



North Dakota  
Information Technology Department

# State of North Dakota & ITD

## Application Landscape Assessment & Transition Plan

Deliverable – Summary Report

March 31, 2020



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## 1 EXECUTIVE SUMMARY

This summary report identifies the prevalent gaps in data communications capabilities in the State of North Dakota’s public safety community. This effort was funded via the NTIA SLIGP 2.0 grant requirements to “identify and plan for the transition of public safety applications, software and databases” and “development of policies and agreements to increase sharing.”

This report reflects data collected during more than 30 working sessions with 78 different stakeholders from across the state and 530 survey response from roughly 300 agencies. From these sources, a total of eleven gaps in key capabilities were identified. Most of these gaps centered around the ability to share incident-related data between disparate computer aided dispatch (CAD) systems. Each gap does not necessarily require a singular solution as several gaps can be grouped together and resolved with a more unified approach and comprehensive solution.

After the initial data collection effort, the four Coordinated Regional Interoperability Boards (CRIB) determined the priority of these 11 gaps. The following list, in order of priority, represents an aggregate of the CRIB priorities:

- **Sharing of Caution Notices, Contact History and Person of Interest Notifications:** Inter-agency sharing of local and state law enforcement data with other agencies where approved.
- **Incident Notification Mobile Application:** A low-cost mobile application solution that can receive CAD incident notification data and pages to field personnel that provide similar functionality as CAD mobile clients.
- **Sharing Location and Unit Status:** The ability to share location and unit status with other agencies or jurisdictions that are not using the same CAD system or vendor.
- **Situational Awareness Incident Map:** A real-time view of critical, multi-agency, information for incidents.
- **Central Repository for Map Data:** A central repository created for the purpose of storing all GIS map layers that have a public safety focus. It would provide a single searchable interface for relevant map layers that can be used by all public safety agencies.
- **Prisoner Transport Coordination:** A prisoner transportation coordination framework that enables jails and law enforcement agencies to share resources.
- **Road Status Information Map:** The ability to integrate the state and local road and highway status into a single map interface with the ability for dispatcher or local agency end user updates.
- **CAD-to-CAD Incident Data Sharing:** The ability to share CAD incident data with other agencies or jurisdictions’ CAD systems.

- **Emergency Road Maintenance:** A streamlined workflow management process and interface to initiate requests for emergency road maintenance.
- **Cross-Agency Messaging Application:** A cross-platform messaging application that allows users to communicate via text, voice, or video, file sharing, and image sharing that is compliant with the open records statues.
- **PTT over Broadband:** A cross-carrier push-to-talk voice smartphone application that would be used for non-critical communication or where the local land mobile radio network does not serve.

The summary report provides an outline of the policies and agreements needed to address these gaps (see Section 7). The section provides templates and guidelines for used in the creation of the final policies and agreements. The policies and agreements section covers data ownership; the management of the data; and the mechanisms used to share the data, funding agreements, and stakeholder commitments. These policies and agreements, along with how the State develops them, are impacted substantially by the final solution—specifically:

- what information is shared,
- who owns the data,
- what existing policies and laws surround the data,
- what other privacy or confidentiality issues exist regarding the data,
- who will manage the solution, and
- who the users of the system are.

Specific policy and agreement considerations for the above gaps are included, as are recommended next steps.

The high-priority gaps highlight a number of general themes identified by this study:

- The safety of personnel is very important. This is reflected by the top priority given to the sharing of caution notices, persons of interest and contact history.
- Four out of the top five gaps in capabilities have to do with situational awareness and the ability to share map-based data, including unit location and status and other GIS information.
- All agencies are very sensitive to cost and prefer a solution with an upfront CAPEX cost and low or no maintenance fees.
- Agencies would like the policies and potential solutions be addressed at the regional level first.

Televate has recommended next steps not only for policies and agreements but for addressing these gaps overall. The overall plan should address the full SAFECOMM Continuum and address governance, technology, usage, training, and standard operating procedures in order to

completely eradicate these gaps. Therefore, it is important that the State think comprehensively about what it will take to solve these problems/gaps and to put the solutions into regular day-to-day practice. The first step is for the SIEC to decide which gaps it will put forth resources to address and who it will assign to provide recommended courses of action for these gaps. Those assigned to the gaps will then need to perform detailed discovery of the requirements for the solutions. This will involve analysis of integration points with existing systems, the number of user agencies, functional requirements, and the overall goals and objectives of the solution that will address the gaps. The SIEC may also ask those assigned to perform this assessment to recommend a solution, address funding needs, identify “anchor tenant” agencies, and other elements needed by the SIEC or the State to move forward with a project to address the gap(s).

## 2 BACKGROUND

The State and Local Implementation Grant Program (SLIGP) was created under the Middle-Class Tax Relief and Job Creation Act of 2012 (the Act). SLIGP is designed to provide resources to assist regional, state, local and tribal government entities as they plan for the Nationwide Public Safety Broadband Network (NPSBN) being developed by the First Responder Network Authority (FirstNet).

In 2018, the National Telecommunications and Information Administration (NTIA) awarded North Dakota with a second grant (SLIGP 2.0) to provide the state with the financial resources to work with stakeholders throughout the state to identify needs, gaps and priorities for public safety wireless broadband.

As per the grant guidelines, NTIA stipulated specific allowable activities eligible for SLIGP 2.0 grant funds. These activities are listed below.

- Single officer (or governmental body) and staff to, at a minimum, provide for ongoing coordination with NTIA and implementation of grant funds.
- Existing governance body to provide input to the single officer and to contribute towards planning activities to further identify potential public safety users of the NPSBN and prepare for data sharing.
- Data collection in specific areas identified to be helpful as requested by FirstNet.
- Development of policies and agreements to increase data sharing between existing public safety systems across various agencies within the State or territory using the NPSBN.
- Individuals, such as the single officer and governing body members, to perform planning activities to help FirstNet and its partner further identify potential public safety users of the NPSBN.

- Planning efforts to help FirstNet gain inclusion on applicable statewide contract vehicles.
- Planning activities to prepare for emergency communications technology transitions.
- Activities to identify and plan for the transition of public safety applications, software, and databases.
- Identifying and documenting on-going coverage needs/gaps within the State.
- Activities to convene stakeholder outreach events to continue planning for NPSBN implementation, as requested by FirstNet.

There is a general understanding that many public safety agencies lack basic capabilities and interoperability with other public safety agencies. The purpose of this project is to:

- Assess gaps in wireless broadband capabilities
- Assess gaps in wireless broadband interoperability
- Identify capabilities that would be affected during a transition or adoption of FirstNet services

## 2.1 Contractual Responsibilities

Televate's contract requires the final report outline the gaps in capabilities regarding public safety data, applications, software, and databases. The contract envisioned that these capabilities would be listed by public safety discipline; however, except for a single law enforcement centric capability gap, the list of capabilities summarized from the landscape assessment and survey represents a universal need across all disciplines and jurisdictions. Ten of the eleven gaps affect the operational capabilities of all or most public safety disciplines to one degree or another.

Second, the final report is to summarize key business requirements, potential impacts, interoperability issues, and security issues that could guide a potential solution. This report accomplishes this task by providing reported use cases and a list of provisional requirements that were fleshed out from the application landscape discussions and survey comments. The narrative preceding the use cases and requirements outlines the interoperability issues, security concerns and potential impacts caused by the lack of the capability. The collection of detailed requirements will occur at a later stage, once the gap has given the approval and a task force is assigned. The detailed requirements will include a detailed auditing of the systems, software and operation requirements.

### 3 APPLICATION LANDSCAPE EFFORT

In compliance with NTIA’s guidance, the primary goal of the application landscape effort was to identify needs, gaps and priorities for public safety applications, software, and databases. To accomplish this task, a formalized script was used to ensure a complete review of the communications needs of the public safety discipline. This script was structured around use cases and communications scenarios encountered by emergency personnel during an incident response.



Figure 1: Development of Specific Data Elements using Use Cases

The scope of work was carefully designed to incorporate feedback from all major disciplines from every level of government across the state. Guidelines were established to ensure sufficient participation from every region as well as from state-level agencies. Participation from a large cross-section of stakeholders enabled the collection of public safety data, applications, databases, and software requirements across all public safety disciplines. The communication network needs to support the sharing of voice and data between different public safety disciplines and between local, state and sometimes federal agencies. The ability to provide seamless communications for voice and data is the ultimate goal for every incident.

In lieu of scheduling a cross-discipline working group to review and assess the application landscape for all jurisdictions and public safety disciplines, the project team and State chose to organize primarily individual interviews (with limited exceptions). Although the process is more labor intensive, the one-on-one interviews are significantly more interactive as the individual stakeholder is given all the time that is necessary to elaborate on their unique needs.



To set the outline of the discussion, the project team researched typical use cases and day-to-day incidents. A script that included these use cases was organized using FirstNet’s operational framework, which is categorized into three broad categories of capabilities:

- Situational Awareness
- Information Exchange
- Communications, to include Voice / Video / Text

To identify participants, the project team collaborated with each CRIB chairperson to first present the scope of the effort as well as to solicit interviewees for the application landscape effort. At the local level, the project team coordinated with the regional CRIB chairperson to select stakeholders from different public safety agencies. In total 78 stakeholders were interviewed between October 2019 and February 2020.

