# SPECIAL PURPOSE COMMITTEE ON NG9-1-1 TRI-SERVICE DATA SHARING

**2021-11-09**

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# Special Purpose Committee on NG9-1-1 Tri-Service Data Sharing

# Version for Board Consideration – 2021-11-09

## Executive Summary

Police, Fire and Paramedic services are most often the three primary emergency services that respond to the vast majority of 9-1-1 calls across Canada. They have no standardized mechanism to quickly and accurately share critical information. The transition to Next Generation 9-1-1 (NG9-1-1) will provide an innovative platform that allows these Tri-Services to share information that will improve public and responder safety.

An opportunity to improve information sharing among emergency responders presents itself once in a generation. There are countless, tragic examples of the consequences when we fail to capitalize on efficient data sharing. Implementation of the tools available in NG9-1-1 demonstrate the Tri-Services commitment to improving public and responder safety whenever possible.

This report provides data sharing principles and recommendations that all Public Safety Answer Points (PSAPs) must consider now in order to build policies and procedures that support sharing critical data, in accordance with legislative provisions, in advance of the transition to NG9-1-1. Funding for NG9-1-1 is an extremely important subject. However, the mandate for this report did not include funding issues therefore that area of discussion is not included.

## Introduction

The Special Purpose Committee (SPC) on NG9-1-1 Tri-Service Data sharing is a combined effort between three national chief's associations – the Canadian Association of Chiefs of Police (CACP), the Canadian Association of Fire Chiefs (CAFC) and the Paramedic Chiefs of Canada (PCC). First responders are called Tri-Services because Paramedic, Fire and Police are all involved in responding to 9-1-1 calls for service. After the formation of the Special Purpose Committee, the importance of having the Association of Public-Safety Communications Officials of Canada (APCO Canada) involved in the discussions became clear, since their members face communications related issues every day. APCO Canada was subsequently brought in as a member of the SPC. While the term Tri-Services is generally accurate, there may be other emergency responders in some areas that can be accessed through 9-1-1 services. Due to this we will use the term ***emergency responders*** in place of the term Tri-Services, although it is recognized that the vast majority of 9-1-1 calls involve fire, paramedic, and police.

The Next Generation of 9-1-1 (called NG9-1-1) brings many data elements and capabilities to enhance public safety and first responder safety, but there needs to be understanding and agreement on what information will be shared by emergency responders under what circumstances. ***This is the focus of the Special Purpose Committee on NG9-1-1 Tri-Service Data Sharing*** (See Appendix 04). But the result of the SPC is more about defining high level principles around the sharing of information since many details of the NG9-1-1 systems are still in final design and the early stages of implementation. However, the importance of agreeing on principles of sharing is an important undertaking that should reduce the manual effort required to manage many call types where two or more emergency responders are involved.

The NG9-1-1 system will not solve all the communications problems experienced by emergency responders. Separate radio systems and other factors can cause communication gaps. This report is

about NG9-1-1 from the time a call taker makes a connection and gathers data, which may or may not be shared with other agencies. It does not discuss how the Public Safety Broadband Network (PSBN) will be used. However, good process and faster dissemination of information may help in solving some communication problems.

The focus of this SPC is the development of new concepts of incident information sharing between the 9-1-1 PSAPs (primary and secondary) and emergency responders in the NG9-1-1 environment, in the interest of public safety.

## State of 9-1-1 Public Safety Communications

9-1-1 is the three digit emergency number that works in most locations in Canada and U.S. by providing fast access to Public Safety Answering Points (PSAPs) where the caller can receive help necessary from Police, Fire, and Paramedics, and in some cases other emergency services. The 9-1-1 system is 50+ years old. We have now reached the bounds of what that technology is capable of. The current 9-1-1 system runs on analog lines and the equipment is nearing the end of its life-cycle, becoming difficult to maintain and impossible to enhance.

The 9-1-1 system currently provides very basic location information about the phone that is being used to call 9-1-1, however the inability to accurately identify the location of wireless devices has become more and more problematic, as about 80 percent of 9-1-1 calls now originate with wireless devices (See Resource 12). Current technologies may only provide the radius of a location up to several thousand meters from the closest cell tower. Safety enhancements are needed to better protect the citizens of Canada and the U.S.

## What is NG9-1-1?

While 9-1-1 and Enhanced 9-1-1 used analog communications, NG9-1-1 will use digital or Internet Protocol (IP) as a foundation. The conversion to NG9-1-1 is a complex and ongoing effort affecting all aspects of how calls are received, dispatched and monitored. NG9-1-1 functionality will appear relatively similar for voice-based 9-1-1 services, however NG9-1-1 will provide more accurate location data, which can greatly improve emergency services response time. NG9-1-1 will also provide the ability to transfer a 9-1-1 call from one PSAP to another across the country.

In the near future, NG9-1-1 will also provide Real Time Text (RTT) for callers who may be Deaf/Deaf-Blind, Hard-of-Hearing or Speech Impaired (DHHSI). RTT will also accommodate those callers who may be in a situation where remaining quiet is a matter of safety. The public is encouraged to call if they can and text if they cannot call. It is important to note that text-based calls tend to take much longer to process and bring to a conclusion than voice-based calls.

## Who will use NG9-1-1?

NG9-1-1 will be implemented in all jurisdictions across Canada that currently provide 9-1-1 service, with a view of eventually covering all of Canada. There will continue to be one number for all emergency responder services that are available in a particular area.

## Why NG9-1-1?

We have reached the technological limits of the current Enhanced 9-1-1 system and change is needed to provide improved services. The implementation of NG9-1-1 is based on an internationally accepted standard (NENA i3).

Although the Emergency Services IP Network (ESINet) is a one-time conversion, there will be an ongoing evolution of features, software, and hardware for emergency services. NG9-1-1 will therefore require ongoing adjustments to processes, technology, and the handling of emergency calls. In the future, NG9-1-1 will allow for the internet of things (IoT) to link more directly to PSAPs. For example, a collision could be reported and responded to by leveraging these new capabilities.

Canadians depend on the provision of reliable and effective 9-1-1 services to seek help in an emergency. Expectations of citizens evolve as technology changes. NG9-1-1 will enable Canadians to access enhanced and innovative 9-1-1 services with IP-based capabilities. For example, Canadians could stream video from an emergency incident, send photos of accident damage or a fleeing suspect, or send personal medical information, including accessibility needs, which could greatly aid emergency responders. These advanced features are mentioned to be forward-looking. However, it should be noted that pictures and video will not be operational in the first versions of NG9-1-1.

## How does NG9-1-1 Governance work?

The Canadian Radio-television and Telecommunications Commission (CRTC) provides oversight and regulation of 9-1-1 Network Providers. This includes dates when particular services will be made available to the 9-1-1 community and other targets. The telecommunications providers work within the CRTC regulations to provide these services. (*See Resources 01 and Resources 02 for CRTC reference links*).

There is no national body coordinating the public safety and operational aspects of NG9-1-1 in Canada. However, it is recommended that national oversight and recommendations for operational standards and services would improve the Public Safety response across Canada. While emergency services are a provincial responsibility, standards for 9-1-1 services may be set provincially or delegated to regions, municipalities, or other agencies. There are also recommended standards set by organizations such as the National Emergency Number Association (NENA), APCO Canada, and the National Fire Protection Association (NFPA), which have been adopted by some communities. Such a body could not legislate standards or impose decisions, but would provide a coordination body for decisions, future transition dates, information on new features as testing is completed, and so on. Without this coordination, the ability to implement new features and capabilities in an organized manner, for the benefit of public safety, is more disparate.

