

# State of 911

Webinar Series

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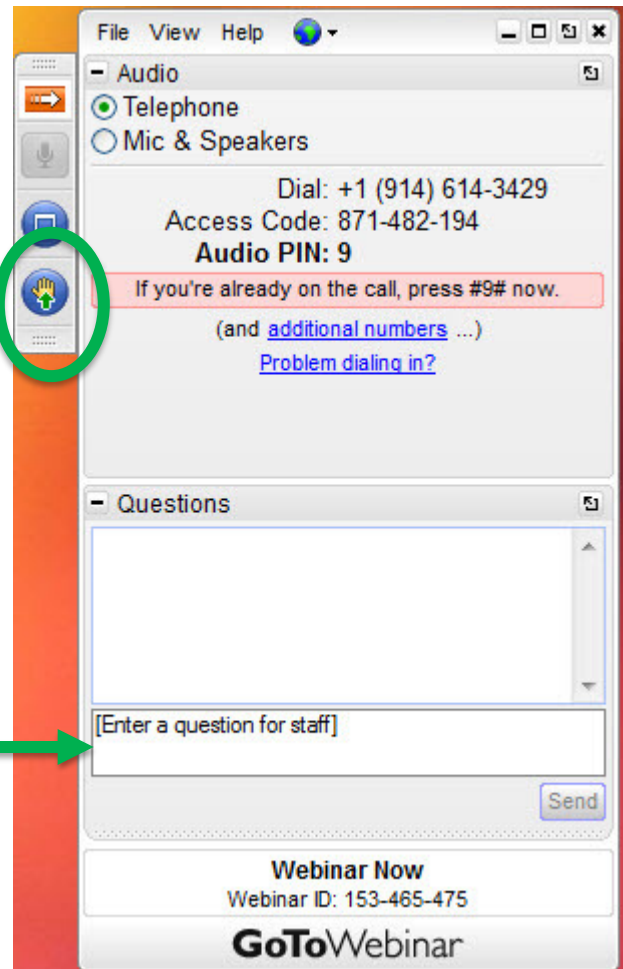
NATIONAL 911 PROGRAM  
May 11, 2021

# 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@missioncriticalpartners.com](mailto:National911Team@missioncriticalpartners.com)

# Questions

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# IMPLEMENTING NEXT GENERATION 9-1-1 IN CANADA



State of 911 Webinar

May 11, 2021



## The Commission

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The Canadian Radio-television and Telecommunications Commission is an “arm’s length” administrative tribunal

- Ensure that Canadians have access to a world-class communication system
- Implement the laws and regulations set by Parliamentarians
  - Broadcasting Act
  - Telecommunications Act
  - Canada’s anti-spam legislation
- Regulate and supervise broadcasting and telecommunications in the public interest, including
  - Promoting compliance with regulations
  - Approving tariffs for regulated services
  - Promoting competition
  - Providing Information





## 9-1-1 within CRTC's Jurisdiction

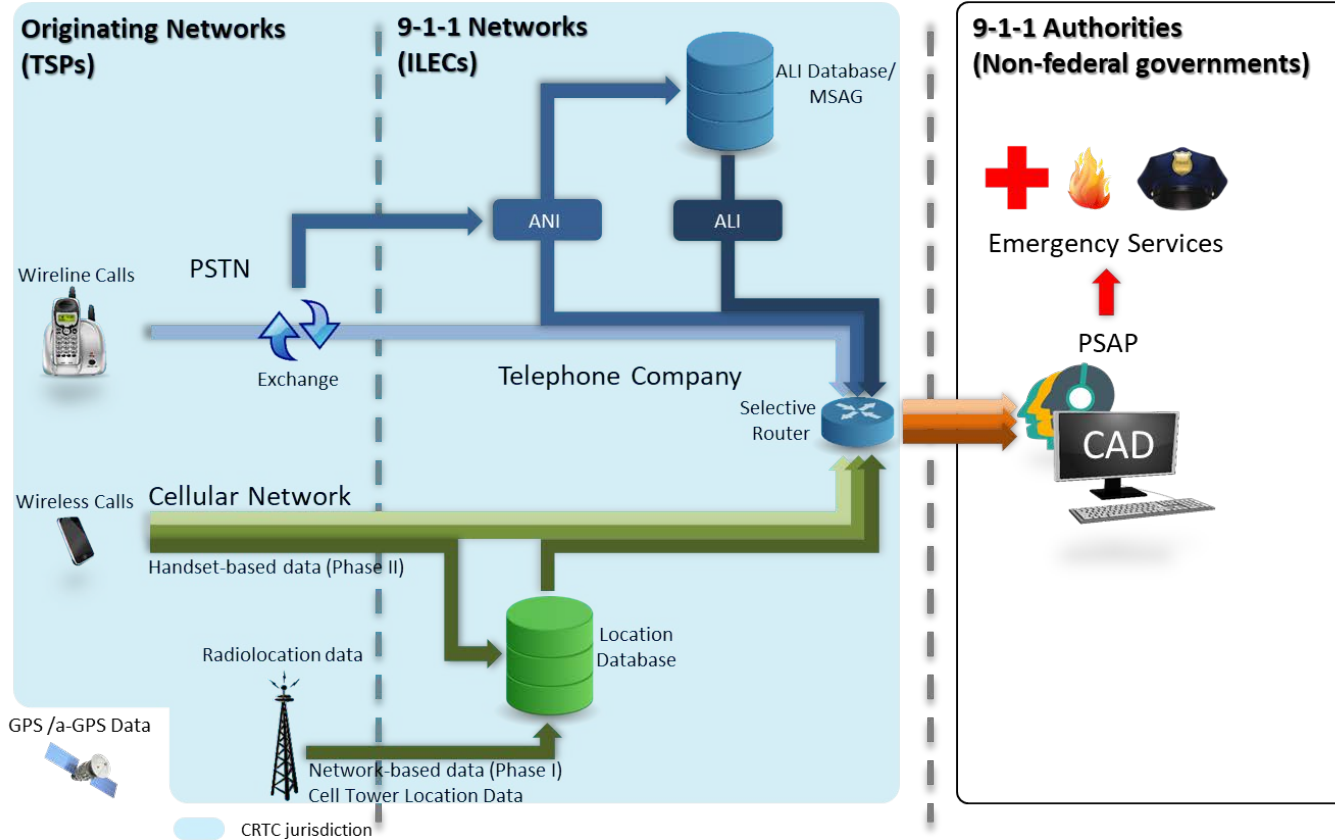
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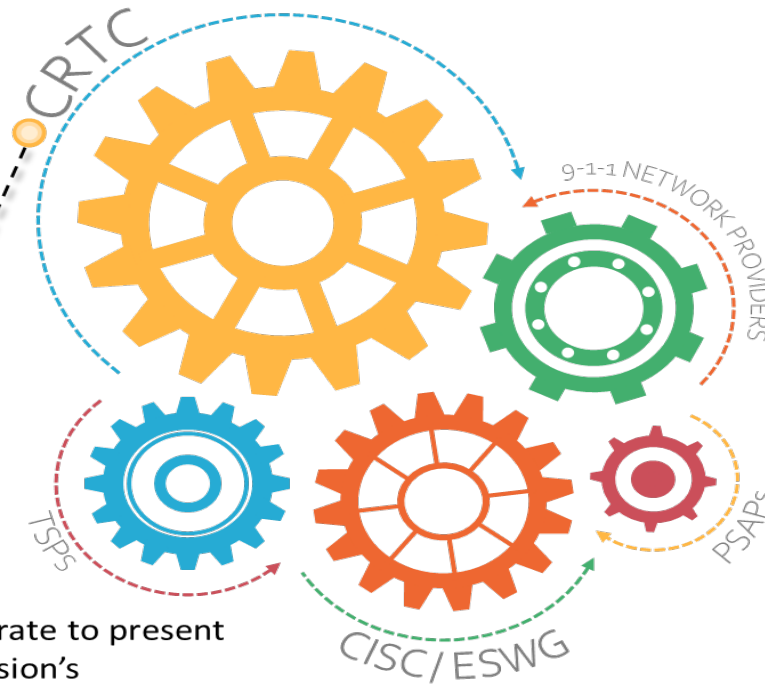
# 9-1-1 Jurisdiction