Table 1: Number of Interview Participants

Region	NW Region	SW Region	NE Region	SE Region	State Agencies	Total
Participants	10	18	13	14	23	78

Project team ensured that there was at least one representative from each public safety discipline within each region. At the state level, stakeholders were selected from the largest state agencies. In total the following public safety disciplines participated in the application landscape assessment.



Table 2: Public Safety Disciplines Interviewed

Discipline	Participants
9-1-1 Call Center or Dispatch	5
Department of Transportation	1
Emergency Management	1 (7) <sup>1</sup>
Emergency Medical	7
Fire	6 (8) <sup>2</sup>
Health / Public Nurse	5
IT Department	5
Law Enforcement	48
<b>Grand Total</b>	<b>78</b>

Using FirstNet’s framework, the project team walked the application landscape participants through a series of use cases to gain a better understanding of the incident, the operational environment, the level of interoperability and potential communications issues. Each incident requires different information, data, or capabilities to ensure their safety and to be efficient. Understanding the information and data used during an incident provides insight into the gaps in capabilities as well as the solutions that need to be put into place to ensure an effective respond to an emergency calls for service.

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<sup>1</sup> The total number of participants who represented Emergency Management is seven (7), as several participants held dual responsibilities either within a law enforcement or fire department.

<sup>2</sup> The total number of participants who represented Fire Department is eight (8), as several participants held dual responsibilities within the fire department and emergency medical agencies.

## 4 RESULTS: GAPS & CAPABILITIES

The objective of this section is to outline the gaps in capabilities that have been identified by the North Dakota public safety community, to provide typical use cases and to outline the basic requirements and/or constraints articulated during the interview discussions and CRIB meetings. Each gap represents an individual capability or critical service that is not currently being met. It is not the intent to imply that individual applications or software must be developed to independently address each gap. Several gaps could potentially be addressed by a unified solution. The list is provided in order of the priorities and rankings identified by the CRIB members (detailed in Section 6 below).

During the discussions, participants relayed several suggestions and general comments pertaining to development of a solution. General comments included:

- Stakeholders prefer the investigation and collection of detailed requirements begin at the regional level. With the detailed regional requirements, a statewide task force can then work with the regions to align the requirements for a statewide solution.
- Stakeholders are looking for solutions that have a one-time cost rather than solutions with ongoing subscription costs or monthly fees. Reoccurring maintenance cost and fees should be kept to a minimum as many small agencies are fiscally constrained.
- Stakeholders would prefer a solution that is owned collectively by stakeholders.

### 4.1 Caution Notices, Contact History & Person-of-Interest

Emergency personnel need to be aware of situations where a non-immediate or potential hazard presents a risk to public safety personnel. Therefore, it is essential for emergency responders and dispatchers to have access to information that provides basic and advanced knowledge of the potential risks associated with a call for service.

Most law enforcement records management systems record and store potential threats to public safety. These may include caution notices or a history of contacts attached to individuals, locations or vehicles. The records may also include other components of the criminal justice system such as prosecutions, courts and corrections data. Person-of-interest notifications are maintained and stored locally and to some degree not shared between disparate systems.

Given the importance of this information, shared access to accurate and timely records can:

- Enable jurisdictions to immediately identify persons who have a history of violent behavior;
- Enable jurisdictions to immediately identify persons who have legal restrictions, such as possessing a firearm or sex offender;

- Enable jurisdictions to immediately identify addresses or vehicles for which extra precaution will be required; and
- Enable dispatchers to ensure appropriate support is dispatched to flagged locations.

Most law enforcement RMS systems provide an internal mechanism for storing and relaying caution notices, contact history and person-of-interest data. However, the capabilities of the various RMS systems across the state vary widely. Some agencies report robust record keeping and an extensive ability for the dispatcher to access and action the appropriate response. End users of these systems report extensive capabilities as well. However, several agencies report several gaps. No agencies report an ability to share data between disparate CAD systems. Except for the data that is uploaded to Criminal Justice Information Services (CJIS) or PremierOne Law Enforcement Records Management System (P1-LERMS), these law enforcement data are not being shared. Stakeholders require a way to better share sensitive law enforcement data without an imposition of onerous requirements.

#### **GAP – Share Relevant Law Enforcement Data**

- **Typical Use Case:**
  - Contact History: Law Enforcement agencies would like to receive and share the contact history of individuals and vehicles that should include all traffic stops, citations and warnings. This would be especially useful for individuals or vehicles that are traveling across the state and between jurisdictions.
  - Officer Caution/Precaution Notices: All public safety agencies would like an ability to flag individuals, vehicles and addresses requiring caution and provide a platform where the data can be shared securely with all jurisdictions statewide.
  - Person of Interest Request: Law Enforcement agencies would like to receive and share “Person of Interest” notifications on a statewide platform.
- **Requirements, Observations and Considerations:**
  - Assess the data that is stored on the local (CAD RMS), state (P1-LERMS) and Federal levels (CJIS) to assess the gaps and mechanisms for sharing.
  - Assess the data requested by non-law-enforcement agencies and how it can be provided within policy and law (e.g., removing certain data elements, requiring specialized solutions for viewing/consuming the data, or other mechanisms).
  - Provide secure environment for the law enforcement sensitive data.
  - Provide a method for sharing precautions with non-law enforcement agencies.
  - There should be progressive tiers for security to allow greater sharing of the data; for example, the lowest tier would allow for a wide distribution and sharing of the non-sensitive data, whereas the highest tier would be reserved for law enforcement and have access to the most sensitive data elements.
- **Policy Issues:**

- Would need to align and comply with applicable federal, state and local requirements for access to sensitive law enforcement data.

## 4.2 Incident Notification Mobile Application

The majority of Fire and EMS agencies do not have access to CAD features in the field and instead rely on secondary push-notification software and applications. In some instances, the CAD vendor may not offer an affordable CAD mobile client that operates on mobile operating systems (Android and iOS). In addition, several fire departments cite examples of the limitations of using PCs. As described, the powering on of the PC and the launch of the application is slow and in several cases the application is not available prior to the arrival at the incident scene. For this reason, most departments rely on personal devices or tablets that remain continuously on.

Most agencies without access to a CAD mobile application rely on off-the-shelf applications like eDispatches, IAmResponding, CodeRed and others to receive incident notification or to provide a lower cost method for receiving CAD content. However, these tools do not offer an integrated CAD solution that agencies seek.

### **GAP – Incident Notification Mobile Application Solution**

Agencies require a low-cost mobile application solution that can forward CAD incident notification data and pages to field personnel that provide similar functionality as typical CAD mobile client solutions.

- **Typical Use Case:**
  - The smartphone application (cross-carrier for both iOS/Android devices) would receive incident notifications from CAD or paging systems.
  - Typical Agencies that would use this solution include Volunteer Fire, EMS and DOH personnel. However, the solution should be open to all government personnel that have primary or secondary public safety responsibilities.
- **Requirements, Observations and Considerations:**
  - The solution must allow users to read and send notifications from two-tone or four-tone paging systems.
  - The solution must be low-cost, as financial constraints are the most frequent barrier cited for this capability. The two most cited issues regarding this gap were cost and security.
  - It must automatically receive and send CAD message or page to subscribed responders.
  - Responder can indicate their status (in route, on scene, close, clear, out of service, etc.) and transmit that status to dispatch as required.
  - It provides incident location with hyperlink to map/navigation (preferred).

- Incident commanders have the ability to see the location and status of responders.
- Dispatchers have the ability, via the CAD, to see the location and status of the responders.
- It must provide a secure user registry for delegated administrators (Fire Chiefs, IT, 911 Coordinators, etc.).
- It must be made available for personal devices and addressing personal device requirements, as nearly no volunteer agencies provide smartphones or tablets to agency personnel.
- **Policy Issues:**
  - No policy issues identified

### 4.3 Location & Unit Status

Generally, public safety agencies do not have the ability to share their location and unit status with other agencies or jurisdictions that are not using the same CAD system or vendor. Additionally, several agencies lack real-time GPS location information for their personnel because the capability is too expensive. Some agencies use “free-to-use” commercial smartphone applications to facilitate this capability; examples include Life360<sup>3</sup> and Find my Friends.<sup>4</sup> However, this information is not integrated with their CAD, and may not meet local and state requirements for record retention. As a result, a gap exists among many agencies for “intra-agency” location and status information sharing as well as “intra-agency” location and status information sharing.