Many agencies have worked together to share information regarding NG9-1-1 and the changes required to emergency services. A comprehensive, although not complete list is available in Appendix 05.

## What does NG9-1-1 mean for Canadians?

NG9-1-1 has many positive impacts for Canadians such as:

- A modern and evolving standard for emergency communications.

- Enhanced location information for wireless devices. This is a critical component when the use of land lines is decreasing and the use of wireless devices are increasing.
- Then near-future implementation of Real Time Text (RTT) for callers who may be Deaf/Deaf-Blind, Hard-of-Hearing or Speech Impaired (DHHSI). This will also service those in situations where voice calling is not safe and those in a growing demographic who show a strong preference to texting.
- Ability to transfer calls to other PSAPs in other cities across the country (no longer limited to the region or province)
- Expanded information delivery to and between PSAPs (caller, call and location) to provide better and more consistent information more quickly, which may assist in better management of emergency calls.
- More sources of relevant information may evolve as the system is established. Eventual digital and multimedia services, allowing the receipt of digital images or video showing the scene of an emergency.

## 9-1-1 Current State of Information Sharing

The failure to share critical data between emergency services negatively impacts the ability to respond effectively on a regular basis. A lack of communication standards has contributed to a number of deaths that might otherwise have been prevented. Inquest and Coroner Juries recommend adequate emergency service data sharing to ensure the right services are deployed in a timely manner. We will discuss both of those scenarios.

***Typical Daily Scenario***

The following scenario illustrates the most common example of how inadequate information sharing can negatively influence public safety and emergency response. Please note that across Canada, this situation likely occurs dozens of times per day.

A motorist has been involved in a collision with injuries present. The driver calls 9-1-1 and are answered by the primary PSAP. The driver requests ‘ambulance’ and is ‘down-streamed’ to the secondary PSAP. The Paramedic Services call taker collects the information they require to dispatch a response. Ideally the call taker would transfer the 9-1-1 call to Police to ensure their specific questions were answered by the same caller. In this scenario, Police may need to transfer the caller a third time to the agency of jurisdiction. If the call is transferred properly through the 9-1-1 system, each agency receives location and number data associated with the initial 9-1-1 call. This minimizes human error when transferring the call. However, this is unlikely to occur because the current process is not efficient, prone to technical problems and inconvenient for the caller. This driver would eventually speak to four different call takers.

Keeping with the current scenario, what is more likely to occur is that the Paramedic Services call taker will remain on the line with the driver while they, or their colleague, contact Police and provide the basic details required to deploy those resources. Further, the initial call taker would also need to make yet another, separate call to Fire. This method of handling the caller means that they are not transferred repeatedly, often waiting in a subsequent queue before being answered. It limits the risk of losing the caller for technical reasons or from pure frustration. It also increases the risk of error as information is relayed repeatedly in a dangerous game of ‘broken telephone’.

Imagine if emergency responders could share critical data accurately and quickly with a few clicks of a mouse. Imagine if agencies could program parameters to share specific information amongst the first responders seamlessly during specific situations.

***Serious Emergency Scenario***

The scenario described above occurs frequently causing duplication of assessment and data inconsistencies between agencies, but fortunately it rarely ends in tragedy. The examples that follow are real events that resulted in an inquiry of some type with recommendations specific to better 9-1-1 information sharing. These tragic deaths may have been prevented, to some degree, had the capability to share critical 9-1-1 information been available.

Accurate information is critical to an emergency response that provides the best chance for a positive outcome. While other circumstances may have contributed to the deaths, there is no doubt that fast and accurate information and the following updates could have created a more positive outcome.

The two examples, which are attached as appendices are:

Use Case 1: Verdict At Coroner's Inquest – British Columbia – Overdose that resulted in death. When Police attended a call where the roommate was disoriented and intoxicated. The Police attended and an altercation occurs, which results in deployment of a Conducted Energy Weapon (CEW). The roommate is then placed in handcuffs. He is initially conscious and breathing without difficulty but after several minutes, his breathing becomes shallow and he becomes unresponsive. Medical assistance was requested but the serious condition of the subject was missed, which resulted in a longer arrival time. The subject died after arriving at hospital. Accurate communication was again listed as a recommendation.

The Coroner's comments indicated that "When a complaint comes into 9-1-1 and multiple services are requested, ensure that all requested agencies are notified immediately". It also identified potential weaknesses with the inter-PSAP flow of information, in that information regarding the incident is not always communicated with detail necessary to facilitate a proper response (*See Appendix 1*).

Use Case 2: Three people in Ontario were killed when their vessel collided with an island after midnight on Lake Wanapitei near Skead in Greater Sudbury. Four people were on the vessel and two were alive after the crash. One occupant called 9-1-1 five times before speaking to a call taker because the call kept getting dropped. There was delay confirming the location of the vessel and the island. Once again, communication between Computer Aided Dispatch (CAD) systems, or communication between the Tri-Services was highlighted as a recommendation.

The Verdict of Coroner's Jury in this case stated, "Ensure that private and public 9-1-1 communication centers, Police, Emergency Medical Services, Fire (career and volunteer), (collectively to be called "Emergency Services"), operate on the same or compatible computer aided dispatch ("CAD") system by December 2023 to allow for immediate sharing of critical information among Emergency Services." (See Appendix 2).

Additionally, a recommendation from the jury looking into the death of Kathryn Missen, in September 2014, indicated that measures should be taken to allow for the "immediate sharing of critical information among Emergency Services" as a measure to enhance public safety.

## Legislative and Privacy Considerations

The commitment to share information that will enhance the safety of Canadians is the most important step.

Generally, provincial privacy legislation ***does enable*** the sharing of information in emergencies, under the right conditions. Also high level legislative regulations should be designed to support sharing under emergency circumstances. Without such regulations, interagency agreements would be necessary, which could halt the implementation of significant sharing in emergencies. The province of British Columbia has created a reference document that outlines the special needs of emergency situations. Quotes from that document are included below (*See Reference 08*).

The following excerpts show related content from a number of provinces' legislation.

***Alberta***

Freedom of Information and Protection of Privacy (FOIP)

A public body can release personal information:
"if the head of the public body believes, on reasonable grounds, that the disclosure will avert or minimize (i) a risk of harm to the health or safety of a minor, or (ii) an imminent danger to the health or safety of any person,
The Health Information Act in Alberta also allows for release of health information:
(m) to any person if the custodian believes, on reasonable grounds, that the disclosure will avert or minimize (i) a risk of harm to the health or safety of a minor, or (ii) a significant risk of harm to the health or safety of any person,"

***British Columbia***

Guidance Document – Disclosure of Personal Information of Individuals in Crisis

The Office of the Information & Privacy Commissioner for British Columbia, in the publication, Guidance Document – Disclosure of Personal Information of Individuals in Crisis (See Resource - 08), makes these comments:

"In emergency situations, privacy laws in BC authorize public bodies or private organizations to responsibly disclose an individual's personal information, including information about their mental, emotional, or other health conditions, to third parties who may be able to help in a crisis. Privacy legislation in BC accommodates the disclosure of personal information in the event it could prevent a tragedy." (*page 1*)

"FIPPA authorizes public bodies to disclose personal information in order to prevent harm to individuals or when disclosure is in the best interests of the individual.