ANI: Automatic Numbering Information • ALI: Automatic Location Information • MSAG: Master Street Address Guide • CAD: Computer Assisted Dispatch

# Stakeholder Collaboration

- ❖ Assigns tasks related to technological, administrative, and operational issues on matters of 9-1-1 provisioning in Canada
- ❖ Regulates based on public interest and recommendations from industry



- ❖ Industry stakeholders who collaborate to present recommendations for the Commission's consideration
- ❖ Develop information, procedures and guidelines
- ❖ Address technical and operational issues related to the provisioning of 9-1-1 services





## Introducing NG9-1-1

### Regulatory Policy 2014-342 - 9-1-1 Action Plan

*“Taking advantage of IP technology, next-generation 9-1-1 (NG9-1-1) services will provide callers with new ways to access emergency services from multiple devices and platforms. It is expected that in the future, Canadians will be able to interact with emergency service providers using, for example, text messaging, pictures, videos, and other means. In addition, technological changes are expected to help overcome limitations that exist in the current 9-1-1 system, such as in relation to determining the location of certain callers”*

### Telecom Decision 2015-531 - Consensus report regarding a Next-Generation 9-1-1 network architecture standard for Canada

*“The Commission approves the recommendations made by the CRTC Interconnection Steering Committee’s (CISC) Emergency Services Working Group (ESWG) regarding the National Emergency Number Association (NENA) i3 architecture standard for Next-Generation 9-1-1 (NG9-1-1) services.”*

# Original NG9-1-1 Policy Framework

*Telecom Regulatory Policy 2017-182*

Next-generation 9-1-1 – Modernizing 9-1-1 networks to meet the public safety needs of Canadians



ILECs are the NG9-1-1 Network Providers



NG9-1-1 network costs recovered through CRTC-approved tariffs



NG9-1-1 network providers and TSPs ready to deliver NG9-1-1 voice calls to PSAPs by 2020.06



NG9-1-1 network providers and WSPs ready to deliver NG9-1-1 text messaging to PSAPs by 2020.12