#### GAP – Sharing Location and Incident Status

- **Typical Use Case**
  - Provide an ability for the dispatcher to view the closest responder for all relevant agencies; for example, a county dispatcher would have the ability to view the locations of relevant state patrol units, and vice versa, even if they were on separate CAD systems
  - Coordinating activities during day-to-day and large-scale events; during large-scale events both dispatchers and the incident commander would like to see the location of all responding units from all agencies on a single map
  - Special use cases and tactical deployments
- **Requirements, Observations & Considerations:**
  - Shall display location, responding unit and status
  - Must have an ability to integrate with CAD mapping interfaces

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<sup>3</sup> Life360 <https://apps.apple.com/us/app/life360-find-family-friends/id384830320>

<sup>4</sup> Find my Friends <https://apps.apple.com/us/app/find-my-friends/id466122094>

- Must be a low-cost solution as financial constraints are the most frequent barrier cited for this capability
- The data owner must have an ability to control what is shared, with whom and when [as per defined policy]
- The data owner must have an ability to turn on/off location sharing as needed and on a unit-by-unit basis, if necessary (for example: during tactical situations [as per defined policy])
  - Note, this requirement was stated for tactical law enforcement usage; it may not pertain to non-law enforcement personnel
- The consuming agency must have the ability to filter the information they would like displayed
- The data owner must have extensive ability to manage users
- Must provide secure and non-secure options
- **Policy Considerations & Issues:**
  - No policy issues identified

#### 4.4 Situational Awareness Incident Map

A real-time situational awareness capability would allow public safety personal to view, collect and enter valuable data on active and potential threats and communicate/share critical information to other dispatched agencies. The desire of public safety personnel is for the creation or facilitation of a statewide GIS-based incident management map or interface to enhance situational awareness during emergency events.

##### **GAP – Real-time Situational Awareness**

- **Typical Use Case:**
  - For use during multijurisdictional incidents
- **Requirements, Observations and Considerations:**
  - Allows end users to “drop pins” for a multiple purposes, including:
    - Location of responders
    - Flooding information
    - Road and lane closures, wash outs,
    - HAZMAT affected areas
    - Pre-plans or emergency plans
    - Geographic data/imagery
    - Dynamic data such as radar and weather
    - Data from other active sources, such as AskRail<sup>5</sup>
- **Policy Issues:**

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<sup>5</sup> AskRail application <http://askrail.us/>

- No policy issues identified

## 4.5 Central Repository for Map Data

Public safety agencies would like a central repository created for the storing of GIS map layers that have a public safety focus. Many of these map layers are managed and stored on disparate systems. The purpose is to provide a single searchable interface for relevant map layers that can be used by all public safety agencies. Agencies would like the repository to be flexible to allow any relevant agency to post data they see as necessary for emergency response.

### GAP – Provide a Central Repository for Map Data

- **Typical Use Case:**
  - Dive teams would like access to Game & Fish maps that display boat ramps and lake access point.
  - Emergency Management would like to post relevant Tier 2 sites and relevant Pre-Plan analysis.
- **Requirements, Observations and Considerations:**
  - The desired solution provides a central catalog of maps that is readily available to designated public safety agencies.
  - Once a common central GIS platform is made available, agencies can post various map layers to it and allow access to relevant public safety agencies.
  - The GIS platform would need to have a location-based searchable interface to provide quick access to relevant data.
  - Typical Maps Layers include, but are not limited to:
    - HAZMAT Tier 2 data;
    - Preplan Map Data;
    - Boat Launch Locations for water rescue services (Game & Fish);
    - Forest Service Trails showing motorized trails with mile markers;
    - Hiking & Biking Trails with mile markers;
    - Private roads (oil industry);
    - Water Pipelines to show Riser locations for wildfire support (Water Commission);  
and
    - Hydrant locations.
- **Policy Issues:**
  - Some data is considered sensitive; therefore, the policy will need to address the control and access to the data.

## 4.6 Prisoner Transport

Provide a prisoner transportation coordination framework that jails and law enforcement agencies can consult to better manage prisoner transports. By sharing prisoner transport resources, greater efficiency, and therefore, lower costs can be achieved.

### **GAP – Provide a Central Framework for Coordinating Prisoner Transports**

- **Typical Use Case:**
  - The transportation of prisoners between jurisdictions, supporting jails, sheriff and law enforcement agencies on the state, county and local levels
- **Requirements, Observations and Considerations:**
  - Provides origin and destination locations
  - Provide information for coordination purposes (point of contacts)
  - Provides medical conditions and related information
  - Would need to define necessary security requirements
- **Policy Issues:**
  - No policy issues identified; however, issues of safety, coordination and liability will need to be addressed by the policy governing the usage of the solution.

## 4.7 Road Status Information Maps

Local jurisdictions would like a single map or interface to display road status information. The map or display should have the ability to integrate the road and highway status data from local CAD systems and the Department of Transportation Travel Information Map.<sup>6</sup> The map or interface should allow the sharing of the road status data between the state and local jurisdictions. Several agencies want the dispatcher or other local agency end user to have an ability to update the data displayed on the single map or mapping interface. Several jurisdictions would like to display this map interface within their CAD systems.

### **GAP – Ability to Share & Update Road Status on State and Local Level**

Status updates to roads and lane closures is generally provided by a phone call, email or radio communication with the local transportation district office (state roads) or through radio to the local dispatch office (local roads).

- **Typical Use Case:**
  - Several agencies keep local road status information up to date in their CAD and would like to share the road status information with other agencies.

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<sup>6</sup> <https://www.dot.nd.gov/travel-info-v2/>

- An ambulance transport going to a hospital outside of the county needs to know road closure information due to flooding to determine the best route to the hospital.
- **Requirements, Observations and Considerations:**
  - The solution provides an ability to consume the state and local road status on a single interface.
  - The data pushed/pulled should include relevant information such as lane closures and accidents. It was suggested that local road status data would be maintained by Dispatch Centers. The ideal method would integrate smoothly with operating procedures so as to not create a significant labor burden.
  - It provides an ability for the dispatcher/end user to drop pins for incidents and road closures.
  - It can integrate with CAD mapping systems and provided in a format that is easily consumable by the local CAD software.
  - A single interface to view road status on both state and local roads.
  - It can push local road status and dispatcher data to the statewide shared map automatically.
  - It can be leveraged for Incident Management and is tailored for public safety's needs.
  - Several jurisdictions would like the aggregated local and state road status to be available to the public; other jurisdictions would like to restrict access to public safety agencies only, with no need for public access or viewing. Public access to the data would need to be resolved during the detailed requirements gathering and the selection of a technical solution.
- **Policy Issues:**
  - Any data that is published on the DOT platform should abide by strict quality standards. DOT indicates that all public-facing data would need to ensure a high degree of reliability before it is published on their web interface.
  - Per the Southwest CRIB, data that becomes part of a statewide platform is no longer protected from disclosures, and therefore, if the locally provided data is required by NDDOT to be outside of the public realm; the legislature may need to exempt the local road status data from public disclosure.

## 4.8 CAD-to-CAD Incident Data

Most, if not all, North Dakota public safety agencies lack the ability to share their CAD data with other agencies or jurisdictions that are not using the same CAD system. The CAD systems of the interviewees do not consume or display incident data from other CAD systems. The lack of interoperability limits the ability to share incident notification and relevant incident data between agencies. As a result, information is generally passed by voice between the

dispatchers and 911 call centers. This causes a significant delay in the sending and receiving of emergency response data and puts additional burdens on dispatchers.

Incident notification is critically important to emergency response and an ability to share notifications across platforms can lead to improved and better coordinated emergency response.

#### **GAP – CAD-to-CAD Incident Data:**

Agencies require an ability to share the incident notification and status of a call for service or incident across agencies and jurisdictions.

##### ■ **Typical Use Case:**

- For jurisdictions not on the state radio CAD, to provide an ability to the dispatcher to share information with Highway Patrol and vice versa. Also, to provide an ability to share relevant incident data with neighboring jurisdiction not on the same CAD system.
- To provide an ability to automatically push prioritized incident notification to relevant responders not on the same CAD system; as an example, vehicular pursuits can frequently easily extend well beyond jurisdictional boundaries and involve multiple agencies.
- Provide the dispatcher the ability to call the nearest active responder and provide them all relevant incident data associated with the 911 call for service.
- Requesting assistance of nearest responding unit: City, County State agencies for automobile accidents or roadside assistance.

##### ■ **Requirements, Observations and Considerations:**

- Data must show the incident type, responding unit, status, location, incident information (with restrictions for sensitive information) responding unit, unit status, incident status, incident location and radio channel.
- The data owner must have an ability to partition and control what is shared, with whom and when [as per defined policy].
- The consuming agency must have the ability to filter the information they would like displayed based on roles and responsibilities.
- The data owner must have extensive ability to manage users and user groups with whom the data can be shared.
- Consuming agency needs the ability to manage end users.
- The data sharing mechanism must have an ability to restrict information based on role and responsibilities and type of data (e.g., restricted information can include National Crime Information Center (NCIC) data, multifactor sign-in requirement, HIPPA restricted data, and other data deemed sensitive).
- NOTE: the ability of the CAD to partition data will greatly affect the choice of solution.

- **Policy Issues:**
  - There are sensitivities regarding the sharing of the location of off and on-duty personnel [to be defined by policy].
  - Not all data should be shared with everyone. The sharing mechanism should be able to partition law enforcement data or HIPPA sensitive data from non-relevant users.

## 4.9 Emergency Road Maintenance

Currently, local jurisdictions contact the regional DOT districts to request maintenance. The local DOT districts receive requests via VHF radio communications, email, and phone call. The districts are available from 5am to 10pm during the work week. After hours the requests are sent to State Radio. There is a desire for a streamlined workflow management process and interface to initiate requests for emergency road maintenance.