FIPPA allows for the disclosure of personal information if "compelling circumstances exist that affect anyone's health or safety,"1 as well as disclosure "so that the next of kin or a friend of an injured, ill or deceased individual may be contacted."2 FIPPA also allows for the disclosure of personal information "for the purpose of reducing the risk that an individual will be a victim of domestic violence, if domestic violence is reasonable likely to occur." (*page 1 and 2*)

***Ontario***

Freedom of Information and Protection of Privacy Act (See Resource 9)

Personal privacy

21 (1) A head shall refuse to disclose personal information to any person other than the individual to whom the information relates except,

a) upon the prior written request or consent of the individual, if the record is one to which the individual is entitled to have access;
b) in compelling circumstances affecting the health or safety of an individual, if upon disclosure notification thereof is mailed to the last known address of the individual to whom the information relates;

Where disclosure permitted

42 (1) An institution shall not disclose personal information in its custody or under its control except,

(h) in compelling circumstances affecting the health or safety of an individual if upon disclosure notification thereof is mailed to the last known address of the individual to whom the information relates;

### Personal Health Information Protection Act, 2004 – Ontario (See Resource 10)

Health information custodians
3.(6) Every municipality that operates a communications service within the meaning of the Ambulance Act is prescribed as,

a) a health information custodian; and
b) a single health information custodian with respect to all of its functions in operating the communications service.

Electronic audit log

10.1 (1) Subject to any prescribed exceptions, a health information custodian that uses electronic means to collect, use, disclose, modify, retain or dispose of personal health information shall,

a) maintain, or require the maintenance of, an electronic audit log described in subsection (4);
b) audit and monitor the electronic audit log as often as is required by the regulations; and
c) comply with any requirements that may be prescribed. 2020, c. 5, Sched. 6, s. 3.

## Communications Interoperability Strategy for Canada (CISC)
(*See Resource 11*)

CISC is an important reference because it is an approved document of Canada that speaks to the importance of interoperability, or the ability for agencies responding to an emergency to effectively communicate and share information. Under “Purpose”, the CISC states,

“The purpose of the CISC and its Action Plan is to provide a structure for the creation of national policies, standards, and plans to improve responder communications capabilities in support of safety, operational, procurement and infrastructure efficiencies, and ultimately increased citizen safety and security. Interoperable communications supports the responder community through the development of a basic structure which will guide the creation of sustainable capabilities, uniform and consistent standards, and steer investments in communications interoperability policies, programs, technology, equipment, training, and best practices.”

While CISC was directly referencing and supporting voice communication interoperability, the next phase of interoperability would surely include data sharing as the natural extension of voice communication. CISC demonstrates and affirms the sharing of information in operational situations, whether day-to-day events or major incidents. CISC further states,

"Information is the lifeblood of effective day-to-day operations within the public safety community. In making countless decisions every day, officials must have immediate access to timely, accurate, and complete information. It has become clear that effective decision making requires information that must often be shared across a broad landscape of systems, agencies, and jurisdictions. For example, the adoption of common tools, such as open standards, is a key element in enabling public safety agencies to deal with this growing and complex problem.

The CISC envisions that the emergency management and response communities will adopt common or compatible processes and tools that enable multi-agency coordination and joint service operations."

The Canadian Communications Interoperability Continuum (*See Appendix 03*) shows a proven framework for operationalizing interoperability in the public safety environment. NG9-1-1 has the ability to enhance information sharing in emergencies and thus provides the potential to move Canada to the right of the Canadian Communications Interoperability Continuum (the right side of the chart has the greatest benefit for public safety).

## NG9-1-1 Transition Roadmap for Canadian PSAPs *(See Resource 07)*

The Canadian NG9-1-1 Coalition produced a report entitled "NG9-1-1 Transition Roadmap for Canadian PSAPs", to assist Canadian PSAPs with what NG9-1-1 would bring, and what would be expected of them. It stated,

"PSAPs must redefine systems and services from single-channel based voice communications to multimodal formats. To capitalize on emerging capabilities, 9-1-1 platforms must be agile and resilient in design – ensuring stability and security of function, while enabling innovation. More efficient use of available technologies allows emergency services to better address community needs during emergency response and natural disasters."

The report confirmed that enhancements are needed in how we are handling emergency situations today and outlined some of the enhancements that would be possible with NG9-1-1.

## TNCO Principles

In general terms, some principles for data sharing in the Canadian NG9-1-1 system have been supplied in the Temporary National Coordination Office (TNCO) report entitled "Progress Report on a National Public Safety Broadband Network - Working towards the next generation of public safety communications in Canada" (*See Resource 06*). While the TNCO principles were written to apply to a future PSBN, some principles also apply to the NG9-1-1 Network, as they would for any national system set up for the safety and security of the public. The relevant principles expressed in the TNCO Report are as follows. The TNCO principles below have been adapted to refer to the NG9-1-1 system.

**Interoperability** – NG9-1-1 enables emergency responders to communicate and share information, as authorized, any time and from anywhere it is accessible.

**Network Access Always** - Whether in their daily routine, or during major events or emergencies, NG9-1-1 users must always have immediate and uninterrupted access to NG9-1-1 where it exists.

**Resiliency/Robustness** – NG9-1-1 must be resilient and robust to meet network access requirements.

**Deliver Mission Critical Services** – NG9-1-1 will enable the delivery of network-hosted mission critical services to public safety users.

**Security** – NG9-1-1 must incorporate and enable security mechanisms meeting the trust requirements of the organizations of emergency responders and those exchanging data through it.

**Sustainability** – NG9-1-1 must meet the needs of its first generation of stakeholders without compromising its ability to meet the needs of future stakeholders.

**Affordability** – NG9-1-1 must be affordable to the entire community of NG9-1-1 users.

## NG9-1-1 Transition Roadmap for Canadian PSAPs

The above mentioned report was produced by the Canadian NG9-1-1 Coalition. It is an excellent guide for Canadian PSAPs, all of whom must convert to the NG9-1-1 environment. The report expressed the importance of outcomes such as universal access that would allow for future NG9-1-1 capabilities and data sources, the interoperability between PSAPs that would result from implementing NG9-1-1, and the agility that allow emergency responders to "rapidly respond to evolving citizen expectations, and capabilities enabled by emerging technologies". (*See Resource 07*)

Public Safety agencies should make use of NG9-1-1 capabilities to enable emergency responders to communicate, access, and share information as authorized. The following principles go beyond the information sharing aspects of NG9-1-1; however they provide a general comment on concepts that will be important to ensure the ongoing operation of an NG9-1-1 system in Canada.

### Create Equitable and Affordable Service

Ensure that information is delivered to PSAPs in a consistent and affordable manner, by adopting and leveraging standards. NG 9-1-1 must deliver an equitable service to the entire community of NG9-1-1 users. For the purposes of this report, this equitable service would relate to information sharing. NG9-1-1 should be technologically and competitively neutral and use commonly accepted standards that do not lead to proprietary solutions that hamper interoperability, make mutual aid between agencies less effective, limit choices, or increase costs. For example, a small PSAP in a remote area should not be disadvantaged by not receiving information from other jurisdictions. Ensure that sharing information in the NG9-1-1 environment is affordable to the entire community of potential NG9-1-1 users.