Existing 9-1-1 networks decommissioned by 2023.06



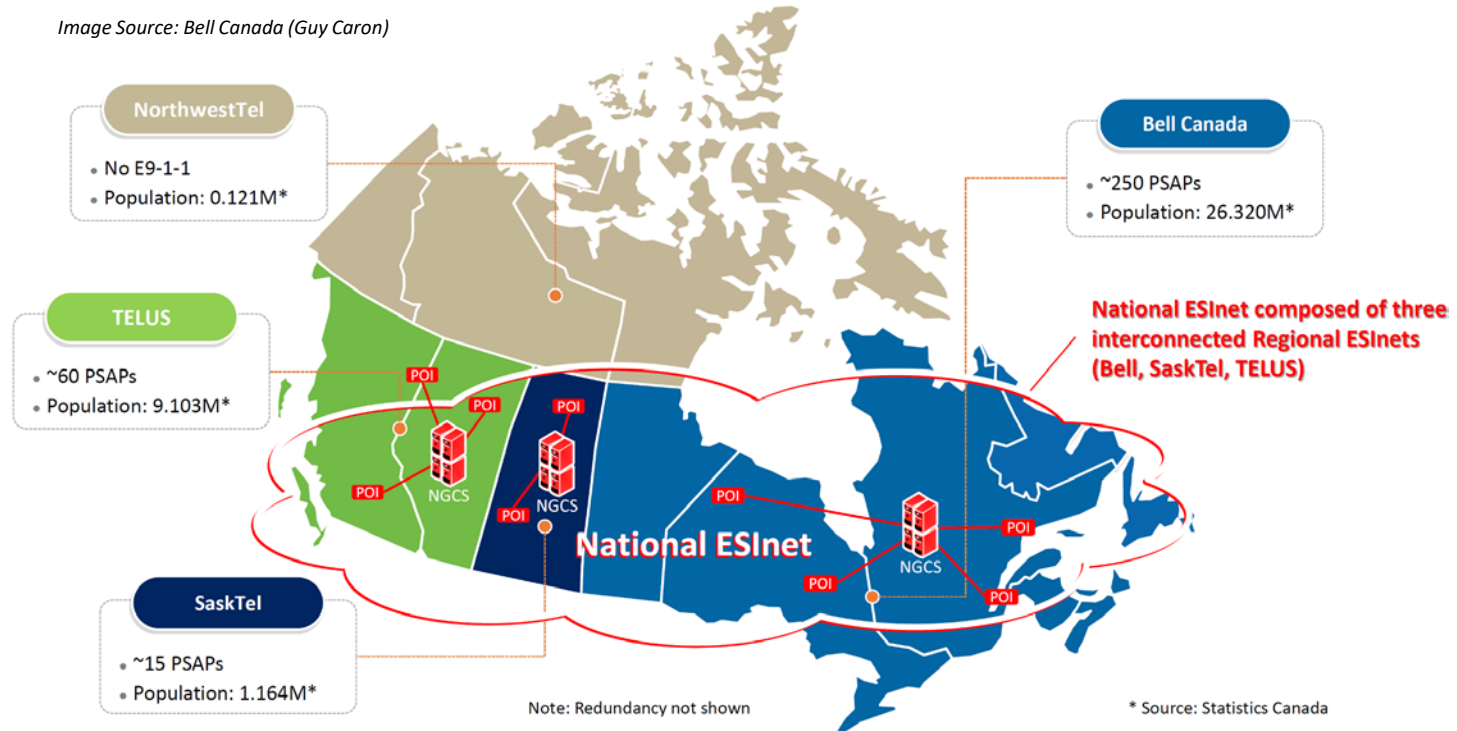
Obligations related to laboratory and implementation trials



New obligations related to reliability, security, privacy, and outage reporting

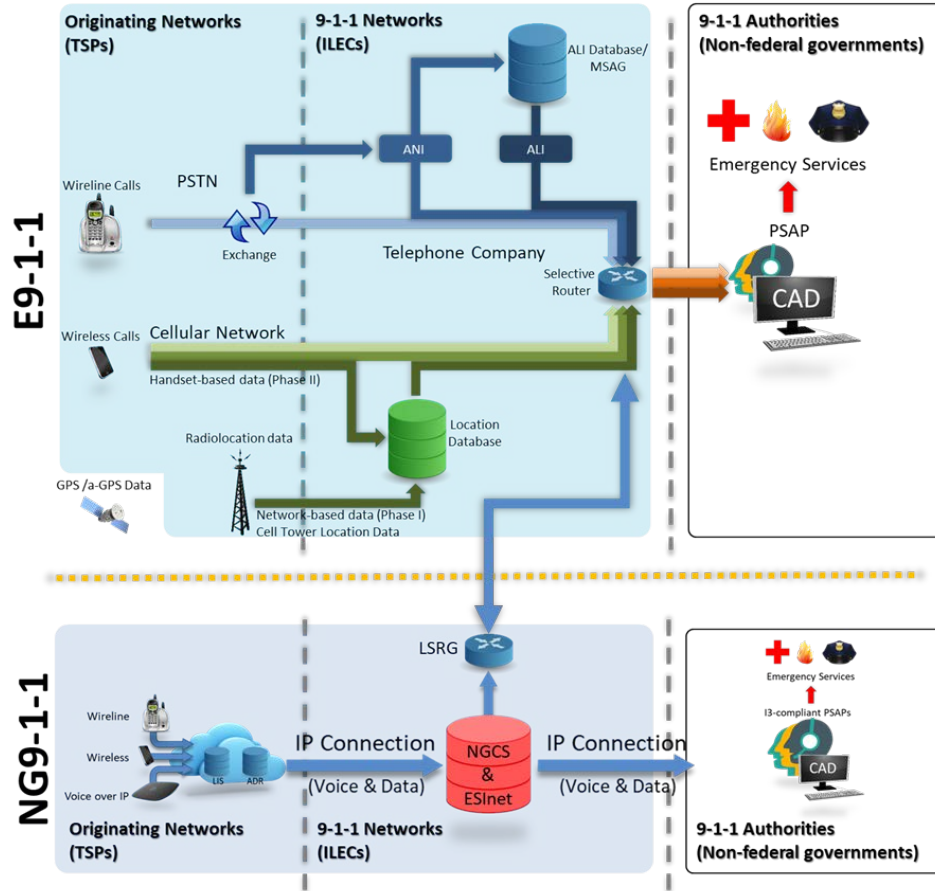
# NG9-1-1 Network Architecture

Image Source: Bell Canada (Guy Caron)

