

# State of 911

Webinar Series

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NATIONAL 911 PROGRAM

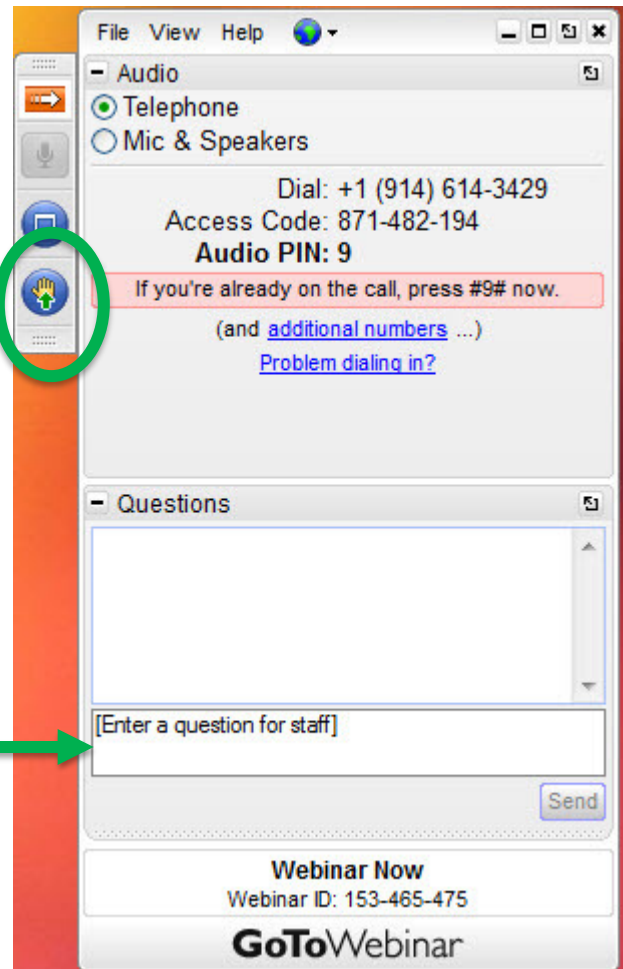
March 9, 2021

# State of 911 Webinar Series

- Designed to provide useful information about Federal and State participation in the planning, design, and implementation of Next Generation 911 (NG911) coupled with real experiences from leaders overseeing these transitions throughout the country
- Webinars are typically held every other month and include presentations from a Federal-level 911 stakeholder and State-level 911 stakeholder, each followed by a 10-minute Q&A period
- For closed captioning, please copy and paste the URL link in the chat window to an additional web browser
- For more information on future webinars, to access archived recordings and to learn more about the National 911 Program, please visit [911.gov](https://911.gov)
- Feedback or questions can be sent to: [National911Team@mcp911.com](mailto:National911Team@mcp911.com)

# Questions

Click on “Raise Hand” and your phone line will be unmuted.



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**NIOOC**

**NG9-1-1 INTEROPERABILITY  
OVERSIGHT COMMISSION**

**NIOOC Overview**

**State of 9-1-1 Webinar  
March 9, 2021**

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## **NG9-1-1 Interoperability Oversight Commission (NIOC) Commissioners**

### NIOC Participants Today

- Rick Blackwell, 9-1-1 Director, Greenville South Carolina
- Steve McMurrer, 9-1-1 Systems Administrator, Fairfax County Virginia
  - Jeff Wittek, Chief of Staff, Motorola Solutions

# About the NIOOC



The screenshot shows the homepage of the NIOOC website. At the top left is the NIOOC logo, which consists of a shield with a padlock and a headset. To the right of the logo is a navigation menu with links for HOME, LEADERSHIP, RESOURCES, FINANCES, NEWS, and CONTACT. The main header features a large graphic of a shield with a padlock and a headset, with the text "NIOOC" in large white letters to its right. Below this, the text "NG9-1-1 INTEROPERABILITY OVERSIGHT COMMISSION" is displayed. The page is divided into sections by horizontal lines. The first section is titled "MISSION STATEMENT" and contains a paragraph of text. Below this is a section titled "FREQUENTLY ASKED QUESTIONS" with a dropdown menu showing the question "+ Why is NIOOC necessary?".

**NIOOC**  
NG9-1-1 INTEROPERABILITY OVERSIGHT COMMISSION

**MISSION STATEMENT**

The NG9-1-1 Interoperability Oversight Commission (NIOOC) is the independent oversight governance body for the NG9-1-1 Public Key Infrastructure (PKI), Forest Guide, and other technical interoperability services key necessary for interoperability and security in NG9-1-1 in North America and beyond. These services are required under standards promulgated by NENA: The 9-1-1 Association and the Internet Engineering Task Force IETF. NIOOC sets the rules and policy for operating these services and performs oversight for their day-to-day operation, including compliance and finances.

For more information about what we do, [read our bylaws.](#)

**FREQUENTLY ASKED QUESTIONS**

+ Why is NIOOC necessary?

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## Who - or What - is NIOC?

*The NG9-1-1 Interoperability Oversight Commission, or NIOC, is an independent, transparent, revenue-neutral organization established to oversee security and interoperability in NG9-1-1 communications of the PSAP Credentialing Agency (PCA) and Forest Guide.*

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# Why was the NIOC Created?

*To oversee operational elements required for nationwide NG9-1-1 interoperability as per the NENA i3 Standard:*

- PSAP Credentialing Authority (PCA)*
- Forest Guide*

*Operationally and cost efficient to have one entity oversee and maintain the PCA and Forest Guide*