### **GAP – Ability for State & Local Agencies to Request Road Maintenance**

A central workflow management process for requesting road maintenance

- **Typical Use Case:**
  - Jurisdictions want a more automated method for making requests for state road maintenance that also provides some status/monitoring for end-users.
- **Requirements, Observations and Considerations:**
  - Solution will provide platform for placing a service request with the DOT (process to be worked out between the local agencies and DOT)
  - Integrate the request capability using the CAD system to minimize duplication of effort and the tracking of the request
  - Leverage this Request for Road Maintenance platform for local use with local public works and transportation departments
  - Enable requesting agencies to track maintenance status with DOT or responsible party
- **Policy Issues:**
  - No policy issues identified

## 4.10 Cross-Agency Messaging Application

Public safety stakeholders would like a cross-platform messaging application that allow users to send text messages and voice messages, make voice and video calls, and share images, documents, user locations, and other media. Users noted that they previously had these capabilities with other agencies using the PremierOne CAD.

### **GAP – Cross-Agency Messaging Platform**

- **Typical Use Case:**
  - Share critical and non-critical communications with agencies across the state for internal purposes and multi-agency responses
- **Requirements, Observations and Considerations:**
  - Shall allow users to send text and voice messages, share images, documents, and other media
  - Shall be encrypted and the platform shall be secure
- **Policy Issues:**
  - Potential issues regarding the “ownership” of data
  - No policy issues identified

## 4.11 PTT over Broadband

Several agencies have expressed strong interest in using a PTT over broadband application. Several agencies currently use applications like Zello.<sup>7</sup>

### GAP – PTT over Broadband

- **Typical Use Case:**
  - PTT app is convenient for non-critical communications.
  - The primary use case is as a secondary mode of communication where the LMR network does not exist or if it is saturated. Law enforcement, Fire and EMS are looking for a supplemental form of communications for PTT.
  - A frequently-cited event was the Dakota Access Pipeline (DAPL) protest. It was located in an area of poor LMR service. To partially resolve the communications issues, a mobile Verizon Broadband site was brought in to provide PTT over broadband services for public safety personnel.
- **Requirements, Observations and Considerations:**
  - The app should be able to work across different carriers.
  - A statewide app would be preferred to ensure interoperability.
  - Supports both iOS or Android.
  - It is inexpensive or free to end users.
  - The PTT over broadband app should be interfaced with SIRN and be provided as part of the SIRN solution.
- **Policy Issues:**
  - Question: Would PTT application need to abide by Open Records law? Would need to confirm with ND AG’s office.
  - Interface into SIRN may require other policy considerations such as security, impacts on capacity, and end-to-end encryption requirements.

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<sup>7</sup> Zello <https://apps.apple.com/us/app/zello-walkie-talkie/id508231856>

## 4.12 Other Issues

The following section lists issues that were raised by the first responder community during the interviews and within the survey but did not elevate to a major specific gap in capabilities. The intent of this section is to provide additional feedback on the challenges some jurisdictions face as well as describe areas where potential interoperability issue may exist sometime in the future as the capability becomes more widespread or to alert the State of future projects.

### 4.12.1 Video

Video usage is a growing trend within the state. Several agencies have or are in the process of certifying personnel for drone piloting. Dash cameras and body cameras are increasing in usage. Also, several agencies report a need to remotely access the streaming video from dashcams and bodycams. Several present and future use cases were described by the respondents:

- Drone video to support
  - Tactical reconnaissance or special operations or search and rescue
  - General situational awareness, event coordination, multijurisdictional events
  - Aircraft or drone video
- Telemedicine: EMS streaming to emergency room physician and for medical support
- Supervisory purposes (for example: stream to dispatch or command center, driver safety issues)
  - After action reviews and training support

General operational requirements; examples given include traffic stops, public interactions, evidence, data gathering, investigations, liability protection and training purposes

- **Potential GAP:**

At this time, there was little need voiced for sharing video between agencies. However, as video usage becomes more prevalent, several agencies predict that drone and helicopter video sharing will become a greater necessity.

### 4.12.2 Existing CAD System Limitations

Some agencies have indicated limitations with their existing CAD system or vendor application that have prevented them from sharing data more widely between agencies. Some of these limitations are described below.

#### **Limiting Factors:**

A few CAD systems cannot partition (or restrict access to) the incident event data based on the user's role. This is both a functional limitation and security issue. For example, the inability of the CAD system to partition law enforcement sensitive data makes it difficult to share information internally and to meet the stringent security requirements for CJIS or NCIC access.

A few CAD vendors lack a smartphone client application that would be suitable for typical large-scale deployments where multiple public safety jurisdictions and agencies are involved. Specifically, the smartphone app would need to have the suggested functionality:

- The app should have the ability to geolocate/track the end user.
- The app should have the ability to update the user's status.
- The app should provide a supervisory view on the incident.
- The app should partition the event data so to limit access to sensitive law enforcement data.

#### **4.12.3 Helo Medical Transport**

The feedback from public safety agencies has been mixed regarding their ability to coordinate and communicate with medical air transport or Life-Flight personnel. Some EMS/Fire Responders have reported difficulty communicating directly with the air flight personnel, where some have not reported any issues. Similarly, some report issues transferring medical data to the air flight crew. Based on the limitations of the scope of this project, we were unable to confirm the extent of the issue or whether it is a gap in capability or a training/operations issue.

#### **4.12.4 Public Mapping Services**

Several counties and 911 call centers are finding it difficult for Google and other public mapping services to update their road and address data. They report that updates to these sources can take more than six (6) months.

#### **4.12.5 Hospital Status Messages**

Several agencies that receive the hospital status message from the Department of Health would like an option to subscribe to a list of hospitals for which they would receive updates. Currently, it is reported that the message includes the status of all hospitals statewide. A model where a user can subscribe to a list of hospitals will allow the end users to narrow the focus of the message they receive to the most relevant information.

### **4.13 FirstNet Transition Planning**

The program also explored the transition of data, applications, databases, and software to the NPSBN. In the context of the gaps in capabilities identified, this section covers planning activities for an agency's transition to FirstNet. In general, the wireless carrier is generally a "pipe" designed to deliver traffic to and from field users to data centers. Transitioning to a new

carrier involves a number of considerations including devices, SIM cards, administrative management, and others. However, the focus of this effort was to identify capability gaps regarding an agency's existing data, applications, databases and software then assess their impact on FirstNet transitioning.

Interviewees were asked about their intentions regarding adoption of FirstNet services that would have an impact on agency systems. When an agency was currently or intended to adopt FirstNet wireless service, the project team explored the potential use of certain FirstNet services that would impact applications, databases, and software. The following sections outline the FirstNet services thought to impact agency applications, databases, and software and address transition plan elements for those solutions.

#### **4.13.1 Federated Identity Management**

FirstNet has on its roadmap an eventual deployment of a Federated Identity Management platform. FirstNet's Identity, Credential, and Access Management (ICAM) is a set of features and functions within the domain of cybersecurity that organize digital identities to facilitate information sharing, interoperability, and collaboration through an exchange of user or system attributes. This platform would affect agencies that choose to integrate their credentialing and access management systems with FirstNet's ICAM.

For most users, credential issuance occurs at the local agency level as part of administration of employees in which they are provided devices and access to information technology systems, such as records management, dispatch and email. FirstNet is in the process of developing a National Federated Strategy for Wireless Mobility in Law Enforcement, Justice, and Public Safety.

A federated ICAM strategy would leverage these local identity and credential management investments, where FirstNet would recognize the existing credentials to be used to authorize access to FirstNet and resources on the network for a significant segment of the user community. In a federated ICAM strategy, FirstNet would delegate to (and trust) identity and credential providers for the identification and authentication of users. It is envisioned that a federated ICAM would affect access to FBI CJIS data.<sup>8</sup>

Agencies interviewed that are on FirstNet or had an interest in FirstNet did not express an interest in integrated identity management. Additionally, at this point in time, FirstNet's ICAM solution has not been defined or made available to user agencies. As a result, a transition plan cannot be developed at this time. A transition to FirstNet does not require a mandatory

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<sup>8</sup> [https://www.cisa.gov/sites/default/files/publications/ICAM\\_Summit\\_Report.pdf](https://www.cisa.gov/sites/default/files/publications/ICAM_Summit_Report.pdf) Recommended Actions and Next Steps # VI. Federal Service Providers to Modularize their Security Policies



adoption of integrated ICAM, and therefore, a plan can be developed once the full scope, policies, and plans from FirstNet and interest in the North Dakota public safety community have been understood.

#### **4.13.2 Mission Critical Push-to-Talk**

FirstNet is working with the standards bodies and vendor community to develop a mission critical push-to-talk (MCPTT) solution for public safety. FirstNet has identified the following objectives and guidance:

- Broadband-based push-to-talk (PTT) solutions must be able to communicate with legacy systems (including dispatch consoles) and offer comparable features and performance.
- Responders will not consider FirstNet’s PTT solution to be “mission-critical capable” until it has been validated in real world scenarios.
- The public safety community foresees various governance, standards, and policy challenges with multi-agency use of mission-critical PTT (MCPTT) and expects the FirstNet Authority to assist in addressing them.