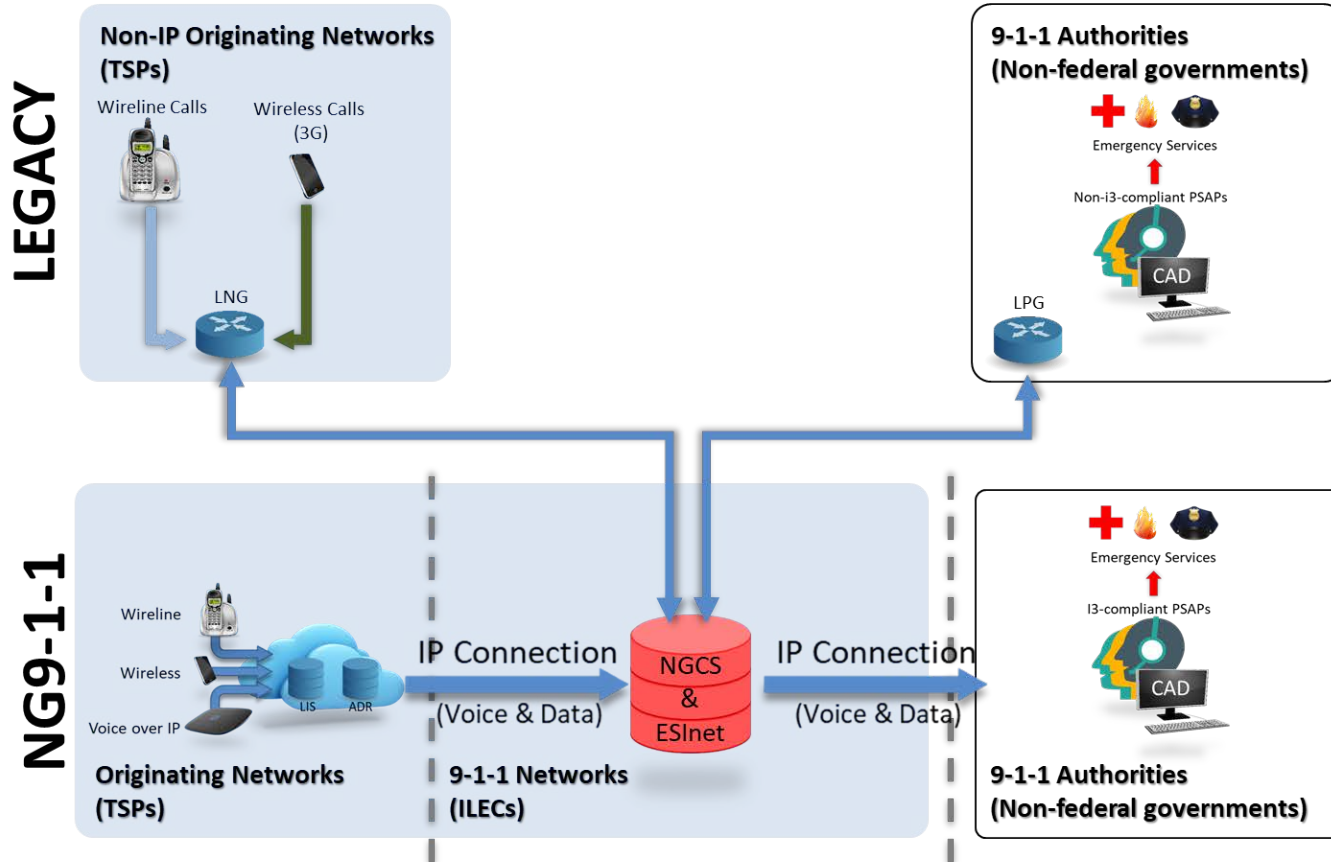


- 9,985 million km<sup>2</sup>, specific geographical challenges
- 37.6 million Canadians over 10 provinces and 3 territories
- 9-1-1 used throughout Canada by 98% of the population (96% Enhanced, 2% Basic)

# Transition to NG9-1-1



# Post-Decommissioning



## NG9-1-1 Text Messaging Based on RTT



Available to all Canadians



Audio enabled for situational  
awareness



Based on Real Time Text; character-  
by-character texting



Must be an active feature on mobile  
device



Must be within VoLTE-served  
coverage area



Must be in an area served by PSAP  
capable of receiving RTT

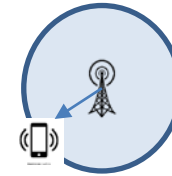




## Wireless Location Evolution in Canada

- *Decision 2003-53 – Wireless Phase I*

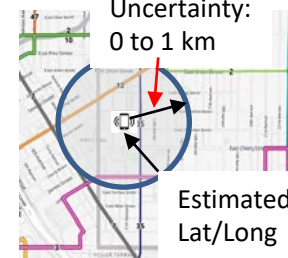
- Wireless carriers directed to offer Enhanced 9-1-1 providing:
  - Telephone number
  - Cell tower site location as proxy for caller location
    - Large uncertainty of caller location



Uncertainty:  
0 to up to  
72  
kilometres

- *Decision 2009-40 – Wireless Phase II*

- Wireless carriers directed to improve E9-1-1 location information with, among other things:
  - Estimated latitude/longitude of caller including estimate of uncertainty at 90% confidence level
    - Smaller level of uncertainty of caller location



Uncertainty:  
0 to 1 km

Estimated  
Lat/Long

- *Decisions 2014-415 and 2015-255 – Phase II Thresholds & Wireless Location Accuracy Monitoring Process*

- Benchmarks used to compare and track location accuracy improvements over time and as technology evolves
- Create a standard format and methodology for collecting and reporting the results of wireless carriers' wireless 9-1-1 caller location accuracy performance



## Improving Location Information for 9-1-1

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Activities underway to improve location information for 9-1-1 services:

- **Wireless Handset-based Location Technology Implementation**

- ESWG assessment of and recommendations pertaining to the implementation of wireless handset-based location technology in Canada (AML/ELS/HELO)
  - ESWG report under consideration by CRTC with decision pending

- **Dispatchable Location**

- Define and determine methods to provide dispatchable location from originating networks to PSAPs and first responders
- Determine how dispatchable location will integrate with the Validation, Geographic Information System (GIS) and Call Routing processes

- **GIS and Addressing**

- ESWG assessment underway pertaining to the issues associated with:
  - The creation of an NG9 1-1 compliant GIS Data Model for Canada
  - The development and implementation of a common Canadian civic addressing format, based on the NENA i3 standard