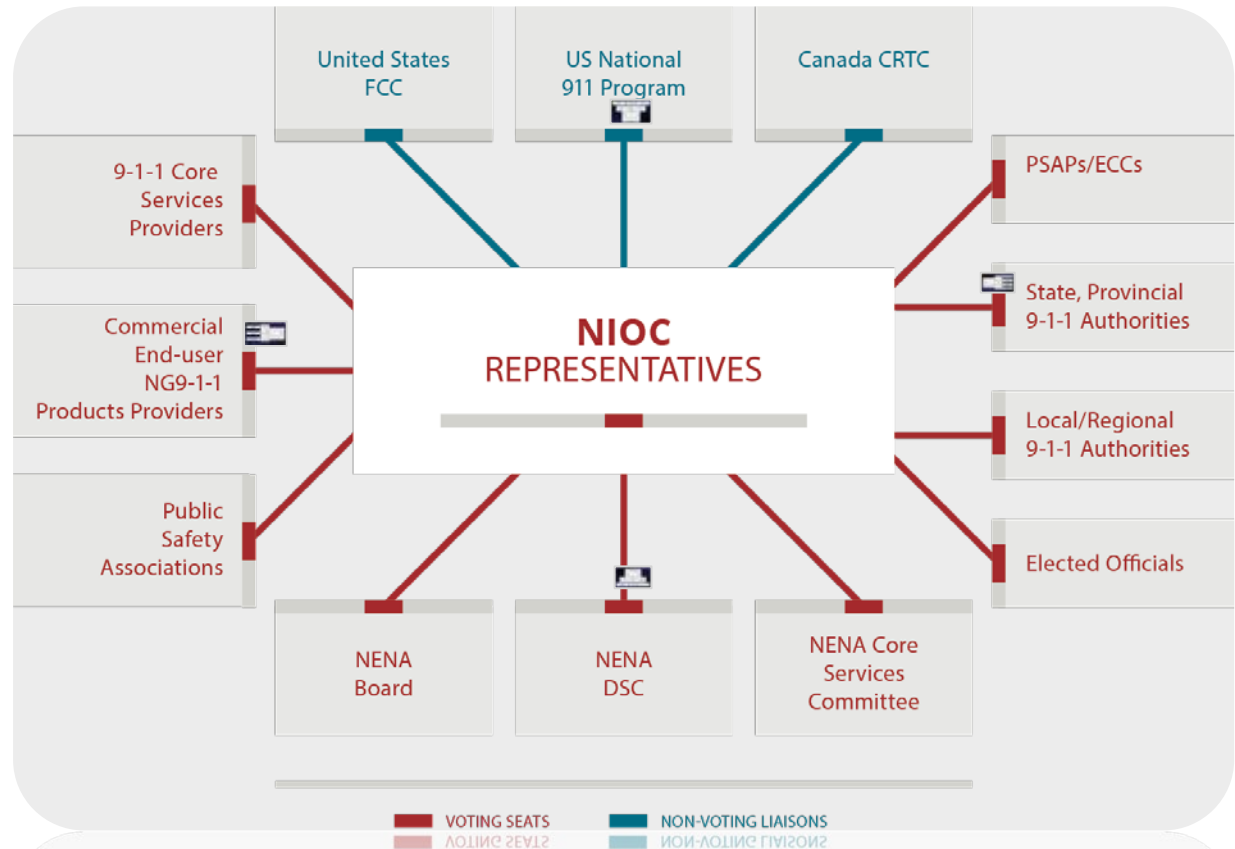
*Absent a Public Key Infrastructure (PKI), there is no trusted communications among NG9-1-1 systems*

*Absent a Forest Guide, there is no complete interoperability among NG9-1-1 systems and jurisdictions*



# Who does NIOC Represent?

- The NG9-1-1 Interoperability Oversight Commission (NIOC) consists of members nominated from a variety of representative stakeholder groups affected by PCA and Forest Guide
- NENA Board reviews and approves nominations to NIOC, which operates under established bylaws