### Plan for Sustainability

Ensure that capabilities are implemented in harmony with standards so that it is easy to take advantage of new features in the NG9-1-1 environment. Information sharing in the NG9-1-1 environment must be realistically achievable and meet the needs of its first generation of requirements without compromising its ability to meet future needs (real-time text, video etc.).

### Deliver Information for Mission Critical Services

Each agency must be forward-thinking in their information sharing policies. Public safety organizations must realize that there is a duty to share where safety is concerned. They must recognize that each emergency service requires specific information to protect the community. Information sharing in the NG9-1-1 environment must facilitate and enable the collection of service specific information as required for safe and effective operations, and subsequently allow the sharing of relevant information as allowed by legislation and necessary to protect safety and life.

It appears that the Freedom of Information and Protection of Privacy Acts across Canada potentially allow the sharing of information under most emergency circumstances. Cross-border data sharing will have to be discussed by the appropriate parties to support emergencies with an international component.

### Freedom of Information, Protection of Privacy and Health Information Considerations

Health information legislation tends to be more stringent about the release of health related information. The question of what can identify the patient is an important one that needs to be determined. There are many examples of where information is important to the quick resolution of a crisis and so work needs to be done. Police are not health care custodians, so the rules of health do not apply to them. Under many legislations, information flows one way in a need to know basis; in essence, people get the information they need at the time, but do not get follow-up updates. We need to be very careful about what information is shared between the emergency responders as sharing information becomes more automatic.

New mechanisms must be created so that if a call meets a pre-determined criteria or threshold, those events are shared automatically, or at least seamlessly with the appropriate agency. For example, Paramedic Services attend a call with undisclosed injuries and determine it is a violent incident involving a weapon. With the click of a mouse, the initial call taker can share that information with the Police of jurisdiction. Research and development are required to create these mechanisms and the Tri-Services, the Emergency Services Working Group (ESWG), APCO Canada and the Computer Aided Dispatch vendors may have to be involved in the ultimate solution.

Innovative solutions like this must be pursued to ensure the Tri-Services demonstrate our commitment to the safety of our communities and the prevention of needless deaths. Canadians expect this level of cooperation from their emergency services. Anything short of marked improvement compared to today's current practice would be seen as a failure; a missed opportunity to incorporate a solution to a well-documented flaw. The inability to capitalize on the transition to NG9-1-1 as the impetus for this change would be criticized for years to come.

## The Principles of Data Sharing

This section is meant to provide broad and applicable principles regarding the sharing of data amongst involved emergency responders. While all of the NG9-1-1 capabilities are not known at this point, Data Rights Management being one example, an NG9-1-1 implementation that supports such capabilities can be assumed. The work done by the Special Purpose Committee on NG9-1-1 Tri-Service Data Sharing should help to build a foundation for information sharing between emergency responders.

*Principle 1*

Share by design and for the purpose of saving lives, within limits permitted by applicable legislation. Emergency responders, most often the Tri-Services, must agree to share information when that sharing can protect personal and public safety.

*Principle 2*

Create a sharing environment where data can be immediately transferred to other emergency responders electronically, without the need for time consuming and sometimes unreliable passing of data by phone calls or radio. Information sharing must be viewed as a standard operational imperative.

*Principle 3*

Emergency Responders must work with NG9-1-1 implementers to create mechanisms that share data with other appropriate emergency responders either automatically or seamlessly when a pre-determined criteria or threshold is met. An appropriate oversight body could help define standards to determine call types that should be distributed to tri-service agencies, ensuring each service can begin the evaluation of their response as quickly as possible. Such calls are often referred to as tiered calls for service, multi-agency responses or combined calls for service.

*Principle 4*

Regulatory guidelines must exist to allow the sharing of required data when defined situations arise, as opposed to agreements between specific agencies. Without such guidelines, many agencies will be hesitant to share information. Those that would like to share will be forced to create a sharing agreement between each of the agencies they share with. This would indefinitely stall the enhancement to public safety that NG9-1-1 and greater sharing could deliver.

*Principle 5*

The vehicle for data sharing in the NG9-1-1 environment is the Emergency Incident Data Object (EIDO) or any message native to the NG9-1-1 environment. The EIDO can be compared to a large container that can carry many defined items of information that are needed to support and manage emergency calls for service. *(See Resource 04 and Resource 05 for more information on the EIDO*).

*Principle 6*

It is recognized that NG9-1-1 is not a static system, but rather, capabilities will continue be added, requiring an ongoing evolution of service from the emergency responder perspective. Structures and regulatory guidelines must be flexible to support the evolutionary development without a significant redesign of processes and technology.

### Cybersecurity Imperative

Because NG9-1-1 is based completely on Internet Protocol (IP) communications, cybersecurity is a significant imperative for the NG9-1-1 system. Time and effort is being put into making, and keeping, the system secure, but this will be an ongoing concern, not a one-time task.

## 9-1-1 Gaps and Constraints

There are a number of gaps and constraints in creating a complete and detailed sharing document at this time. Here are some examples.

### Incomplete Standards for NG9-1-1

## Special Purpose Committee on NG9-1-1 Tri-Service Data Sharing

Development of the NG9-1-1 standards is still underway and the technology to accomplish the envisioned emergency responder information sharing does not yet fully exist. Therefore, a detailed description of the proposed information sharing protocol is still unavailable. This report is focused on identifying the existing gap and capitalizing on the time available to encourage the development of an effective solution.

As an example, data rights are an important component of this discussion. While the NG9-1-1 documentation speaks of the importance of a data rights model that allows users to decide who can see what information, the specification for the Data Rights module is not yet complete. However, an important positive step is the inclusion of data rights as part of the NG9-1-1 implementation. The Special Purpose Committee report is intended to support discussions relating to the data rights module.

One standard that has recently received ANSI approval is NENA's i3v3 EIDO standard. This is a standards-based mechanism for data sharing within the NGCS and amongst all PSAPs.

### View of Privacy Legislation

In the view of many, the most significant hurdle to seamless emergency responder information sharing is a common interpretation of privacy legislation that is seen to prevent sharing. However, it is critical to note that sharing information, under the approved circumstances, is not precluded by any privacy legislation. The previous section entitled "Legislative and Privacy Considerations" discussed a number of provincial legislations. As noted, a number of inquests have spoken to a more safety-focused interpretation of the need to share information.

# The Way Forward

### Coordination of NG9-1-1 Implementation

It has been previously discussed that there is no NG9-1-1 national coordination body or central organization for operational and transition related issues. Should a national oversight body be established it is critical that PCC, CAFC, CACP and APCO Canada continue to represent the needs of public safety emergency responders. The implementation of NG9-1-1 will be regional throughout Canada, and provinces will make decisions on implementation based on their situations. Hopefully this process will take into account the importance of a unified approach to information sharing in emergency situations for the preservation of life.

The transition must be coordinated to minimize confusion on milestone dates and feature availability as awareness campaigns inform the public of changes to the 9-1-1 system. All regions won't have the same features at the same time, so social media may create inaccurate expectations in a region that has not yet received those features. This vital coordination may be adversely affected by the timeframes that we are working towards.

Discussion and design are needed on the handling of non-emergency calls and alternative methods of providing service. NG9-1-1 design should support alternative responses or response organizations (as examples, Coast Guard, Kids Help Phone, Suicide Service, or other non-tri-service responder agencies).