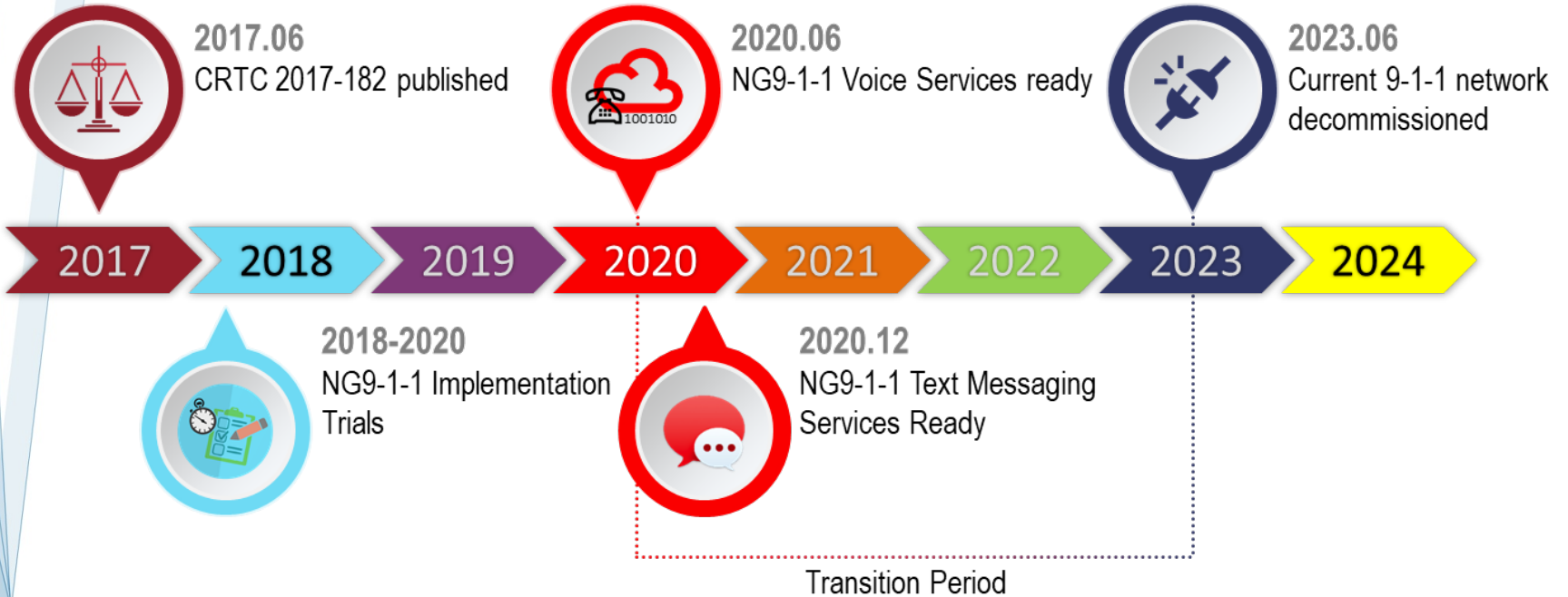
- **Geo Routing**

- ESWG assessment underway pertaining to the issues associated with implementing the mechanism to route emergency calls using geodetic information as per NENA i3 specifications