Mr. David Furth  
Deputy Chief

Public Safety & Homeland Security Bureau  
Federal Communications Commission

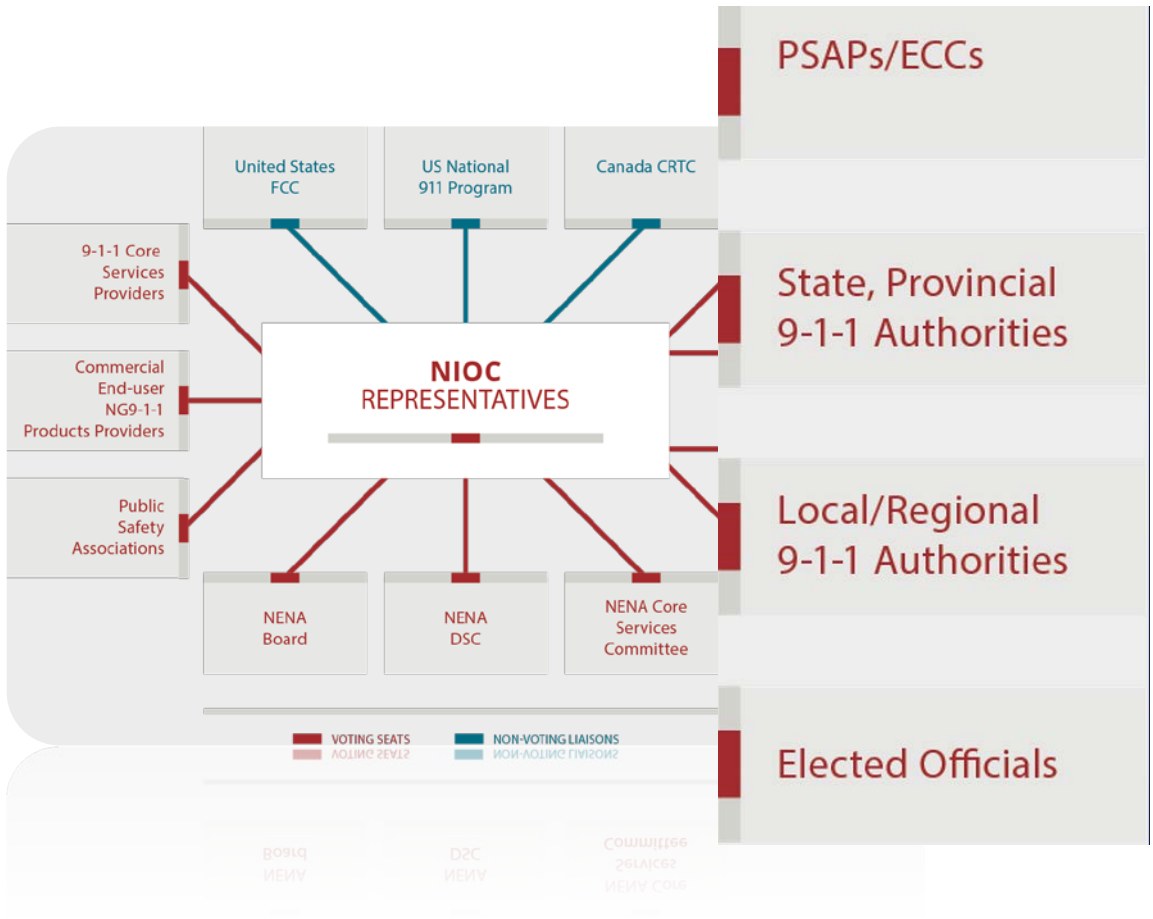
Ms. Laurie Flaherty  
Coordinator

National 911 Program Office  
NHTSA/DOT

Mr. Michel Murray  
Director

Canadian Radio-Television and  
Telecommunications Commission



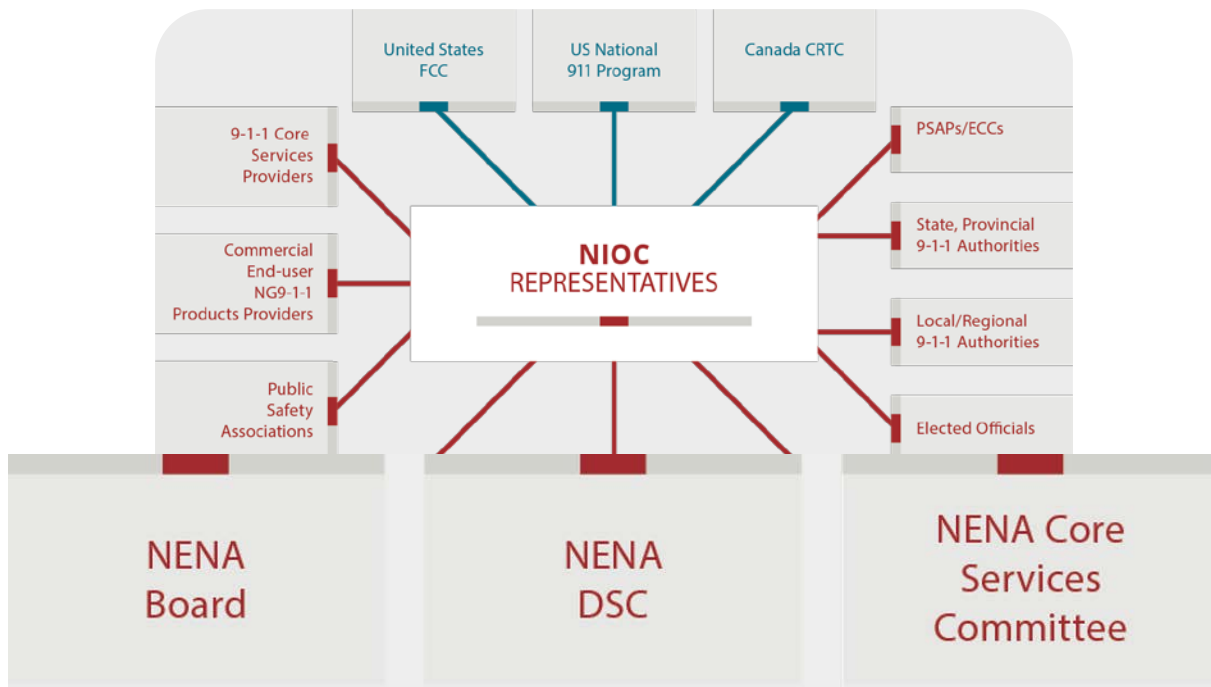


Ms. Darlene Pankonie  
 Communications Division Manager  
 Washington County Sheriff's Office, MN

Ms. Maria Jacques, Vice-Chair  
 911 Director  
 State of Maine

Mr. Steve McMurrer, Secretary  
 911 Systems Administrator  
 Fairfax County, Virginia

Ms. Irene Fernando  
 County Commissioner  
 Hennepin County, Minnesota



Mr. Dave Sehnert  
 Director of Strategy & Partnerships  
 RapidSOS

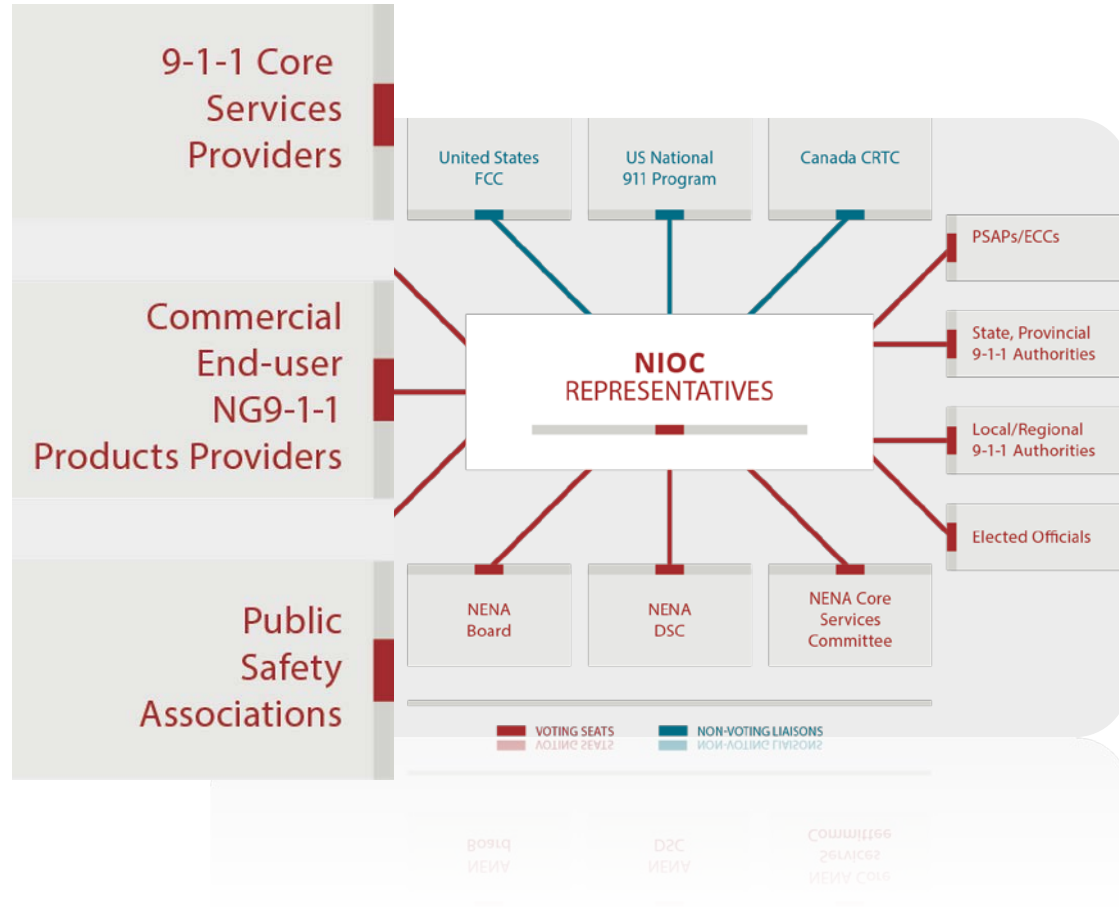
Mr. Rick Blackwell,  
 Chair  
 Director  
 Greenville County E911  
 South Carolina

Mr. Steve O’Conor  
 Senior Consultant  
 Next Generation 9-1-1 Consulting  
 Services