## Data Residency

A full and complete understanding of the relevant provincial or federal FOI and Privacy legislation and other relevant governing documents should be applied when deciding where 9-1-1 services will reside. As an example, the document entitled CRTC 2017-182, states this in paragraph 125:

125. Accordingly, the Commission imposes an obligation, as a condition of offering and providing telecommunications services pursuant to section 24 of the Act, that NG9-1-1 network providers take all reasonable measures to ensure that all NG9-1-1 network components reside in Canada, and that all traffic transiting their NG9-1-1 networks and destined for a PSAP located in Canada remain in Canada. Should NG9-1-1 network providers wish to make use of components outside Canada, they are to notify the Commission, supported by full justification as to why it is not reasonable to locate the components in Canada, within six months prior to the proposed use of such components.

## Data Governance and Ownership

Many questions exist regarding data ownership and the potential impacts on disclosure to the courts, retention of data, continuity of evidence and so on. The manner in which we share caller information to multiple agencies while ensuring it is secure and protected to the extent possible requires further conversation. For example, if the information collected by one emergency call taker is sent to another emergency responder agency, do both agencies now own that data? Additionally, how do we keep data consistent and how do we respond to Freedom of Information access requests?

This report is intended to initiate the conversation and identify existing gaps. As NG9-1-1 configuration standards are finalized, a candid discussion at the national level must resolve outstanding issues related to information sharing and data ownership.

### National Issues

The work done by the Special Purpose Committee has initiated an important process to identify the existing gap and the importance of sharing critical information among emergency responders to improve public safety on a daily basis. This report should be reviewed and the principles identified above should be endorsed by the Boards of the Fire, Police and Paramedic chiefs' national associations and by APCO Canada. The issues raised by this report should be initially discussed at the national association level. After those issues have been managed, this report should be socialized with the membership of those associations to build awareness and acceptance of the principles in this report.

The members of the Special Purpose Committee believe the multi-disciplinary nature of this committee would be advantageous in working through the issues identified in this report. We see the major steps as follows:

- The Special Purpose Committee will submit the report to the PCC, the CAFC, the CACP and APCO Canada Boards for review and comment as a first draft, prior to any distribution.
- The associations who receive the report should comment on issues or concerns they identify. It is recommended that the Special Purpose Committee be used to resolve these issues, leading to the report being endorsed as principles for NG9-1-1.
- Before the final report is released, it should be reviewed with the Canadian NG9-1-1 PSAP Coalition, ESWG and other groups that have a vested interest in the issue of information sharing. Any concerns would be reviewed with the three associations.
- A final report will be produced that will represent the positions of the PCC, the CAFC, the CACP and APCO Canada. It will be made public and be made available as an input to ongoing NG9-1-1 development. While the report does not have any legislative authority, having the three national chiefs associations and APCO Canada adopt this position should make it more easily adopted by most regions in Canada, thus obviating the need for such research to be done multiple times across Canada.
- The final report will be made public and distributed to all organizations that are involved in the NG9-1-1 evolution in Canada.
- The Five Lanes of Interoperability Model should be used to govern the aspects of data sharing (*see Appendix 03*). This important methodology ensures that features and processes will work when they are needed because testing and training are involved in the five lanes of the project.
- Health information legislation tends to be more stringent about the release of health related information. The question of what can identify the patient is an important one that needs to be determined. Governing bodies have to be more involved in making clear the ability to share information in an emergency.
- Some form of legal and privacy work will be necessary to finalize the recommendations in each province. British Columbia has provided a model document for this purpose.

It is also the recommendation of the Special Purpose Committee that the work of this group be continued, in some fashion, to steer future discussions, identify operational issues that result from decisions made by NG9-1-1 groups and monitor the ongoing evolution of the NG9-1-1 system. Coordination will be vital, and the Special Purpose Committee is a venue where the Tri-Services and APCO Canada can work together in a cooperative environment. Coordination has been seen as an issue, so ongoing coordinating work with organizations like the CACP ICT NG9-1-1 Working Group, the Canadian PSAP NG9-1-1 Coalition, ESWG, the CAFC Information Communications Technologies/Interoperability Committee and others, will enhance the general process and outcomes.

*Respectfully submitted by,*

*The Special Purpose Committee on NG9-1-1 Tri-Service Data Sharing*

*November 9, 2021*

## Acronyms

| Acronym | Description |
|---|---|
| 9-1-1 | The original 9-1-1 system that was totally analog |
| E9-1-1 | The second generation of 9-1-1 systems that included more advanced location information |
| NG9-1-1 | Next Generation 9-1-1 – a new generation of 9-1-1 systems that receive emergency calls over Internet Protocol (IP) networks |
| ACN | Automatic Crash Notification – a system that notifies a central agency if a vehicle is in a crash |
| APCO Canada | Public-Safety Communications Officials of Canada |
| CACP | Canadian Association of Chiefs of Police |
| CAD | Computer Aided Dispatch (CAD) systems |
| CAFC | Canadian Association of Fire Chiefs |
| CEW | Conducted Energy Weapon (CEW) that uses electricity as a less-lethal way to perform arrest. |
| CISC | Communications Interoperability Strategy for Canada (CISC) |
| CRTC | Canadian Radio-television and Telecommunications Commission - The CRTC is an administrative tribunal that operates at arm's length from the federal government. |
| DHHSI | Deaf/Deaf-Blind, Hard-of-Hearing or Speech Impaired |
| EIDO | Emergency Incident Data Object (EIDO) |
| ESINet | Emergency Services IP Network - This is the national NG9-1-1 network. All Public Safety Answering Points would be connected to the ESINet to support NG9-1-1 functions. |
| ESWG | Emergency Services Working Group (ESWG), which reports to Canadian Radio-television Telecommunications Commission (CRTC). |
| FIPPA | Freedom of Information and Protection of Privacy Act (legislation) |
| FOIPPA | Freedom of Information and Protection of Privacy (FOIP) Act |
| I3 | The NG9-1-1 technical standard developed by the National Emergency Number Association (NENA) |
| ICT | Information and Communications Technology Committee |
| IP | Internet Protocol – the language of modern networks |

| | |
|---|---|
| NENA | National Emergency Number Association (NENA) - has developed the international NG9-1-1 i3 technical standard that is being used by Canada and the U.S. |
| NFPA | National Fire Protection Association |
| PCC | Paramedic Chiefs of Canada |
| PSAP | Public Safety Answering Point |
| PSBN | Public Safety Broadband Network – a wireless and high speed network that will support Public Safety requirements |
| RTT | Real Time Text – a new method for receiving emergency calls by text from a smart phone (not SMS or iMessage) |
| SPC | Special Purpose Committee on NG9-1-1 Tri-Service Data Sharing |
| TNCO | Temporary National Coordination Office (TNCO) – a temporary organization set up to oversee the Public Safety Broadband Network until a permanent governance structure could be found. |

## Resources

Resource 01: https://crtc.gc.ca/eng/archive/2014/2014-342.htm
CRTC web page entitled Telecom Regulatory Policy CRTC 2014-342

Resource 02: https://crtc.gc.ca/eng/archive/2017/2017-182.htm
CRTC web page entitled Telecom Regulatory Policy CRTC 2017-182

Resource 03: https://www.oipc.bc.ca/guidance-documents/2336
Office of the Information & Privacy Commissioner for British Columbia – Guidance Document – Disclosure of Personal Information of Individuals in Crisis