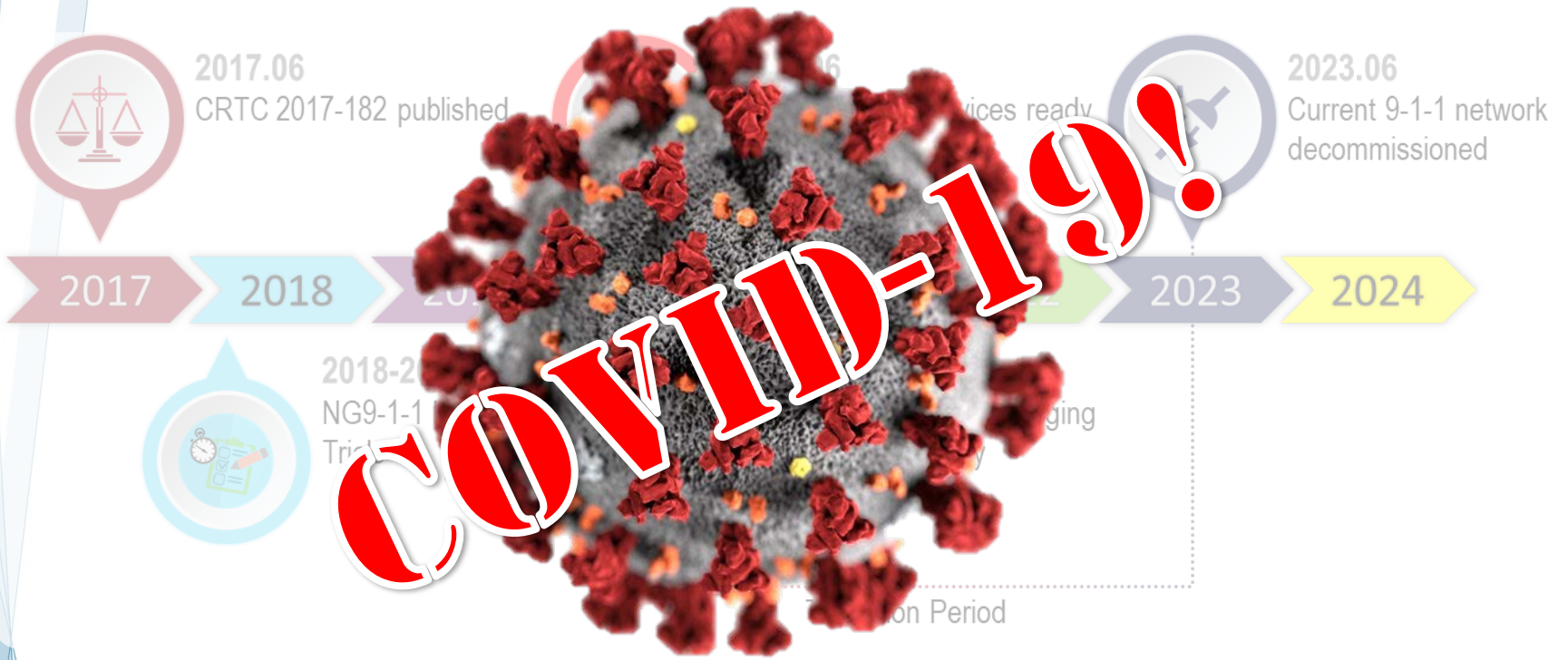


# Original NG9-1-1 Timeline



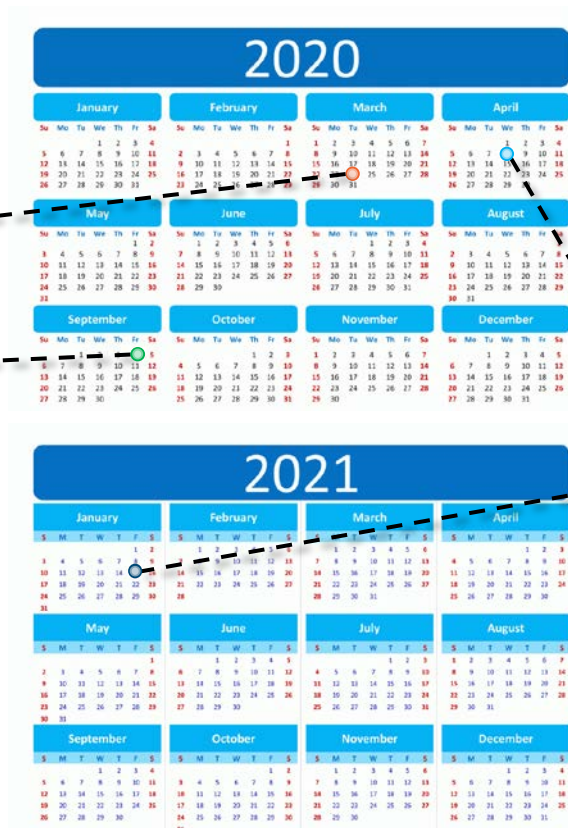


# Original NG9-1-1 Timeline





# NG9-1-1 Timeline



March 24, 2020  
ESWG COVID-19 Task Force

September 4, 2020  
Launch of process to establish new NG9-1-1 deadlines

April 8, 2020  
Suspension of NG9-1-1 deadlines

January 15, 2021  
Closure of record for NOC 2020-326

**TBD 2021**  
Publication of new NG9-1-1 deadlines



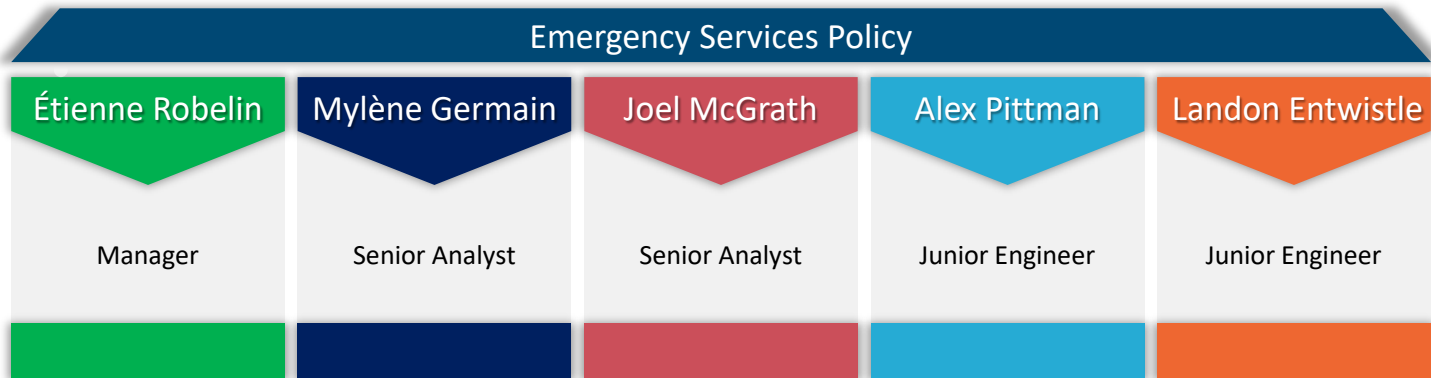
## Challenges and Lessons Learned

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- Standards
  - Dependency on SDOs
  - Canadianization of standards
  - Impacts on vendor
- Collaboration is key for an effective and uniform system
- Time requirements should not be underestimated
- Time and scope of trials



# QUESTIONS?





## Appendix A - Strategic Objectives

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The following are the key strategic objectives the CRTC aims to achieve in relation to the implementation of NG9-1-1

- Increasing the safety of Canadians by giving them the best access to emergency services through world-class telecommunications networks;
- Providing high-quality information, services, and support to PSAPs, which ultimately enables emergency responders to effectively assist Canadians;
- Introducing NG9-1-1 solutions that are cost-effective, innovative, and transparent;
- During the transition to NG9-1-1, maintaining the existing high-quality, reliable 9-1-1 networks;
- Ensuring an effective and timely transition to NG9-1-1; and
- Using standards-based solutions that allow for flexibility and strive for national consistency.



