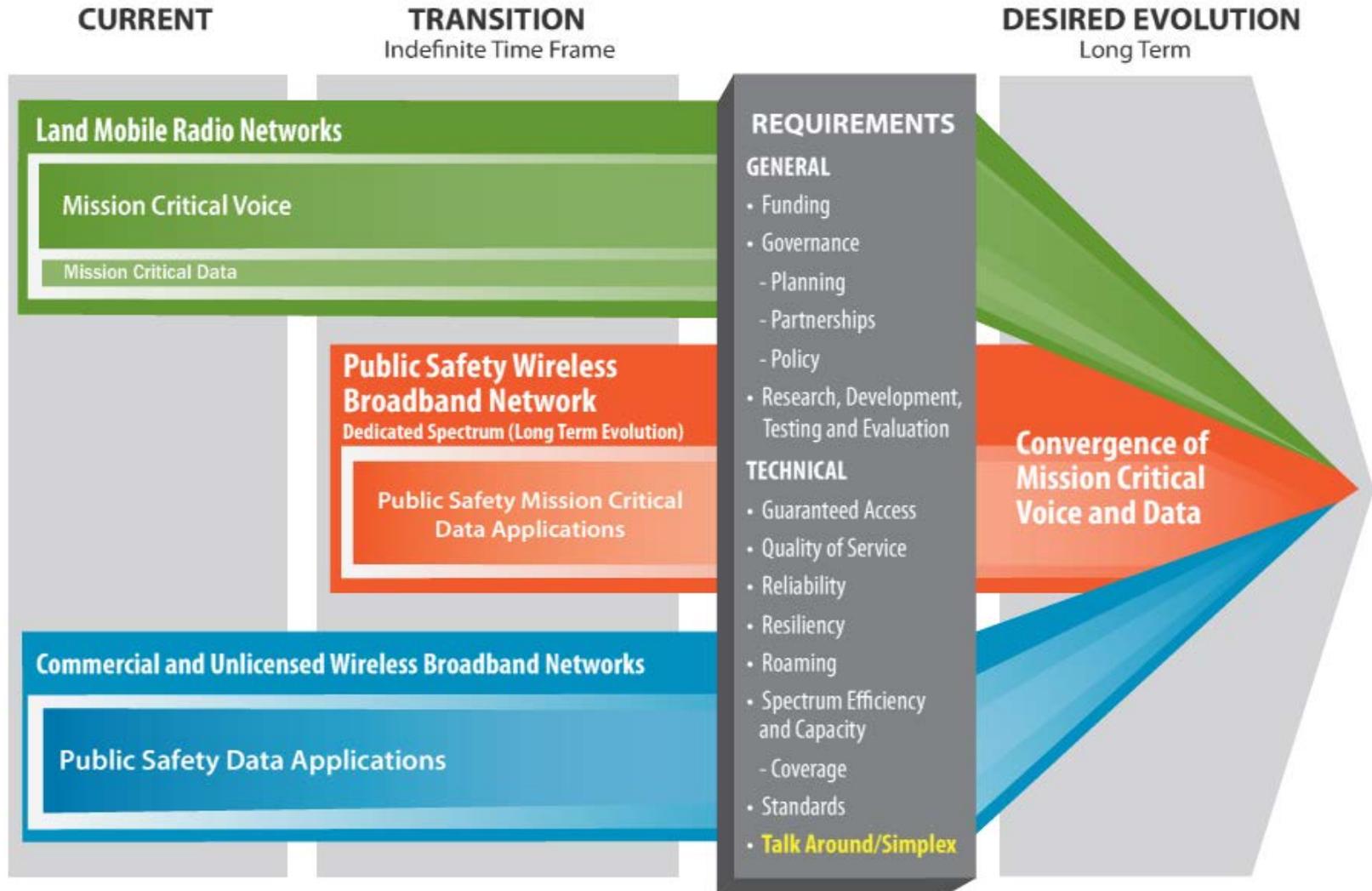
FOR OFFICIAL USE ONLY

Help us manage expectations

- LTE is not a replacement for LMR technology today
- LMR will continue to provide mission critical voice communications for the foreseeable future
- The LTE *data* network introduces new capabilities to assist the first responder
 - Provides new supplementary data and video services
 - Its true power and value will be realized once useful, interoperable applications are in the hands of users



Public Safety Communications Evolution to a Single Converged Mission Critical Platform



Thank You

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Courtesy of FirstNet

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