Resource 04: Please follow these steps to get the English EIDO description:
Click https://github.com/NENA911/EIDO-JSON
Click on the blue word "Documentation" at the left of the page
Click on "EIDO JSON_STA-021.1-201Y Draft.docx" to download the EIDO description

Resource 05: To get a Frequently Asked Questions document for EIDO:
Click https://nenawiki.org/wiki/EIDO_(Emergency_Incident_Data_Object)
Click EIDO & IDX Frequently Asked Questions (NENA Knowledge Base)

Resource 06: https://www.publicsafety.gc.ca/cnt/rsrcs/pblctns/2019-prprt-npsbn/index-en.aspx#a10
Temporary National Coordination Office (TNCO) report entitled "Progress Report on a National Public Safety Broadband Network

Resource 07: https://cdn.ymaws.com/apco.ca/resource/resmgr/pdf_files/ng911roadmap.pdf
NG9-1-1 Transition Roadmap for Canadian PSAPs, by the Canadian NG9-1-1 Coalition

Resource 08: https://www.oipc.bc.ca/guidance-documents/2336
Guidance Document – Disclosure of Personal Information of Individuals in Crisis

Resource 09: https://www.ontario.ca/laws/statute/90f31
Ontario Freedom of Information and Protection of Privacy Act

Resource 10: https://www.ontario.ca/laws/statute/04p03
Ontario Personal Health Information Protection Act

Resource 11: https://www.publicsafety.gc.ca/cnt/rsrcs/pblctns/ntrprblt-strtg/index-en.aspx
Communications Interoperability Strategy for Canada

Resource 12: https://www.nena.org/page/911Statistics
NENA: The 9-1-1 Association – 9-1-1 Statistics Report on Calls in the United States

# Appendices

Appendix 01: Information Sharing Use Case 01 - Overdose

Appendix 02: Information Sharing Use Case 02

Appendix 03: Canadian Communications Interoperability Continuum

Appendix 04: Briefing Note for CACP ICT Committee

Appendix 05: List of Agencies Participating in NG9-1-1 Activities

## Appendix - 01 - Use Case 01 – Overdose

A 9-1-1 call is made by a person who discovers his roommate disoriented, incoherent and likely intoxicated. The caller is requesting emergency services out of concern for his roommate and a pet that appears to have been injured, possibly by the roommate.

The 9-1-1 call is routed to the local police, who respond quickly and find evidence of substance use and the roommate unresponsive to verbal commands. An altercation occurs and results in deployment of a Conducted Energy Weapon (Taser). The roommate is then placed in handcuffs. He is initially conscious and breathing without difficulty but after several minutes, his breathing becomes shallow and he becomes unresponsive. CPR is initiated but an AED is not used, despite one being available at the scene.

At the time of Police arrival, paramedic services were requested to be on "standby". The local fire department arrived shortly after police. Primary Care Paramedics arrive approximately 20 minutes after Police arrival (but after the fire department) and subsequently requested Advanced Care Paramedics, who transport the patient to hospital, where he dies within thirty minutes of arrival, roughly 90 minutes after the initial 9-1-1 call.

## What agencies are involved (Fire/Paramedic/Police/Dispatch Centers):

PSAP, Police, Fire, EMS.

## What info needs to be shared:

There is a requirement for multiple services (Police and EMS) to receive information and dispatches simultaneously. Details of a patient's medical condition need to be shared among all responders at the same time to ensure the appropriate type of response.

A subsequent Coroner's investigation into the event found that Police obtained additional information about the event after the initial 9-1-1 call which was not communicated to other responders. Specific gaps in information exchange were as follows:

- Although both Police and EMS were requested at the time of the initial 9-1-1 call, Fire and EMS were not dispatched until after the Taser was deployed and medical distress commenced.
- The details of the patient's medical distress were not communicated to the EMS Dispatch Centre, resulting in the EMS response being "routine" and paramedics not having details of the patients' condition until after they arrived at the scene.

## Summarize – recommendations and guidelines

A Coroner's Report made the following recommendations:

1. When a 9-1-1 caller identifies there is a potential or verified health concern associated with a Police event, the existence of this concern and any medical details should be captured in a shared Incident Record and automatically communicated to EMS and/or Fire.

2. When Police responders become aware of a medical distress situation, this information and the severity of the distress should be captured/updated in a shared Incident Record and automatically communicated to EMS and/or Fire.

## External Reference

British Columbia Coroner's Report

# Appendix - 02 - Use Case – 02 – Boating Accident

Item 6 listed below recommends that Emergency Services operate on the same or compatible computer aided dispatch (CAD) system. The Special Purpose Committee supports the more modern approach of ensuring all systems be interoperable, thus providing the appearance and function of one system.

## Description of Use case

On June 30th 2013, three people were killed when their vessel collided with an island after midnight on Lake Wanapitei near Skead in Greater Sudbury. Four people were on the vessel and two were alive after the crash. One occupant called 911 five times before speaking to a call taker because the call kept getting dropped. There was delay confirming the location of the vessel and the island. The caller texted an image of a map with GPS coordinates but there was still a significant delay. The call taker suggested starting a signal fire. The fire quickly spread out of control and consumed the vessel after the crash. Fire services were asked to delay their deployment to the island in order to transport paramedics which resulted in a further delay. Fire fighters arrived approximately one hour after the original call was received. Two occupants were deceased at the scene, one from the fire. The third person died in the hospital.

## What agencies are involved (Fire/Paramedic/Police/Dispatch Centers):

Regional Police, Regional Emergency Services, Fire Services, Ministry of Health and Long Term Care.

## What info needs to be shared:

Information about the catastrophic nature of the call should be quickly shared with all responders to provide the best possibility of having the people and equipment needed at the scene. The Jury Recommendations state, among other things, that "14. Require that Ontario and all municipalities ensure that bi-directional real-time CAD data, and other data (such as maps), are available to police, fire and EMS first responders on mobile data terminals." This speaks to fast and complete information being shared among first responders.

## Summarize – recommendations and guidelines

In November of 2018, the Verdict of the Coroner's Jury provided 27 recommendations. Although the two incidents were not related, the Chief Coroner combined them because they both involved 911 delays. The jury recommendations are listed below

Jury Recommendations:

*To the Government of Ontario*

**Ontario should:**

1. Put in place an independent body to provide oversight to all 911 operations, keeping in mind regional differences and service levels, and its mandate should include, but not limited to:

    a. investigating, responding to, and resolving complaints
    b. conducting audits
    c. collecting data and conducting research
    d. conducting systemic reviews
    e. issuing an annual report, which should be publicly accessible and should include the meeting dates, times and agenda for each meeting held.

2. Ensure timely access by families to all pertinent and comprehensive information related to deaths where 911 services are involved.

3. Develop and conduct a public awareness campaign on the purpose of the 911 service, including alternative numbers for reaching police in non-emergency situations.

4. Investigate methods to deter inappropriate and accidental (e.g. pocket dialing) use of the 911 service.

5. Ensure that conclusions and recommendations of internal reviews conducted in relation to deaths where 911 services are involved are made public to ensure transparency, accountability, and accuracy.

6. Ensure that private and public 911 communication centers, Police, Emergency Medical Services (EMS, Fire (career and volunteer), (collectively to be called "Emergency Services"), operate on the same or compatible computer aided dispatch (CAD) system by December 2023 to allow for immediate sharing of critical information among Emergency Services.