## Appendix B - NG9-1-1 Policy Framework

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- [Telecom Regulatory Policy CRTC 2017-182](#) Next-generation 9-1-1 – Modernizing 9-1-1 networks to meet the public safety needs of Canadians
- [Telecom Decision CRTC 2018-79](#) CISC Emergency Services Working Group – Consensus report ESRE0077 regarding cybersecurity best practices for public safety answering points in a Canadian 9-1-1 ecosystem
- [Telecom Decision CRTC 2018-188](#) New Brunswick 9-1-1 Bureau, on behalf of public safety answering point organizations – Application to review and vary Telecom Regulatory Policy 2017-182 regarding next-generation 9-1-1 services
- [Telecom Decision CRTC 2018-217](#) CISC Emergency Services Working Group consensus items – Next-generation 9-1-1 technical and operational considerations and trial logistics
- [Telecom Regulatory Policy CRTC 2019-66](#) Next-generation 9-1-1 network design efficiencies
- [Telecom Decision CRTC 2019-226](#) CISC Emergency Services Working Group – Consensus report regarding technical specifications for real-time-text-based Next-Generation 9-1-1 Text Messaging





## Appendix B - NG9-1-1 Policy Framework

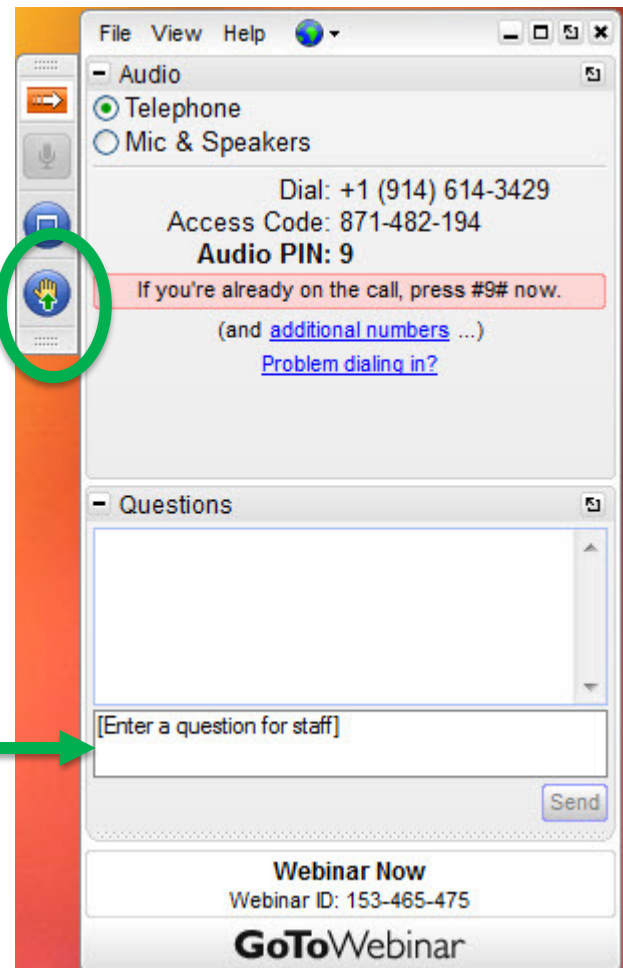
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- [Telecom Decision CRTC 2019-348](#) Follow-up to Telecom Regulatory Policy 2019-66 – Activities related to next-generation 9-1-1 network design efficiencies
- [Telecom Decision CRTC 2019-353](#) CISC Emergency Services Working Group – Consensus report on matters related to compatibility, reliability, resiliency, and security for next-generation 9-1-1
- [Telecom Decision CRTC 2020-150](#) Consensus report ESRE0089 regarding next-generation 9-1-1 mapping and addressing considerations
- [Telecom Decision CRTC 2020-373](#) Consensus report ESRE0086 regarding dispatchable location from originating networks
- [ESWG Website](#)



# Q & A Period

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# To Fund or Not to Fund? That is the question

MIKE SUNSERI

DEPUTY EXECUTIVE DIRECTOR, KENTUCKY OFFICE OF HOMELAND  
SECURITY

ADMINISTRATOR, KENTUCKY 911 SERVICES BOARD



# Why certify?

- ▶ Carrot and the stick approach to incentivize migration to wireless call handling and encourage consolidation
  - 3-legged stool KY funding model necessitated distinction of wireline vs. wireless
  - Tied wireless 911 fees to delivery of wireless 911
    - ❖ Current wireless fees:
      - Postpaid \$0.70/month EFT by providers
      - Prepaid \$0.93/transaction @POS
- ▶ Resulted in reduction in # of Kentucky PSAPs



# Evolution of certification process

- ▶ Old model paper-based
  - Inefficient, time-consuming, frustrating
- ▶ 2018 – adopted web-based electronic submission procedure using Smartsheet
  - Cost of product = \$1,800/year for 6 licensed users (admins)
  - Dynamic, real-time, efficient

# How it works

► Web address:

<https://app.smartsheet.com/b/publish?EQBCT=72a65079b9004468a36230feedbe589b>

PSAP Certification Portal (View Only) :



Report Abuse Help

## Online PSAP Certification Portal

### Section A - Documents and Contracts

- A1 - Complete the PSAP Survey and Provide Contact Info
- A2 - Notification to the Board that the PSAP is ready to receive and use Phase II Wireless E911 data elements
- A3 - Documentation of PSAPs authority to establish E911 service according to KRS 65.760
- A4 - Binding resolution committing the PSAP to necessary wireless E911 services and investments
- A5 - Copies of existing or proposed agreements between a wireless carrier and PSAP
- A6 - A list of public safety agencies served by the PSAP along with any agreements
- A7 - Copy of any agreement between PSAP and contracted wireline E911 provider
- A8 - Description of anticipated use of CMRS funds
- A9 - Notarized letter identifying the Payee for disbursements and the Payee's address
- A10 - Notarized letter concerning non-disclosure agreements
- A11 - Notarized letter concerning training for PSAP staff
- A12 - Copies of correspondence requesting Phase II service from carriers




#### IMPORTANT NOTICE

The 911 Services Board uses Smartsheet to collect, organize and process information. Interaction with this automated system relies on email notifications.

To avoid missing a notification please whitelist Smartsheet emails in your email program or contact your system administrator to ask about updating their email policy to allow email from the @smartsheet.com domain to be delivered and whitelisted.

[Click here](#) to learn more about whitelisting email addresses in the most popular email clients.