Mr. Doug Cunningham  
Sales Engineer  
CenturyLink

Mr. Jeff Wittek, Treasurer  
Chief of Staff  
Motorola Solutions

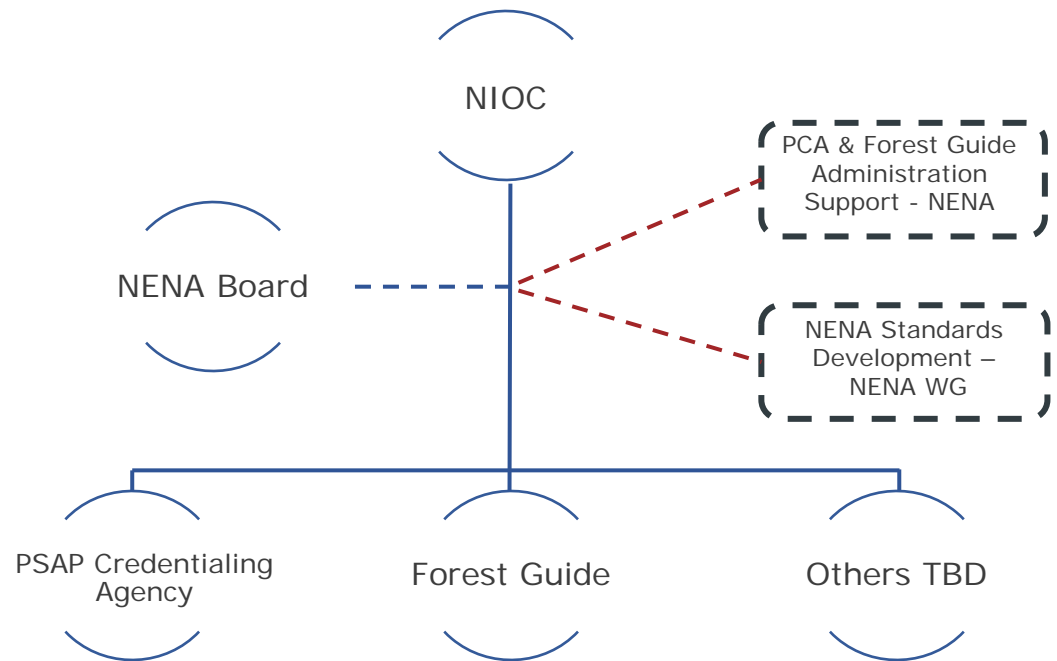
Mr. Kris Zuniga  
Communications Commander  
Kings County Sheriff, CA



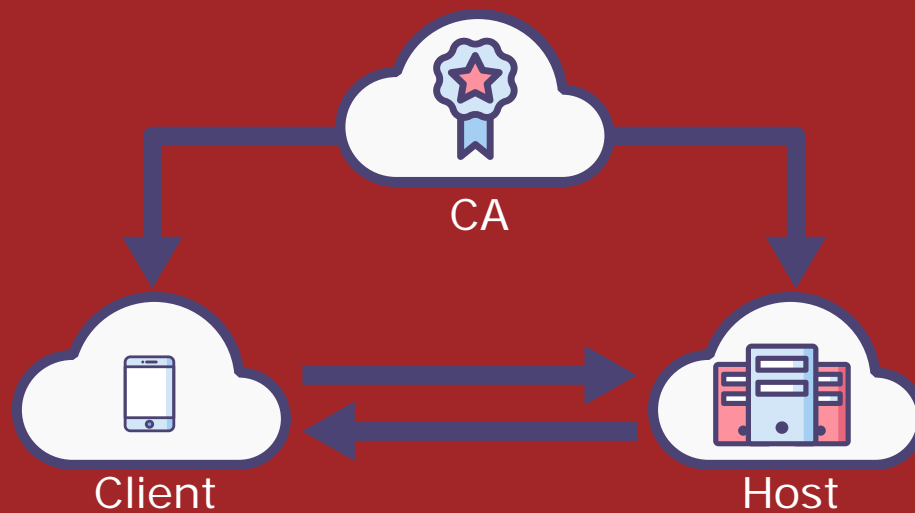
# NIOC Governance

- NENA will provide initial executive function support for the Commission, including administration of the contract with the PCA Administrator and handling finances, until NIOC becomes fully independent
- The PCA and Forest Guide Administrators will be required to follow the standards developed by NENA as a SDO
- The Commission will develop policies for the PCA and Forest Guide with input by the Administrators and various SMEs, including pricing, certificate policy development and enforcement

## NG9-1-1 Interoperability Commission (NIOC)



# About PCA and PKI



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# What is PKI?

- Public Key Infrastructure (PKI) is a set of roles, policies, hardware, software and procedures required for communications security
- In NG9-1-1, PKI is needed for secure inter-jurisdiction interoperability
- The PKI creates security by establishing and managing a “Chain of Trust” through the creation and management of “Certificates”
- Certificates are created and managed by a Credentialing Authority (CA)
- PKI is similar to the chain of trust used in the public internet, but is limited to NG9-1-1 technology



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# What is a PCA?

- PSAP Credentialing Authority (PCA) is the Root CA for NG911
- The PCA is the “root of trust” in the “chain of trust”
- The PCA issues “root” certificates to other Credentialing Authorities in the “chain of trust”
- The PCA is a required NENA i3 functional element and an integral component of the PKI
- The PCA is the root of trust for NG911...trust begins with the PCA



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## So, What is the Status of the PCA?

- A RFP was released by NENA in June 2019 to solicit competitive proposals for the PCA
- Responses were formally reviewed by a team of SMEs and an award recommendation was made
- Procurement and review processes were reviewed by the NIOC and were found to be of the highest integrity
- Based on the NIOC's findings, an award was made to DigiCert
- The Certificate Policy has been created, reviewed, and approved
- DigiCert is scheduling the signing ceremony and is in the process of hardware implementation

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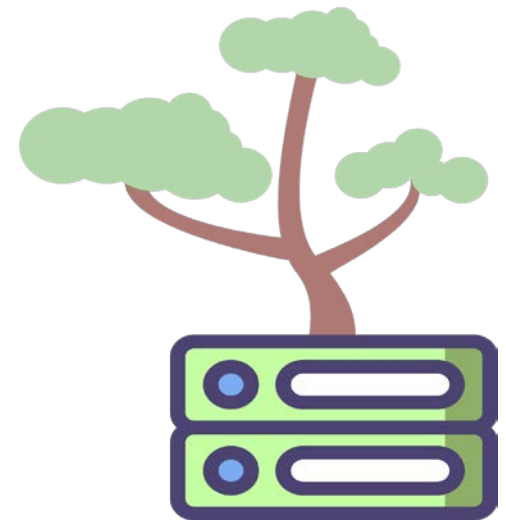
# About the Forest Guide



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# Why is the Forest Guide Needed?

- Its primary function is to aid in interoperability
- The Forest Guide provides routing instructions across disparate NG9-1-1 jurisdictions
- The Forest Guide is an enhancement to location-based routing as described in Internet Engineering Task Force (IETF) and NENA i3 standards for emergency calling
- It is designed to resolve queries when there is no destination for a location
- Industry standards envision a network of forest guides to provide for domestic and global interoperability



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## **So, What is the Status of the Forest Guide?**

- Forest Guide RFP was released by the NIOC in November 2020
- Mandatory Pre-Bid conference was held on January 13th
- Proposals are due on March 15th
- Vendor interviews will be held March 29th
- The RFP review process will be open and transparent; it will be similar to that used for the PCA
- NIOC publicly solicited volunteers to participate on RFP response review committee

# In Summary...

- Who is the NIOC and why it has a governance role in support of NG9-1-1 Interoperability?
  - *Organizationally diverse, independent, and revenue-neutral commission acting as a transparent oversight body for key NG9-1-1 security functions*
- What are the purposes of the NG9-1-1 PCA and PKI?
  - *Instill greater trust, security, and interoperability among disparate NG9-1-1 System Implementations*
- Where & how does Forest Guide support NG9-1-1?
  - *Enables Automated Call Routing for Out of Area 9-1-1 Calls, both domestically and between Countries*