Similar to ICAM, agencies did not express an interest in adopting the FirstNet MCPTT solution. Likewise, it is not necessary that agencies adopt the MCPTT service. Transition to the FirstNet service and adoption of the MCPTT solution will involve many factors including how the agency intends to use the MCPTT service, whether it will be interfaced with the agency’s Land Mobile Radio system, and how it will be interfaced with the agency’s Land Mobile Radio System. As noted above, PTT over Broadband was a gap that was identified by the CRIBs to be of a low priority. Should the State move forward with further exploring statewide interoperability over push-to-talk solutions, the State should make push-to-talk policies part of that exploration.



## 5 SURVEY SUMMARY

The application landscape survey was designed to identify the applications used today and the applications public safety agencies would like to use in the future to support emergency operations. It identified critical data that needs to be accessed and shared by public safety over mobile broadband networks. It also sought to understand why applications, data, or data sharing capabilities are lacking. The survey is was complementary to the application landscape interviews and was conducted between December 20, 2019 and February 29, 2020.

Large parts of the survey results are integrated in the key gaps and capabilities outlined in Section 4. This section provides a high-level summary of the survey results. Appendix A provides question-by-question review of the detailed results.

### Summary of Respondents

In total, 530 individuals responded to the survey, representing 320 agencies, and coming from all public safety disciplines. As such, the survey provides a broad landscape of the needs and capabilities of public safety stakeholders across North Dakota. As depicted in the following figure, survey respondents represented a broad base of disciplines that are part of emergency response throughout the state.

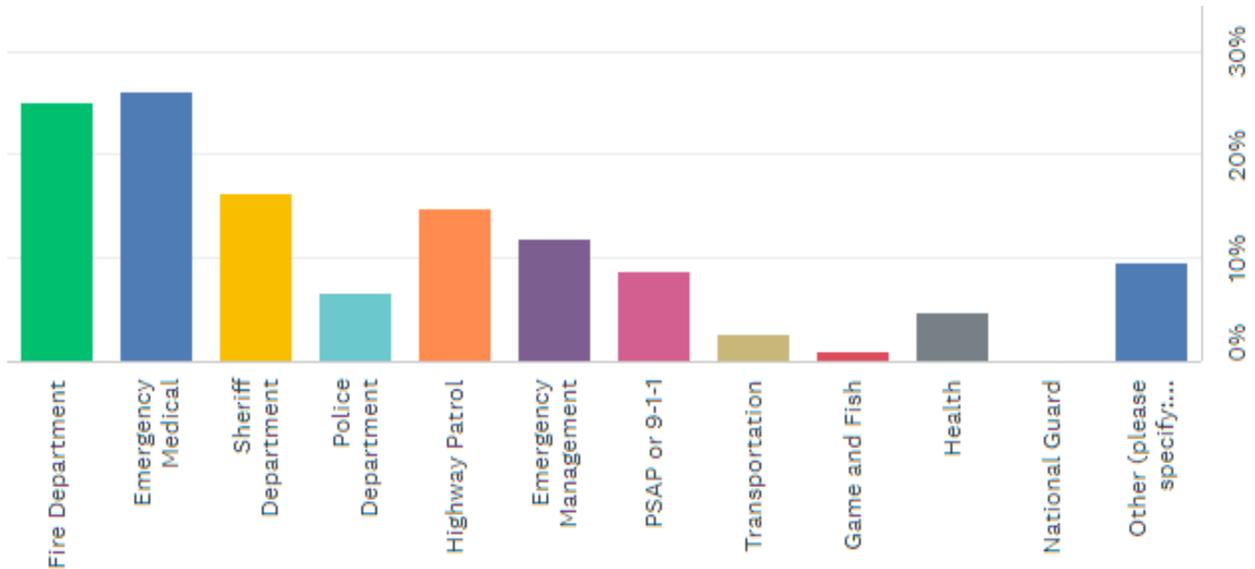


Figure 2: Survey Respondents<sup>9</sup>

The survey included a total of 33 questions to discover the application landscape in North Dakota. One example of the questions explored the agencies with whom the respondent desired to share unit status and location. The figure below indicates that, as expected,

<sup>9</sup> Because participants were able to select more than one discipline, totals will equal more than 100%.



respondents indicated a strong desire to share data between agencies—primarily with fire, law enforcement, and EMS, but also including emergency management as well. Sharing was of the greatest interest at the local level, followed by state and Federal.

Which other agencies would you like to share your unit status and location information with?

Answered: 72 Skipped: 351

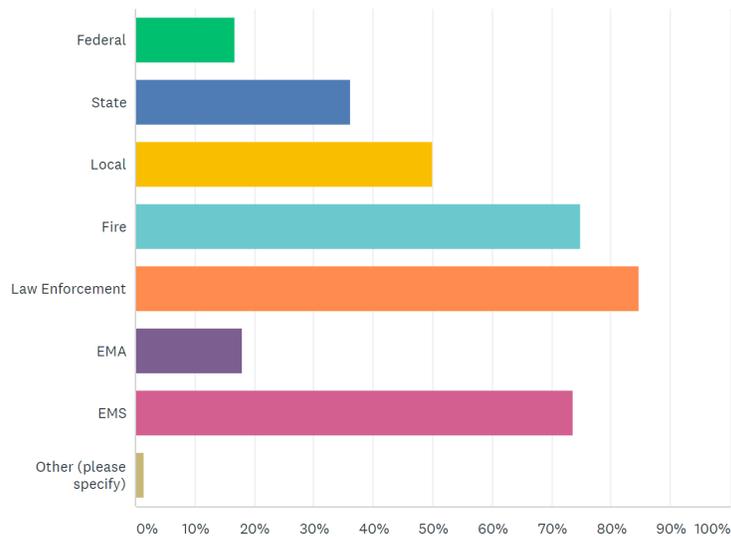


Figure 3: Desire to Share Location & Unit Status

Key findings from the survey results include the following:

- In comparison with law enforcement agencies, less than half of the Fire/EMS respondents report having access to a computer aided mobile application to receive emergency notifications.
- Twenty-seven percent (27%) of law enforcement respondents report not providing the location of their field units, whereas 70% of fire and EMS agencies fall into this category.
- More than half of all respondents report cost and a lack of technical resources as the main reason for not having the capability to report status and location to their dispatch centers.
- Respondents report more than three times the number of devices on Verizon Wireless than any other carrier.
- Personal smartphones are used to support emergency response. This is true, to a lesser extent, with disciplines with a high level of government-provided devices where several report a desire to carry a single device for both work and personal use. The use of personal devices to support emergency response is substantial with the Fire and EMS respondents.



- The majority of respondents that use personal devices to support emergency responses are willing to have their agencies leverage their personal devices to track their location and unit status.

## 6 SUMMARY OF CRIB FEEDBACK

Upon the conclusion of the interviews and the drafting of the summary results, the project team organized a second meeting with the regional CRIBs. The purpose of the meeting was to present the results of the application landscape effort and collect feedback from the CRIB members. Each gap in capability was reviewed during the interactive meeting. After a review and discussion of the capability gap, the CRIB members were asked to score each based on the needs and priorities of the agencies they represent.

During the meetings the CRIBs were given the opportunity to prioritize other gaps (presented in Section 4.12) that were not “widespread” gaps in the interviews. In other words, this allowed them to bring those gaps into focus as part of the state’s priorities. The CRIBs did not choose to do so. Furthermore, the CRIBs were also invited to share any other gaps that had not been mentioned. The CRIBs did not identify any gaps that were not already mentioned.

### 6.1 Gap Priorities

CRIB members were asked to assess their minimum capability baseline by prioritizing the gaps within two categories of priorities: “Highest Priority” and “Priority.” Gaps identified as highest priority are those gaps for which CRIB members “would like to see a solution” proposed. The second category, “Priority,” represents the gaps for which they “would like to see a solution investigated.” Items in the Priority category are gaps that are less important to the operational efficacy of public safety agencies.

It should be noted that the methodology used to rank each gap is intended to provide insight into the importance of these capabilities seen through the eyes of the CRIB membership. It is not intended to exclude the investigation of a solution for any gap identified within this report. The methodology is meant to relay the averaged importance of the gap that has been aggregated across all regions. Second, there are some minor inconsistencies of priority across the different regions that are possibly due to the capabilities of the different CAD systems and the operating conditions of the public safety agencies. It is for this reason the CRIBs suggest that the collection of detailed requirements gathering begins at the regional level.

Five gaps were designated as “Highest Priority” by three out of the four CRIBs. These included the following capabilities:

- Caution Notices, Person-of-Interest & Contact History
- Incident Notification Mobile Client
- Location & Unit Status
- Situational Awareness Incident Map
- CAD-to-CAD Incident Data

Three gaps can be designated as a “Priority” as three out of the four CRIBs did designate these as either a “Highest Priority” or “Priority.” These included the following capabilities:

- Central Repository for Map Data
- Road Status Information Maps
- Prisoner Transport

The remaining three gaps in capabilities are designated “*No Designation of Priority*”; however, each gap has been designated by at least one CRIB as “Highest Priority” and/or “Priority.” These included the following capabilities:

- Emergency Road Maintenance
- PTT over Broadband
- Cross-Agency Messaging App

The following table represents the aggregated priorities based on the average rank of the four CRIBS for each gap in capability. Each CRIB member was given an opportunity to rate each gap on a scale from 1 to 10, with 10 being the most important to address. The aggregate score for each gap is provided as an average of the individual ratings.