7. Require that Ontario and all municipalities insure that their CAD systems have the capacity to:

a. Utilize the re-bid feature to request caller location information;
b. Allow operators to emphasize critical information; and
c. Escalate alerts the greater the delay in dispatching the call (e.g. additional audible or visible alerts at five, ten, fifteen minutes).

8. Require the Ministry of Health and Long Term Care, EMS, Police and Fire to establish an interoperable radio channel that would be available to all Emergency Services during a multi-agency response.

9. Require that Ontario and all municipalities ensure that 911 services within their jurisdictions are appropriately staffed, including ensuring that supervisors of 911 call takers and dispatchers can focus on their supervisory duties without being diverted by routine call taking or dispatching duties.

10. Require that supervisors of 911 call takers and dispatchers are trained on the equipment and software used by the personnel they are supervising.

11. Require that Ontario and all municipalities provide appropriate supports for 911 call takers, dispatchers and supervisors, including supports for mental health and post-traumatic stress disorder.

12. Require that Ontario and all municipalities identify appropriate emergency resources when dealing with a water rescue, including available police or fire boats, launch points, and personnel. This information should be available to all 911 call takers, dispatchers and supervisors through the CAD system.

13. Require that Ontario and all municipalities ensure that 911 services within their jurisdictions establish a formal policy, accompanied by comprehensive training, to:
    a. permit callers who are unable to verbally communicate their needs to communicate through other means (e.g. silent 911 call procedure);
    b. permit front line Emergency Service responders to communicate directly with a caller where appropriate
    c. govern when a medical tiered response is engaged, including simultaneous notification
    d. ensure appropriate organizational accountability when there are unnecessary delays in dispatching 911 calls
    e. require 911 call takers and dispatchers to engage their supervisors prior to making decisions beyond their normal training (e.g. instructing a caller to light a signal fire)
    f. ensure that supervisors for Emergency Services have the capacity to communicate directly with each other

g. ensure that front line Emergency Service responders have the capacity to communicate directly with other responders and dispatchers
h. permit all 911 call takers, dispatchers and supervisors to request and receive updated location information from cellular providers
i. identify and acknowledge critical information during radio communications (e.g. “Pan Pan Pan” and “Roger”)
j. conduct an internal review where 911 services are involved in a death and concerns have been identified by family or staff, which must include consultations with staff during and following the review
k. address whether and when the Bell Surveillance and Maintenance Centre is referred to in CAD and the implications of its inclusion
l. conduct a debriefing with appropriate staff following a major 911 incident.

14. Require that Ontario and all municipalities ensure that bi-directional real-time CAD data, and other data (such as maps), are available to police, fire and EMS first responders on mobile data terminals.

15. Require that Ontario and all municipalities install a minimum of three direct telephone lines between and among 911 Communications Centre’s (the precise number of lines to be decided based on call volumes and other relevant factors).

16. Work with Bell Canada to increase the number of participants that can be on the same emergency call above the current limit of three.

17. Ensure active supervisors or designates of 911 call takers and dispatchers have the capacity to monitor CAD information at all times.

18. Report to the Office of the Chief Coroner by no later than December 1, 2019, and annually for five years, in an open letter, regarding the progress made with respect to these recommendations.

19. Investigate measures (including equipment and facilities) to assist 911 call takers, dispatchers and supervisors to effectively and comprehensively listen to information being communicated from callers and colleagues (e.g. when callers are hard to hear or understand).

*To All Municipalities in Ontario that provide 911 services*

**All Municipalities that provide for 911 services in Ontario should:**

20. Take their own steps to enact any and all recommendations that apply to municipalities by December 2021, whether or not Ontario requires them to do so.

21. Review current staffing formulas.

22. Add clerical help to call centers.

23. Review the suitability of 12-hour shift schedules.

24. Use local resources (e.g. volunteer fire) to address response time delays.

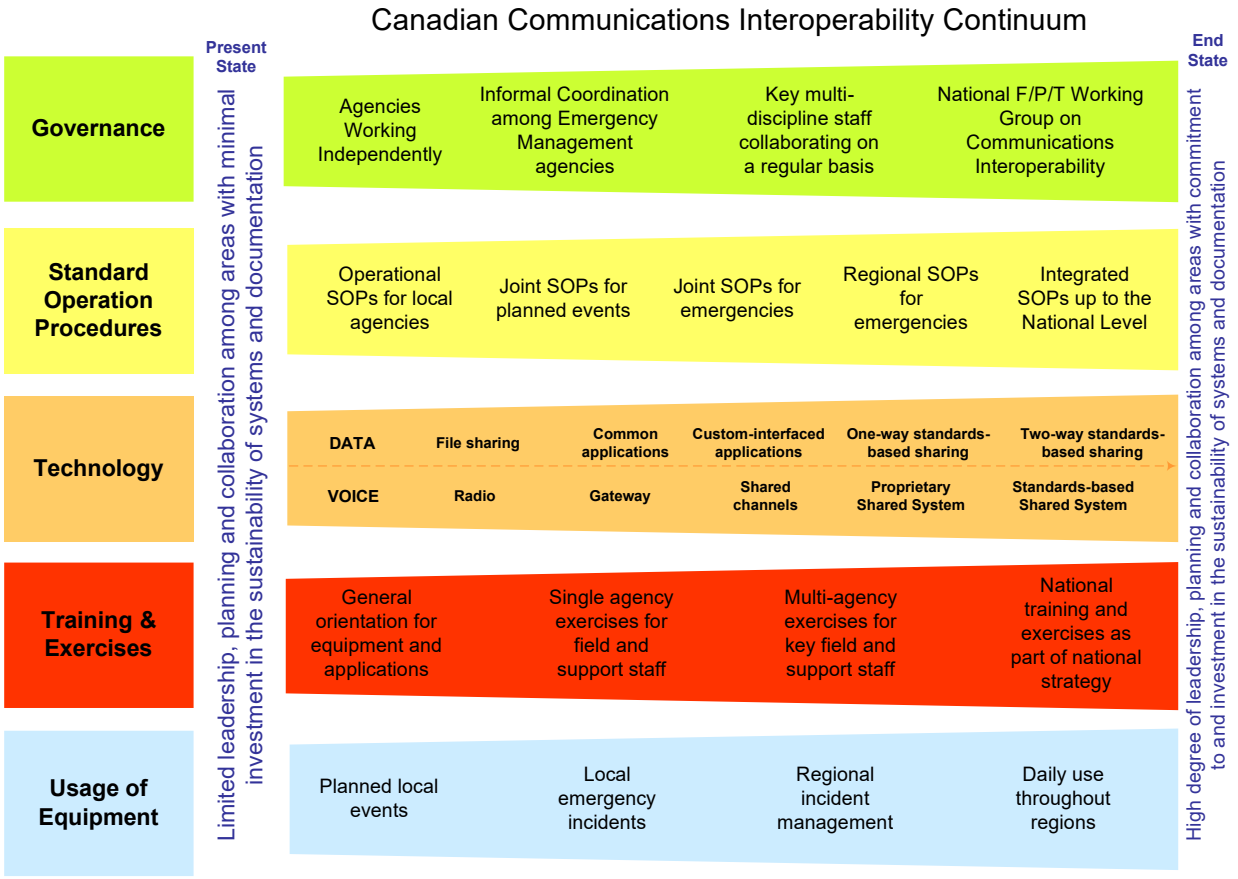
25. Install clearly marked signage to direct responders to local/rural volunteer fire stations;

26. Ensure sufficient lighting (through permanent or portable means as appropriate) at launch points (e.g. docks, trail heads) to prevent delays to responders when leaving the launch point.