<https://ng911ioc.org>

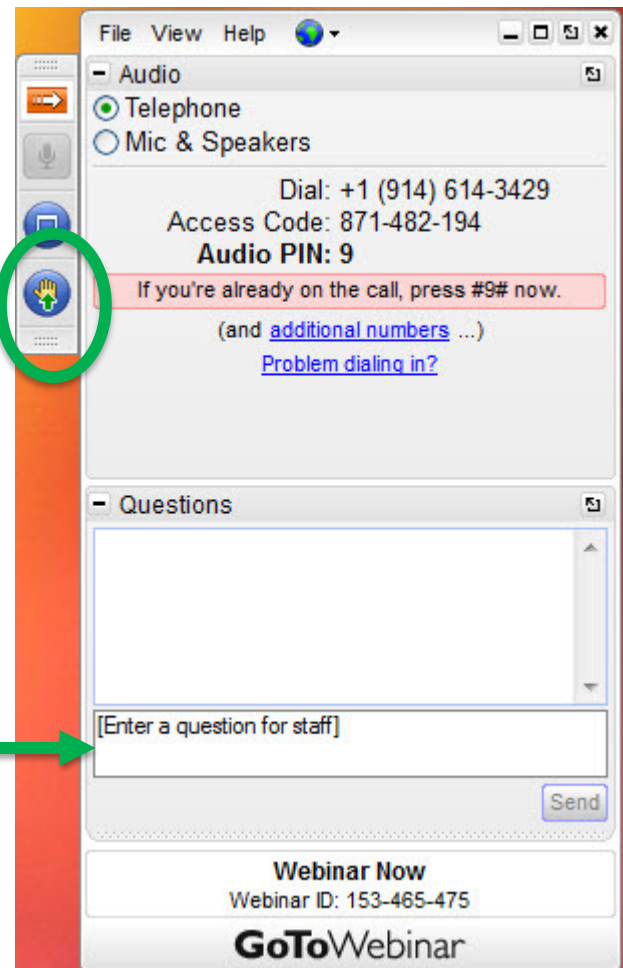


**NIOOC**

**NG9-1-1** INTEROPERABILITY  
OVERSIGHT COMMISSION

# Q & A Period

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# Pennsylvania NG911 Overview

# Commonwealth of Pennsylvania



## Pennsylvania profile:



Population: 12.8 million (5th)



Land area: 44,742 (32nd)



Diverse geography



## Consolidated, County-based 911 system



67 counties



60 primary PSAPs



## Call Volume:



Philadelphia – 2.4 million



Juniata – 20,000

# Supporting Legislation



Legislation built to support statewide NG911 efforts



State 911 Plan focused on NG911



New state minimum standards



Physical PSAP inventory



Planning & cooperation for statewide NG911 system



911 Advisory Board – advice/recommendations on NG911



Funding

# Funding – Regional/Statewide



Legislation recognizes:



Need to maintain current systems **AND**



Invest in NG911 and future technologies



All 911 revenue is now remitted to the State:



At least 83% - Quarterly distribution to PSAPs



Up to 15% - may be used by PEMA for NG911 initiatives



15% funds used to support regional efforts in preparation for NG911:



Fund regional ESInets



Incentivize system sharing



GIS (statewide gap analysis, data development, imagery)



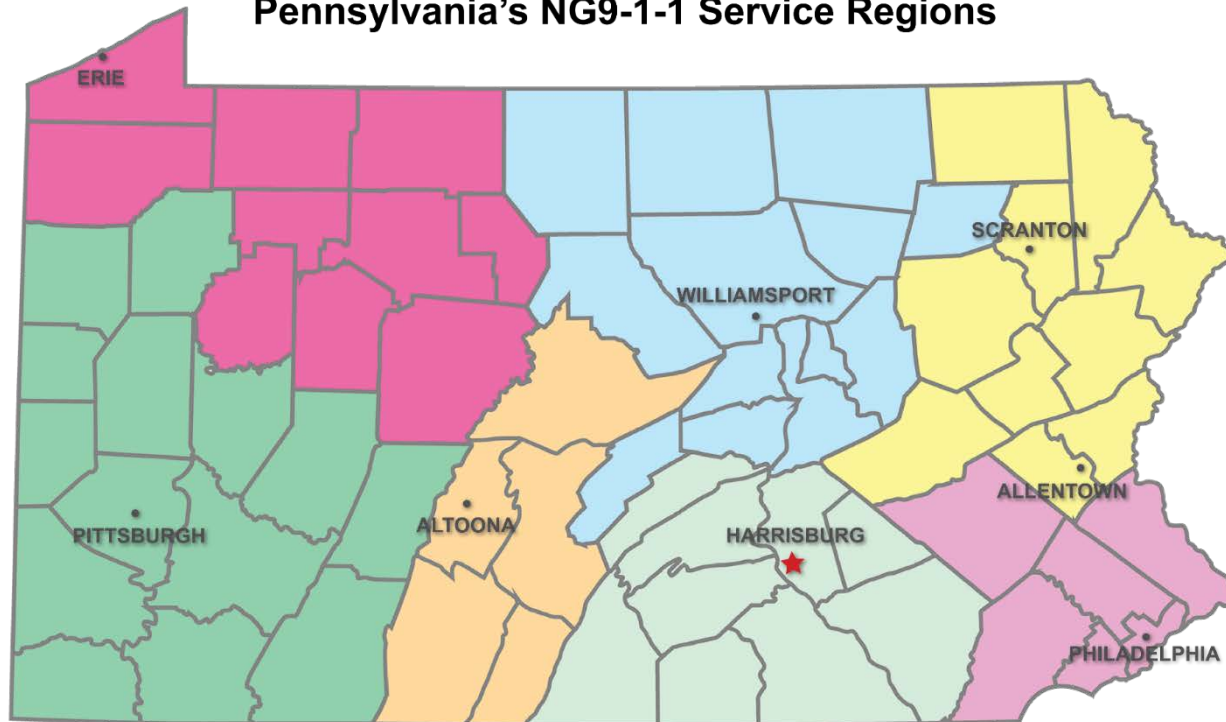
Plan to cover recurring/non-recurring costs of NG911 service



PA counties contributed \$46 million from general funds or other local funding sources towards 911 in 2020.