Table 3: CRIB Consultation Results

<b>Gaps in Capabilities:</b>	<b>Avg. Rank</b>	<b>NW Region</b>	<b>SE Region</b>	<b>NE Region</b>	<b>SW Region</b>
Caution Notices, Person-of-Interest & Contact History	1.8	1	1	4	1
Incident Notification Mobile Client	3.8	3	6	1	5
Location & Unit Status	4.3	5	3	3	6
Situational Awareness Incident Map	4.5	4	2	5	7
Central Repository for Map Data	5.5	9	4	7	2
CAD-to-CAD Incident Data	6.0	6	8	2	8
Road Status Information Maps	6.3	7	5	9	4
Prisoner Transport	6.5	2	7	8	9
Emergency Road Maintenance	8.3	8	11	11	3
PTT over Broadband	9.0	11	9	6	10
Cross-Agency Messaging App	10.3	10	10	10	11

<b>Highest Priority –</b> Would like to see a solution	Indicated as a “Highest Priority” by at least three (3) CRIB regions
<b>Priority –</b> Would like to see a solution investigated	Indicated as a “Highest Priority” and/or a “Priority” by at least three (3) CRIB regions
<b>No Designation of Priority</b>	No Designation of Priority

A detailed list of scores given by each CRIB member can be found in Appendix B.

## 6.2 CRIB Comments

A summary of general comments and suggestions provided by the CRIB members during the review of gaps analysis is provided below.

- **General Comments**
  - The evaluation of the capabilities should consider the impact of border counties. Interoperability will need to be considered with neighboring counties in other states, especially where mutual aid agreements exist.
  - CRIBs expect that the evaluation of potential solutions begin in the regions, which would collect their detailed requirements and an in-depth understanding of the system constraints.

- Automation should be maximized. Any proposed solution needs to improve the overall efficiency of existing processes. The solution should be simple, easy to manage and not add to the burden of public safety personnel.
- **Caution Notices, Person-of-Interest & Contact History**
  - Most CAD systems provide this functionality. However, there is no sharing of this caution notices between CAD systems.
  - The state radio CAD system does not have an ability to partition the sensitive law enforcement data for wider use, therefore, data sharing requires strict two-factor authentication for security. The security capabilities limits the ability to share data.
- **Situational Awareness Incident Map**
  - It is preferred that this is a simple, single GIS interface in which CAD systems can pull information/data they need and push information/data they want to share. The data should be based on mission requirements. Dynamic data should be limited to prevent information overload (e.g., sensors such as video, weather, and traffic), but should be available to provide additional insight to support specific mission capabilities and heighten situational awareness.
- **Location & Unit Status**
  - The ability to see and share the location and unit status of all dispatched units for all public safety disciplines on a simple GIS interface is important.
  - Participants have indicated that more information available to the dispatcher would be better; however, the need to push the location and unit status to the responder in the field is questionable.
- **Prisoner Transport**
  - Some agencies feel strongly that fulfilling the gap would save significant resources.
- **Incident Notification Mobile Client**
  - Most CAD mobile clients designed for use on smartphones provide this capability. However, financial restraints and security issues restrict its deployment. A solution needs to provide two-way communications (notifications to the client/responder and location/status to the dispatch) at a low-cost.
  - Repeated concern that a solution needs to be free or at a low cost.
- **Road Status Information Maps**
  - It is preferred that this is a simple GIS interface in which road status information can be pushed from local CAD systems and local CAD systems can pull road status information they would like to display.
  - It is suggested that an incremental approach is taken when deriving a data exchange solution. Also, the solution should not add to the burdens of the dispatchers.
  - Several CRIB members would like to provide the public with access to aggregated Road Status Information Maps. They believe that it would provide a vital service to their constituents. The solution will need to delineate the differences in requirements between a private and public solution for evaluation purposes.



- **Central Repository for Map Data**
  - Key use case would be multijurisdictional incidents.
- **CAD-to-CAD Incident Data**
  - In the case of Red River Dispatch, they have found this capability to be invaluable for their agency.
  - Several CRIB members state that the sharing of data would need to be governed by policy; there is not a need to share “all data,” only specific data elements.
  - Just having an ability for local jurisdictions to share with state radio would be a great improvement.
- **Emergency Road Maintenance**
  - Most CRIB members see only a limited usage of this capability.
- **Cross-Agency Messaging App**
  - For those who were using the PremierOne Messaging App, several miss having this capability.
- **PTT over Broadband**
  - Although there is a significant interest in PTT over broadband and several agencies use OTT applications (Zello), this capability ranks low in terms of priority. Regions are focused on next steps of the SIRN project, and not PTT over Broadband.

## 7 POLICIES & AGREEMENTS

This section deals with the impacts of policies and agreements regarding the gaps identified during the course of this project, especially with regards to the sharing of applications, software and databases. The policies and agreements for the initiatives associated with these gaps are varied. The policy and agreement to share data will need to cover several elements concerning the data ownership, the management of the data, obligations of the receiving party, and the mechanisms used to share the data.

One of the primary considerations in the development of new policies and agreements is the scope of parties participating. The survey and the interviews uncovered that state and local agencies would like bi-directional information sharing among state, local and federal agencies in many circumstances. As a result, a key element regarding the development of policies and agreements is ensuring the appropriate stakeholders are engaged in the process of developing them.

New systems or software will require new policies and agreements to the obligations of the parties, including capital and operational funding, ownership of data and systems, safeguarding information, access permissions, security requirements, and other stakeholder usage. The following sections provide a summary of the policies and agreements associated with the gaps identified in Section 4, a set of templates and guidelines for development of the policies and agreements, an assessment of existing policies, and proposed next steps regarding policies and agreements.

### 7.1 Summary of Policies and Agreements

As stated previously, the State will require policies and agreements to address all the gaps that will be addressed. A separate policy or agreement is not needed to address each gap. Instead, the eventual solution may aggregate several related gaps into one net solution and policies and agreements would then be developed per "solution." For example, if the stakeholders were to decide to deploy one system to address all CAD-related gaps (CAD-to-CAD, mobile CAD access, and sharing location and unit status), logically a single policy and agreement would be developed associated with all information shared via that solution. The State may also opt to integrate law enforcement RMS record sharing into the CAD as well, and again, policy and agreement elements associated with that sensitive information would be incorporated into one master policy and one master agreement. The technical requirements for these gaps are provided in Section 4 above and would form the basis of the types of information to be shared and will drive the scope of the associated documents.

Policy considerations were provided in Section 4 above for each gap. As the stakeholder workgroups responsible for developing policies and agreements begin scope these documents,

they should begin with these observations and are aggregated together in Appendix C below. In addition, the workgroups should consider existing policies and agreements identified in Section 7.3 and others that may not have been shared with program staff.

## 7.2 Templates and Guidelines

These sections provide recommendations regarding developing guidelines for the following items.

### 7.2.1 Governing Statutes

There are multiple statutes governing the level of control and security required for each data element. The policy will need to document the security level these requirements require prior to the selection of the identified solution used for data sharing. The security and control parameters will likely drive the selection of the solution; therefore, these requirements need to be gathered early in the process.

The first step will be to identify the data element that is to be shared. Next, the workgroup will need to consult with the relevant authorities concerning the security and control requirements. The workgroup shall document all governing statutes to define limits and controls necessary to facilitate data exchange. They will:

- Review existing policies and agreements;
- Identify participants (affected parties) of the information sharing (e.g., federal, state, and local);
- Outline the plan to consult with relevant agencies (AG's office, CJIS, P1 RMS Administrator, etc.) with an objective to identify the governing statutes that will set the limits and controls necessary to facilitate data exchange;
- Document security guidance and specifications;
- Outline issues pertaining to the data sensitivity requirements (i.e., establish a need-to-know basis framework); and
- Outline data desensitization process for sharing of proxy data for elements that are restricted by statute.

### 7.2.2 Funding Agreement

Initial and ongoing funding must be a key consideration in the policies and agreements. Given the implementation framework for the data sharing solution, the policy and agreement will need to consider the capital and operational expenses involved with the deployment and maintenance of the identified solution and how or if those costs will be shared. The funding model should include the following elements:

- Definition of the Technical Solution
  - Applications and services being developed and delivered
  - Identification of the beneficiaries of services
- Capital Expenditures
  - Internal labor required for the implementation of the solution
  - External labor required
  - Hardware, including the purchase of maintenance and support
  - Software, including the purchase, lease and depreciation, maintenance and support
  - Affected facilities
  - Telecom
  - Training and documentation of operations processes
- Operational Expenses
  - IT management costs
  - Hardware and software maintenance and support
  - Telecom
  - Training
  - Sustainability model for hardware and software upgrades

### **7.2.3 Access & Control**

The access and control of the data is vital to the data sharing process and includes:

- Permitting users and access control mechanisms
- Media protection, physical protection, and transport protection
- Configuration management
- Identification and authentication policies and procedures
- Data Ownership responsibilities
  - Acceptable Use Description
  - Acceptance of liability and data integrity (disclosures)
  - Creation of Acceptable Use Agreement
  - Definition and list of participants and stakeholders
- Data Exchange Procedures
  - To be defined by the technical solution selected

### **7.2.4 Stakeholder Commitments**

Success is only achieved if the implemented solution is put into practice, used regularly, sustained, and fully supported. The policy and agreement will need to capture stakeholder commitments to ensure that all parties are responsible. Therefore, the workgroups should develop stakeholder commitments in the policies and agreements that consider:

- Adoption commitments

- Commitment of training , access, use and handling of data
- Commitment of technical support (including incident response, auditing, and accountability)
- Commitment of funding, or support to secure upfront and ongoing funding
- Other roles and responsibilities of the parties

### 7.3 Assessment of Existing Policies and Agreements

The project team did not identify any existing policies and agreements in the State of North Dakota that address the kind of information sharing envisioned in Section 4 with the exception of CJIS policies. CJIS has strict policies that ensure integrity and security of sensitive law enforcement data. The CJIS Security Policy<sup>10</sup> “describes the vision and captures the security concepts that set the policies, protections, roles, and responsibilities with minimal impact from changes in technology.”<sup>11</sup> It has provisions for a wide variety of policy elements from technical requirements to usage policies. The policy also includes the user agreement that establishes the obligations the parties including training, adherence to the policies, and a variety of provisions that are relevant to general information sharing. This policy document can serve as a good starting point to address the needed policies and agreements for the gaps identified in Section 4.