27. Identify a mechanism to urgently engage a dispatcher on a call of a critical or uncertain nature (e.g. “hotshot”).

## Appendix - 03 - Canadian Communications Interoperability Continuum

This document shows the framework used to successfully implement interoperability processes in Public Safety.



## Appendix - 04 - BRIEFING NOTE FOR CACP ICT COMMITTEE

### Briefing Note for CACP ICT Committee
### Emergency Incident Data Exchange in Next Generation 9-1-1

**Purpose:**

The purpose of this briefing note is to present options and a recommendation to the CACP ICT Committee and the CACP Executive Director for expansion of Tri-Service and cross-jurisdictional emergency incident data exchange using Next Generation 9-1-1 networks.

**Background:**

In 2017 and 2018, the Canadian Radio-telecommunications Commission (CRTC) issued its decisions mandating the transition of 9-1-1 telephone networks in Canada to Next Generation 9 1-1 (NG 9-1-1) technology by 2023. NG 9-1-1 networks will provide opportunities for significant expansion of the information to be delivered to Public Safety Answer Points (PSAPs) as part of a 9-1-1 call and the ability to rapidly share information between PSAPs, dispatch centers and emergency response agencies as part of the response to an emergency incident.

This capability will be enabled through the use of a data exchange mechanism known as the Emergency Incident Data Object (EIDO), which is defined in NG 9-1-1 technical standards. Fully leveraging these capabilities is going to require the development of operational policy and practice for expanded information exchange by Police, Fire and Ambulance dispatch centers, as well as other Emergency Response centers (e.g. Coast Guard, Search and Rescue, etc.), along with the use and retention of that information.

**Current Situation and Opportunity:**

Today, “Enhanced 9-1-1” (E9-1-1) service, available in most areas of Canada, includes the delivery of two key pieces of information with the 9-1-1 call – ALI (automatic location identification) and ANI (automatic number identification) – to enable the call taker or dispatcher to identify the location and phone number of the caller. In many PSAPs and dispatch centers, this basic set of information is automatically transferred into Computer Aided Dispatch (CAD) systems and becomes part of the agency’s record of the incident and therefore, is available to responders assigned to the incident. In addition, when a 9-1-1 call is transferred from a primary PSAP to a secondary PSAP providing dispatch for a different emergency response agency, the ANI/ALI information is automatically transferred and becomes part of the downstream agency’s incident record.

Generally, this is the limit of automatic incident exchange through the 9-1-1 system today. There are certain proprietary arrangements in place that enable automatic information transfer on a CAD-to-CAD basis – Fire dispatch to Ambulance dispatch is common in metro areas. Beyond that, PSAP-to-PSAP (and therefore agency-to-agency) information exchange is a very manual process, usually involving dispatchers having to make phone calls to other emergency response centers to share incident information, request assistance, etc.

The result can be very slow, limited or inaccurate information exchange that delays responses, reduces responder situational awareness and jeopardizes responder and public safety.

With the EIDO data exchange mechanism, an expanded set of data related to the incident can be shared in a standardized format through the NG 9-1-1 network. As the transition to NG 9-1-1 proceeds and PSAPs and dispatch centers upgrade their systems to be compatible, they will be able to update and transfer the EIDO data to other PSAPs and emergency response centers automatically. This will enable the operational issues mentioned above to be mitigated.

However, it will be the responsibility of each PSAP or emergency dispatch center to determine which of its incident information can be shared, beyond the minimal set that will be provided by the telecommunications service providers, i.e. caller and location information. Some of this additional information may be private, operationally sensitive and/or classified and therefore may not be appropriate for sharing between dispatch center(s).

From a Police PSAP/emergency dispatch center perspective, the following information exchange scenarios would apply and should be considered:

- Police dispatch -> Police dispatch (different jurisdiction)
- Police dispatch -> Ambulance dispatch
- Police dispatch -> Fire dispatch
- Police -> Other Emergency Response Center (e.g. Coast Guard, Search and Rescue)

For each scenario, policy and operational guidelines need to be developed that will be specific to the type of event and the sensitivity and classification of the information. It is expected that these guidelines will be structured according to the following:

- Information that is always shared (i.e. caller and location information)
- Information that must be shared due to public safety considerations
- Information that is never shared
- Information that might be shared, under certain conditions

The first scenario (Police dispatch -> Police dispatch) is already being considered by the CACP ICT Committee's NG 9-1-1 working group, which intends to provide draft policy and guidelines for use by Police jurisdictions across Canada.

The remaining scenarios, and potentially others, need to be defined through dialogue between representatives of the Police community and authorized representatives of the other emergency responder services, including PSAPs. Legal and privacy concerns must be considered and in the case of Police information, CPIC policy must also be applied.

At this point, it is not clear what the appropriate forum for this initiative should be and ultimately, what governance mechanisms and decision-making authorities would apply.

**Options:**

**Option 1:** The CACP refers this matter to the Tri-Services Emergency Management Committee and request that it establish a working group to develop the required operational policies and guidelines:

- The advantage of this option is that this is an existing body (the Tri-Services EM Committee) that working together on behalf of the CACP
- The disadvantage of this option is the national bodies for Fire and Paramedic associations may not recognize the decisions being made as representative of their needs and interests

**Option 2:** The CACP refers this matter to CITIG – the Canadian Interoperability Technology Interest Group and request that it establish a task group to develop the required operational policies and guidelines:

- The advantage of this option is that CITIG represents the Police, Fire and Paramedic associations at the national level
- The disadvantage of this option is that CITIG may not have sufficient resources or mandate to take on an activity such as this

**Option 3:** The Fire and Paramedic associations each assign one or two qualified representatives to represent them on a working group and the CACP coordinates this with the CRTC Emergency Services Working Group (ESWG):

- The advantage of this option is that each of the Tri-Services can recommend one or two designates who can represent their needs and interests
- The disadvantage of this option is that the CACP will need to take on the responsibility of supporting and facilitating these discussions

**Recommendation:**

The CACP ICT Committee NG 9-1-1 Working Group is recommending Option 3, as this approach is mostly like to result in agreement on data sharing principles that will have buy-in from the Tri-Services and thereby contribute to the safety and security of first responders and the Canadian public.

## Appendix - 05 – List of Agencies Participating in NG9-1-1 Activities

The following list is representative and is not meant to be a complete list.

- CACP – NG9-1-1 Working Group, under the Information and Communications Technology Committee (ICT) of the CACP
- Canadian NG9-1-1 Coalition – Volunteer group of involved agencies who are associated to the CACP
- Emergency Services Working Group (ESWG), which reports to Canadian Radio-television Telecommunications Commission (CRTC). The CRTC is an administrative tribunal that operates at arm's length from the federal government. The ESWG group works to ensure technical standards are followed and specific Canadian needs are met appropriately.
- National Emergency Number Association (NENA), has developed the international NG9-1-1 i3 technical standard that is being used by Canada and the U.S.
- Association of Public-Safety Communications Officials (APCO Canada) has a vested interest in NG9-1-1 because their members are directly involved in communications centers and PSAPs where 9-1-1 calls are received.
- A number of provincial chiefs associations also have working groups on NG9-1-1. While other groups exist, this list serves to show the number of agencies that are working on this complex and important project.