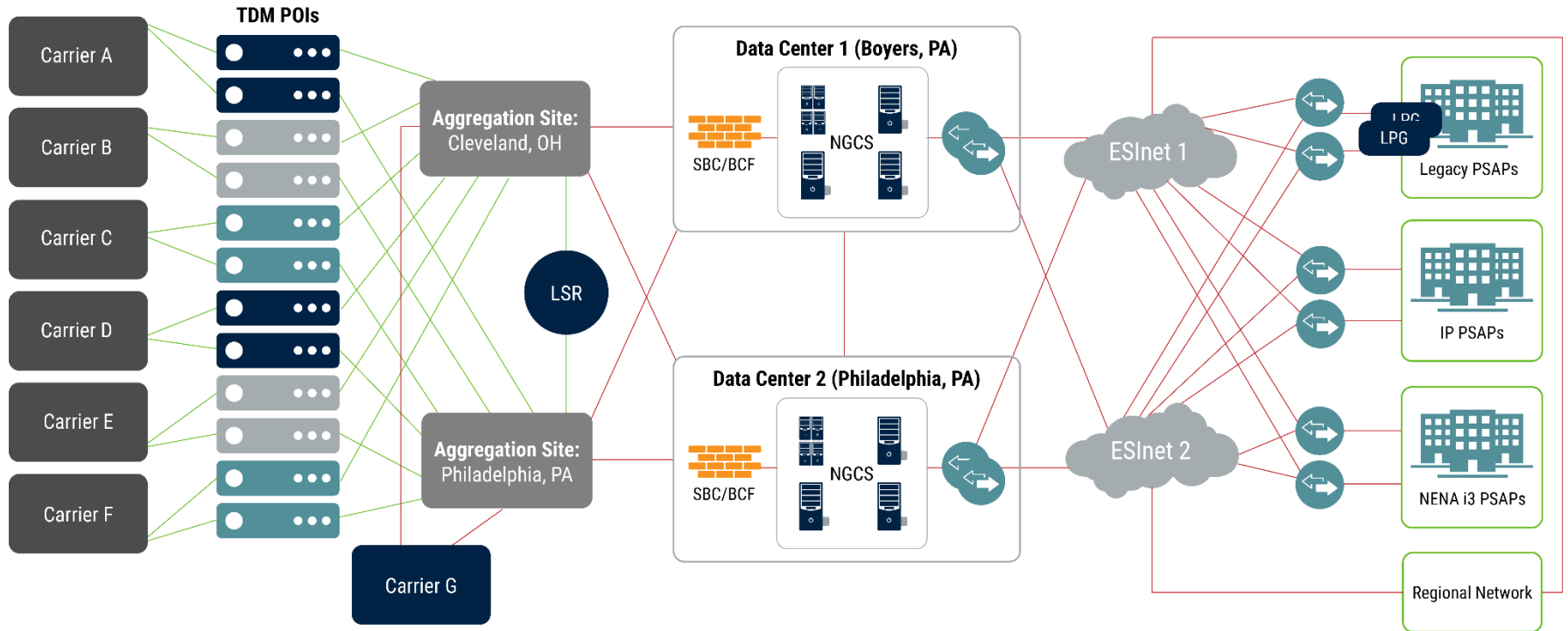
# Regional/Statewide Approach

Pennsylvania's NG9-1-1 Service Regions



- Supported regional efforts that may impact future Statewide NG911 efforts
  - Regional ESInets, regional CHE, GIS, and other shared systems (CAD, LMR, etc.)
- Leverage regional efforts as part of statewide NG911 approach

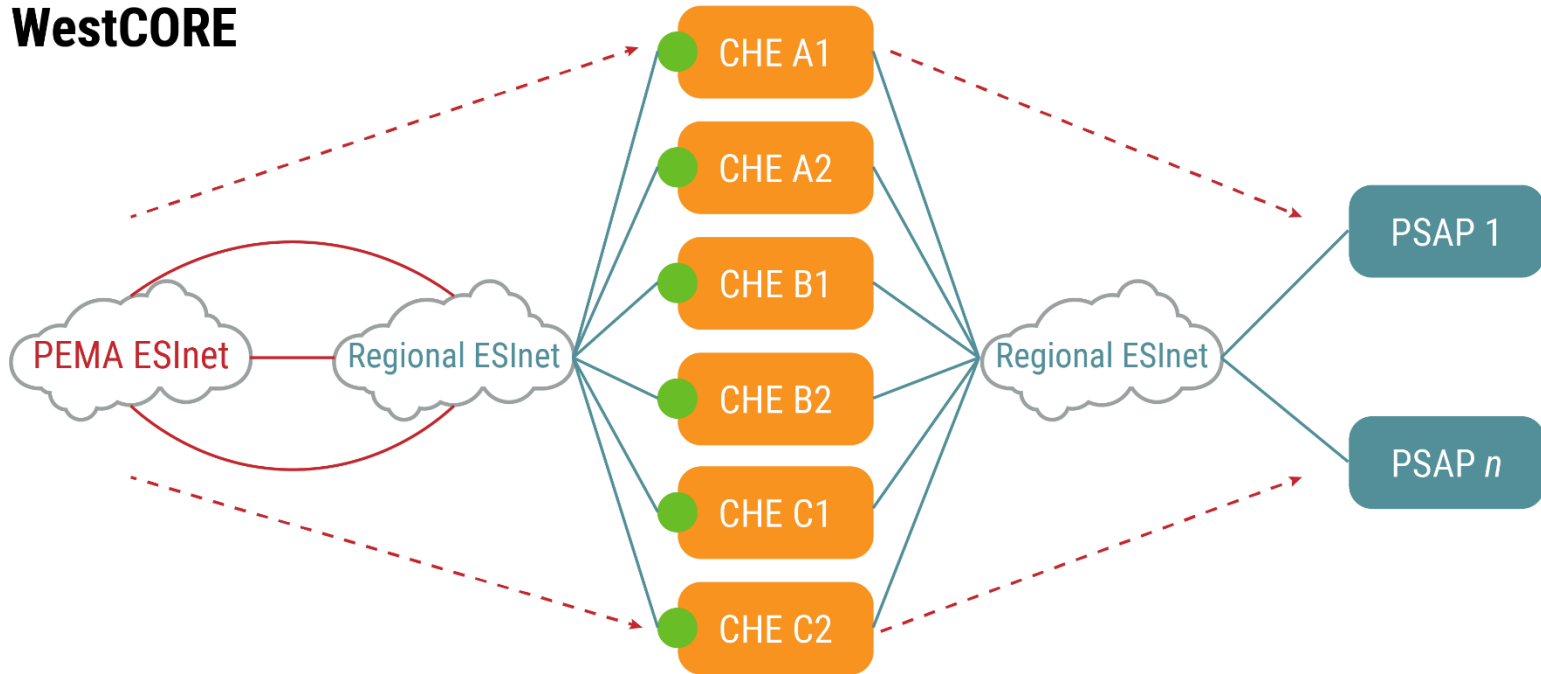
# Solution Highlights



19 PEMA ESInet NGCS Coord F-01

# Regional Network Example

## WestCORE



- - - CHE Host to PSAP Voice Path (CHE provider's responsibility)