### 7.4 Policies and Agreements Next Steps

It is difficult to identify next steps for policies and agreements absent a solution to the gaps above and the agencies, governments, or entities that will participate in some new information sharing capability. As a result, policies and agreements become part of the overall program that must start with the functional definition of the system and the types of information it stores, transmits and conveys. The type of information, the sensitives and laws surrounding that information are critical elements of identifying the scope and complexity of the policies and agreements to solve that information sharing gap. Therefore, before the policy elements can be discussed, decisions have to be made with regards to the kinds of information that will be shared and under what conditions they will be shared first. Those elements will serve as policy and agreement requirements that will drive the development of these key documents. The working groups that develop these policies and agreements must be subject matter experts regarding the variety of agency policies, state, local, and federal laws, security, and other related matters. Due to the potential liabilities associated with such information sharing, it will become critical that there is trust and mutual agreement associated with these elements in order for agencies to be willing to fully engage, signing on to policies and agreements,

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<sup>10</sup> The current security policy is available [here](#).

<sup>11</sup> CJIS Security Policy, page i



connecting systems or procedures to enable the information sharing, and ultimately, to make the information sharing part of daily operations in order to benefit from such systems as the stakeholders desire. The following section provides more details about the overall next steps and how the development of policies and agreements fits in to the recommended overall plan.

## 8 RECOMMENDED NEXT STEPS

The following section outlines Televate’s recommended next steps to guide the advancement of broadband data and information sharing throughout the state. The next steps must begin with the SIEC and a decision to move forward with preliminary activities to address the public safety stakeholder community highlighted gaps. The SIEC must decide on how it will organize workgroups, subcommittees, or other bodies and their specific charges, missions, and objectives to take these initial ideas and concepts and implement solutions that address the critical gap elements. This effort encompasses the full SAFECOM interoperability continuum including governance, technology, training, usage, and standard operating procedures and other key elements such as funding.<sup>12</sup>

Before a solution can be proposed, additional work, including the recommendations below, needs to be done to understand the affected systems, impacted agencies, and detailed operational requirements the solution needs to meet.

The SIEC might consider the regional CRIB request that the CRIB’s members begin the data interoperability assessment work at the regional level by convening workgroups to draft a series of detailed requirements to frame the scope of the potential solution. This process would involve key jurisdictions and stakeholders to guide the collection and coordination of relevant information to define the detailed requirements. The SIEC could aggregate this work and deconflict any differences among the regions.

Under the proposed process, the CRIBs or SIEC identified workgroups should develop the following:

- Goals and Justification for the Gap in Capability
  - Identify the use cases that will be resolved by filling the gap in capability and need for the data
  - Document the operational and technical requirements for the gap in capability and data, including mechanisms to control information sharing, identity management requirements, and security requirements
  - Document the benefits and goals associated with incident response and interoperability – how does it improve the associated business process?
- Identification of the systems and key existing infrastructure for interoperability
  - Identify key back-end systems (e.g., CAD, RMS) required to interconnect with a new proposed framework
  - Document end user devices and OS requirements and other client dependencies

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<sup>12</sup> See SAFECOMM Continuum here:  
[https://www.dhs.gov/sites/default/files/publications/interoperability\\_continuum\\_brochure\\_2\\_1.pdf](https://www.dhs.gov/sites/default/files/publications/interoperability_continuum_brochure_2_1.pdf)



- Identify cross-system opportunities for further enhancements (i.e., if interoperability should be implemented across gaps)
- Assess the impact of the solution
  - Assess impact on resources (personnel, funding, and other)
  - Assess impact on operational procedures
  - Assess the acquisition method if appropriate (if a new system is implemented, identify the method the solution will be acquired) and the degree to which the solution is readily available, along with potential risks associated with the acquisition
- Define and Develop the Policy and Agreement Documents
  - Document the security and other policy requirements for each data element
  - Develop proposed policies and agreements to ensure successful and safe deployment of the proposed solution
  - Identify “anchor tenants” to assess the extent to which agencies in each region support the solution, the policies, and the proposed agreement and the obligations it imparts on them.
  - Consult with relevant authorities as necessary (e.g., law enforcement data will require consultation with Attorney General’s office and/or Federal agencies)
- Documentation of Operational Goals and Key Performance Criteria and an overall plan to fully address the gaps
- Develop the proposed solution
  - Consider the gamut of potential solutions to address key gaps such as standard interfaces, recommended implementation solutions, or statewide system implementation to address the gaps.
  - Provide a recommendation to the SIEC that includes:
    - Problem definition and use cases
    - Proposed solution
    - Proposed financial and resource implications
    - Proposed policies and agreements
    - Proposed acquisition strategy and risks
    - Proposed overall plan to address the gap

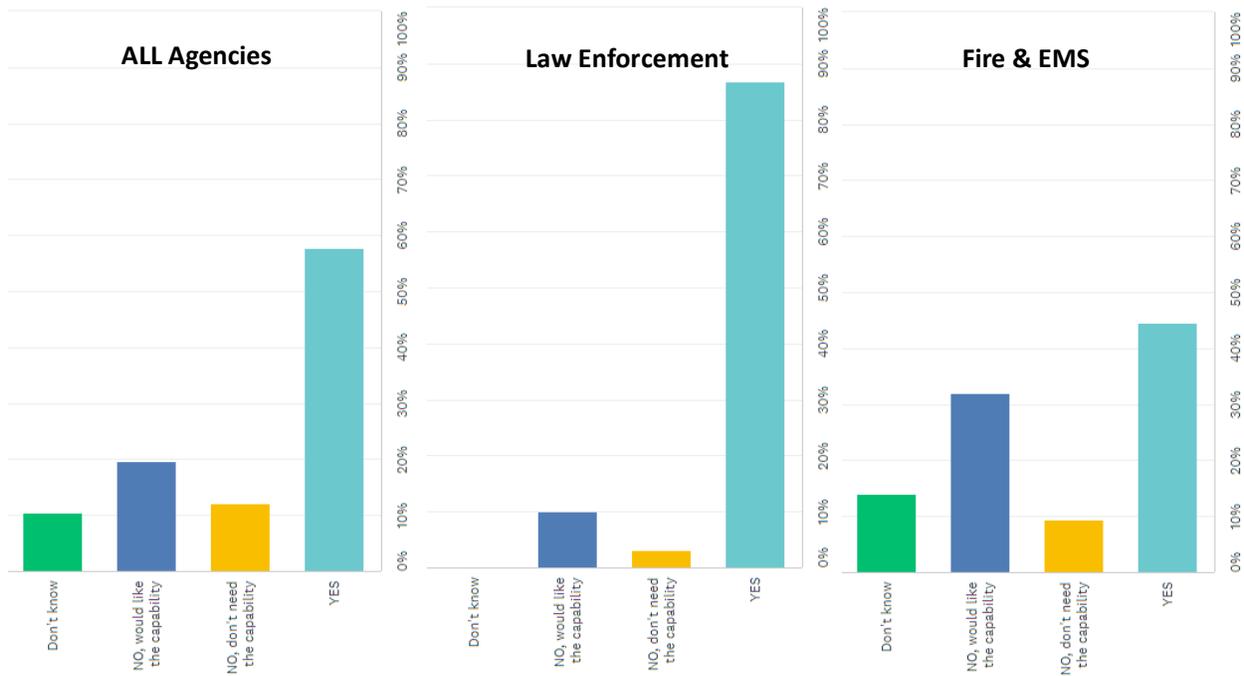
The SIEC would decide to proceed, revise, or reject the proposals from the CRIBs or workgroups based on a variety of factors. The SIEC would then set in motion the execution of the plan proposed by the CRIBs or working groups as the SIEC and the stakeholders see fit.