# How it works

PSAP Survey Links (View Only) : 

## Online PSAP Certification Portal - PSAP Survey

### INSTRUCTIONS

The PSAP Survey and Contact Information forms are required for certification. The PSAP survey includes two (2) survey/questionnaire sections and then five (5) key roles that we must have contact information for:

General PSAP details, Director, Authorizing Official/Mayor/Judge Exec, Financial Officer and GIS/Mapping point of contact


**EACH ITEM BELOW MUST BE COMPLETED. Please note, form progress DOES NOT SAVE.**

### New PSAP Certification PSAP Survey Links

- [911 PSAP Survey General and Equipment Info](#)
- [911 PSAP Survey Call Counting and Contingency Plans](#)
- [PSAP Contacts 1 \(PSAP Details\)](#)
- [PSAP Contacts 2 \(Director Information\)](#)
- [PSAP Contacts 3 \(Authorizing Official\)](#)
- [PSAP Contacts 4 \(Financial Officer\)](#)
- [PSAP Contacts 5 \(GIS/Mapping Point of Contact\)](#)








# How we track progress


Upgrade
Q Search...

You have limited access to Smartsheet. [Upgrade to use premium features](#)

Edit
★ Certification Processing Portal

## Certification Review Portal

### PSAPs Seeking Certification

Primary	POC Email	Progress	A1A	A1B	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12	B1	C1	C2	C3	D1	D2	D3	D4	D5
Fulton County 911 Dispatch	JL Atwill, Robert Grigg	<div style="width: 100%; height: 10px; background-color: blue;"></div>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

### Item Review

Accepted	Primary	Section Sort	Item	Created	Reject	Rejection Note	Statement
<input type="checkbox"/>	Fulton County 911 Dispatch	C01	Network Description and Characteristics	02/13/19 2:45 PM	<input type="checkbox"/>		Attached is a network descri
<input type="checkbox"/>	Fulton County 911 Dispatch	C02	E911 Equipment in PSAP	02/13/19 2:46 PM	<input type="checkbox"/>		Attached is a list of equipme
<input type="checkbox"/>	Fulton County 911 Dispatch	C03	Call Transfer Functions in PSAP	02/13/19 2:46 PM	<input type="checkbox"/>		Attached is documentation o
<input type="checkbox"/>	Fulton County 911 Dispatch	D01	Default and Alternate Call Routing	02/13/19 2:47 PM	<input type="checkbox"/>		Attached is documentation o
<input type="checkbox"/>	Fulton County 911 Dispatch	D02	Backup Power Equipment	02/13/19 2:47 PM	<input type="checkbox"/>		Attached is documentation o
<input type="checkbox"/>	Fulton County 911 Dispatch	D03	Evacuation and Relocation Plans	02/13/19 2:47 PM	<input type="checkbox"/>		Attached is documentation o
<input type="checkbox"/>	Fulton County 911 Dispatch	D04	Non-Emergency Service Line	02/08/19 2:17 PM	<input type="checkbox"/>		(270) 236-0701
<input type="checkbox"/>	Fulton County 911 Dispatch	D05	E911 Call Handling Procedures	02/12/19 3:23 PM	<input type="checkbox"/>		Attached is documentation o

# Final steps to certification

- ▶ Site visit
  - Engage Board consultant, PSAP directors, Board staff
- ▶ Geospatial audit
  - Contracted firm (1<sup>st</sup> one free)
  - Select 20 random points, 90% must plot within 1/10<sup>th</sup> mile
  - Once NG911 address/site structure points mapping guidelines implemented, accuracy requirements increase to 33 feet
- ▶ Board approval
  - Conditional vs. full



Any questions?

Mike Sunseri

Deputy Executive Director, Kentucky Office of Homeland Security

Administrator, Kentucky 911 Services Board

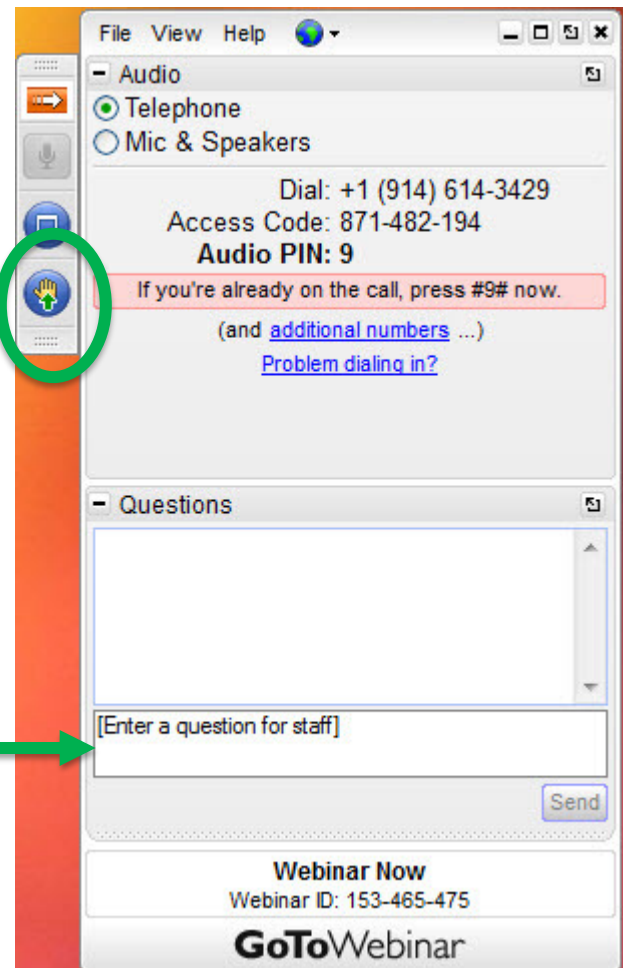
[Mike.Sunseri@ky.gov](mailto:Mike.Sunseri@ky.gov)

502-564-3911



# Q & A Period

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# Future Webinars

- 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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- Feedback or questions can be sent to:  
[National911Team@missioncriticalpartners.com](mailto:National911Team@missioncriticalpartners.com)