● Comtech Application Demarcation

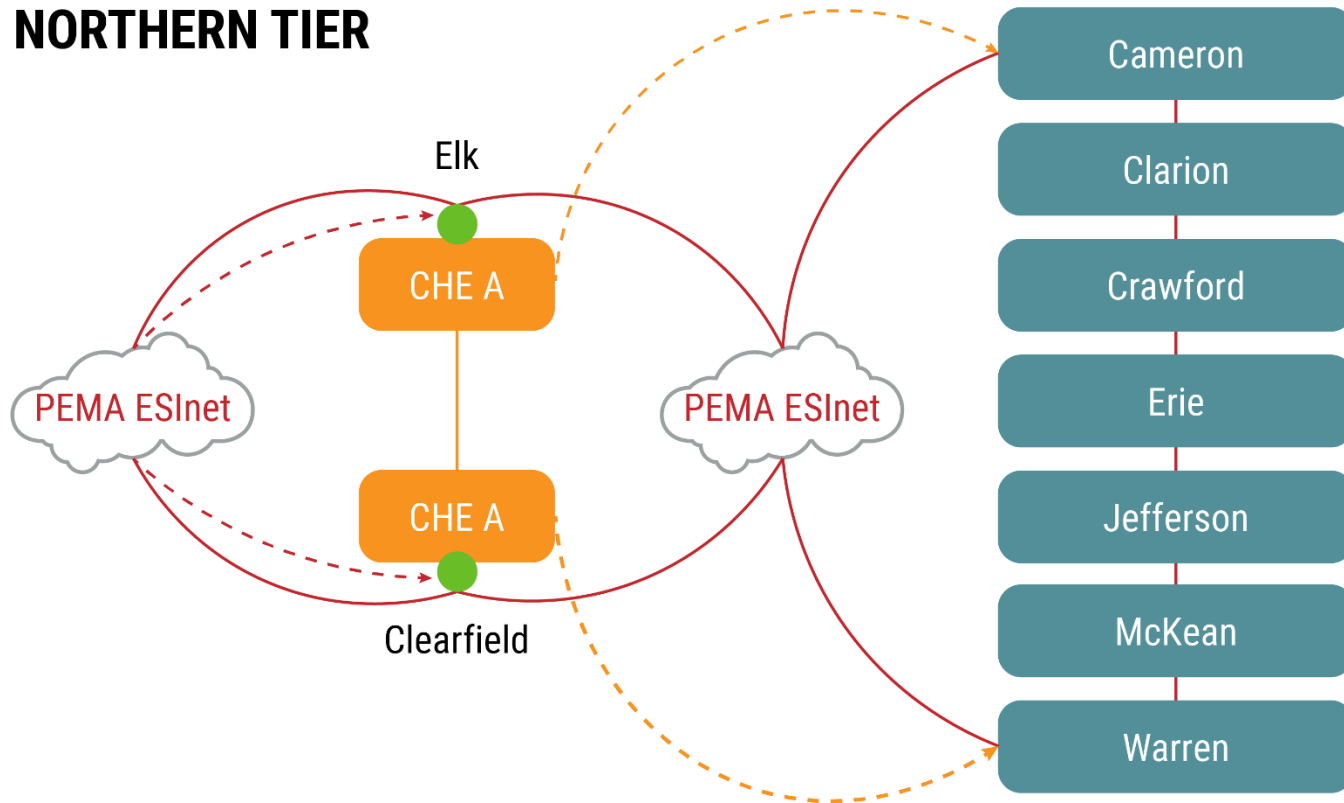
- - - ESInet to CHE 9-1-1 Voice Path (Comtech's responsibility)

— PEMA ESInet (Comtech's responsibility)

— Regional ESInet (Regional network provider's responsibility)

# Direct to PEMA ESI net Example

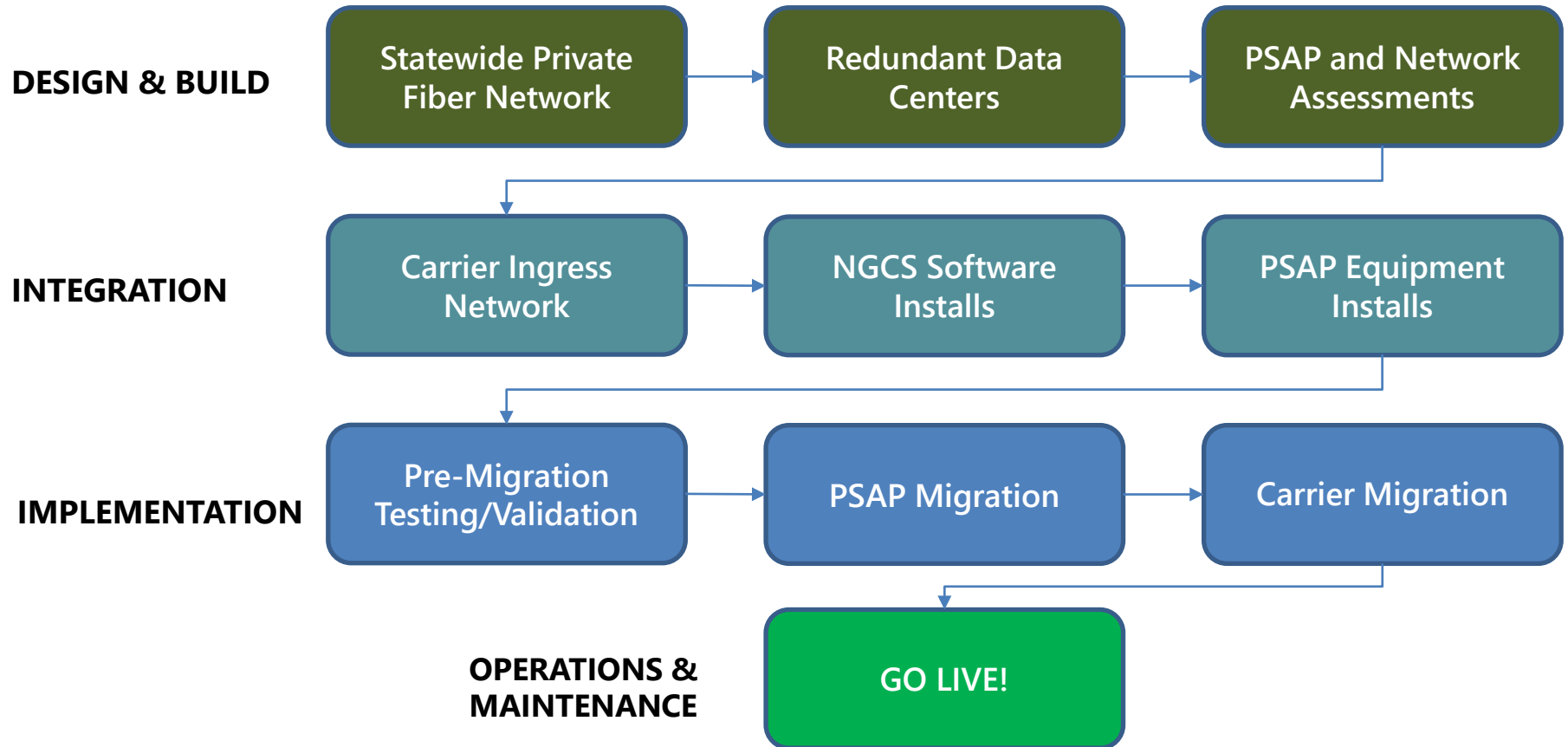
## NORTHERN TIER



- - - - CHE Host to PSAP Voice Path (CHE provider's responsibility)
- CHE Provider LAN (CHE provider's responsibility)
- Comtech Application Demarcation
- - - - ESI net to CHE 9-1-1 Voice Path (Comtech's responsibility)
- PEMA ESI net (Comtech's responsibility)

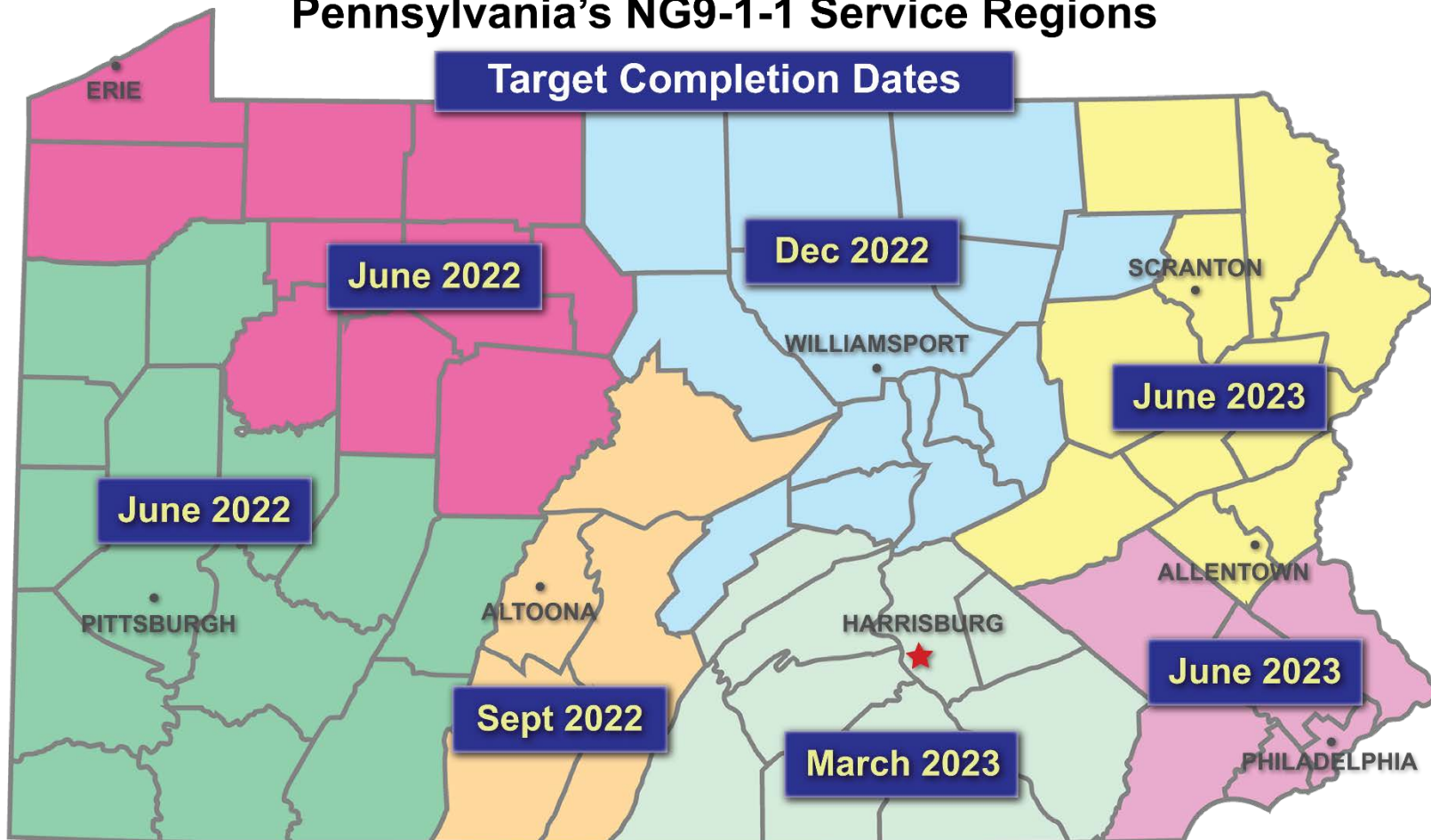


# Project Phases




# Regional Plan & Schedule

## Pennsylvania's NG9-1-1 Service Regions





pennsylvania 

# **Pennsylvania Emergency Management Agency**

**1310 Elmerton Avenue**

**Harrisburg, Pennsylvania 17110**

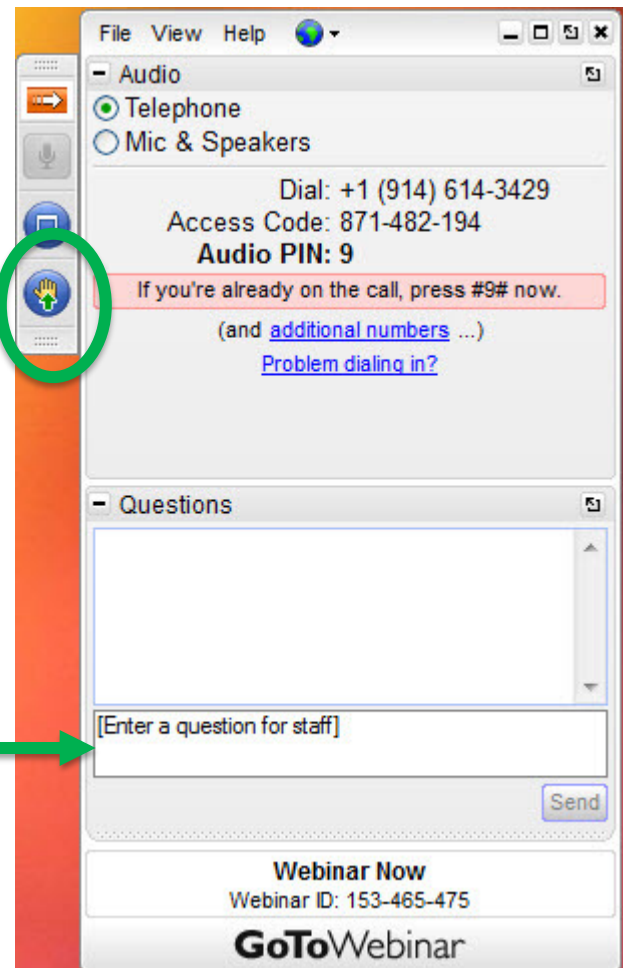
**717-651-2218**

**[jefboyle@pa.gov](mailto:jefboyle@pa.gov)**

**[www.PEMA.pa.gov](http://www.PEMA.pa.gov)**

# Q & A Period

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# Future Webinars

- Tuesday, May 11, 2021
- Tuesday, July 13, 2021
- Tuesday, September 14, 2021
- Tuesday, November 9, 2021
- To register, visit:  
<https://attendee.gotowebinar.com/register/1693316487360151824>
- Previous State of 911 webinars are available at:  
[www.911.gov/webinars.html](http://www.911.gov/webinars.html)

# National 911 Program

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