## 9 APPENDIX A – DETAILED SURVEY RESULTS

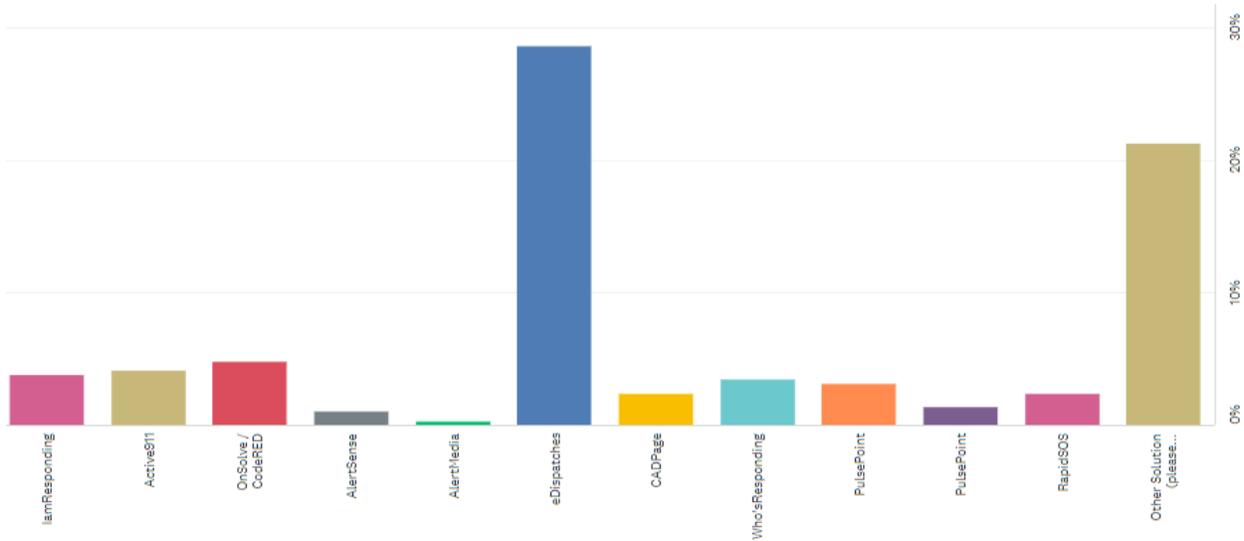
The following are the results from each survey question as they relate to the application landscape assessment. Questions 1 and 2 provide respondent contact information and discipline, and therefore, these sections highlight the responses for questions three through 33.

### 9.1.1 Q3. Does your agency use a Computer Aided Dispatch (CAD) application?





**9.1.2 Q4. Incident Notification Applications in use today (mobile clients).**



- Other notification application not listed here include:
  - Everbridge<sup>13</sup>, Hyper-Reach<sup>14</sup>, APSS Sentinel<sup>15</sup>
- Other Solutions include:
  - Mass Notification systems such as Hyper-Reach, Everbridge
  - CAD Software

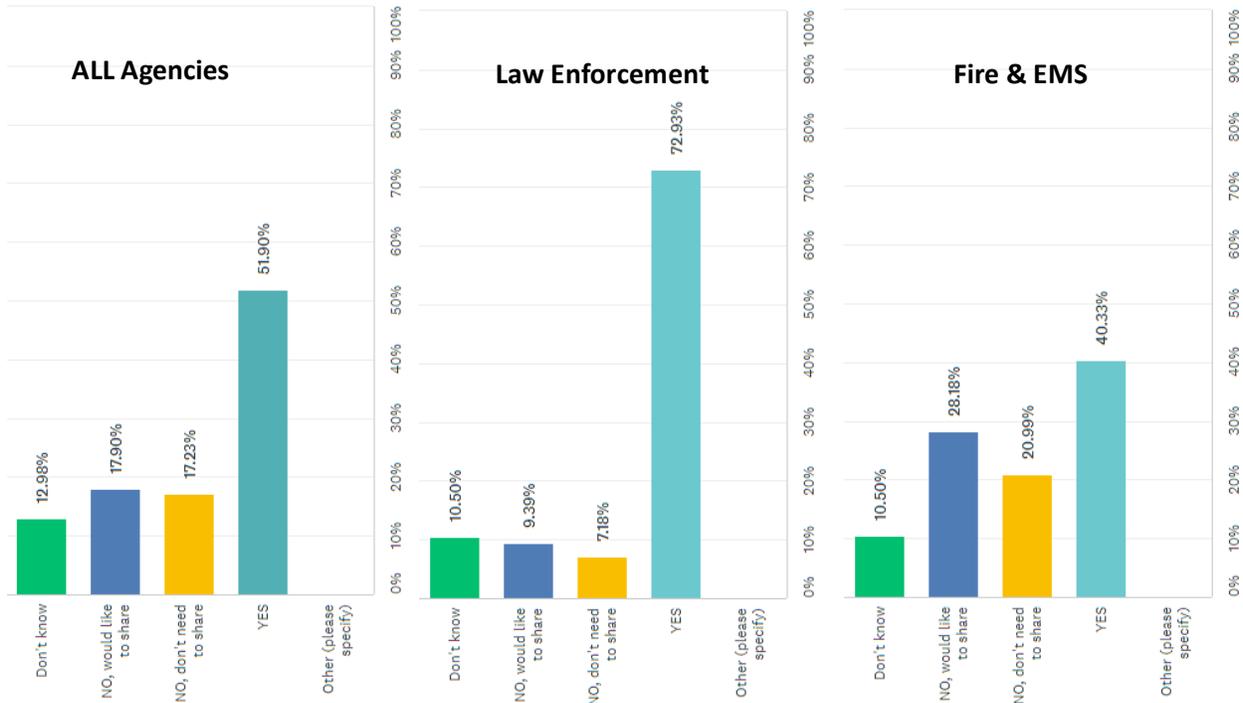
<sup>13</sup> <https://www.everbridge.com/industries/states-and-local-governments/>

<sup>14</sup> <https://www.hyper-reach.com/>

<sup>15</sup> <https://www.alertpss.com/safety-solutions/mobile-silent-software/>



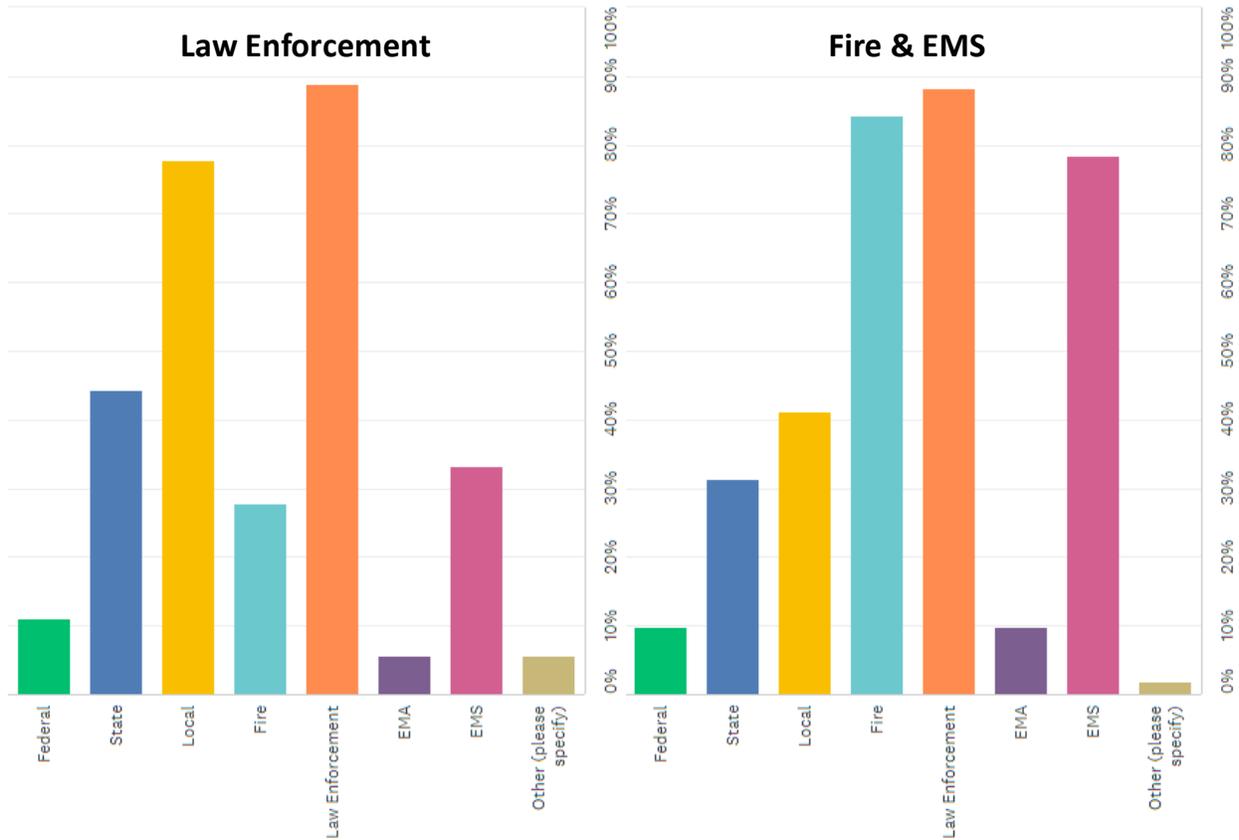
**9.1.3 Q5. Does your agency share your incident location, unit/personnel status and location information with other agencies?**



- Nearly 18% of respondents do not see a need to share location and status, however, law enforcement overwhelmingly shares this information.



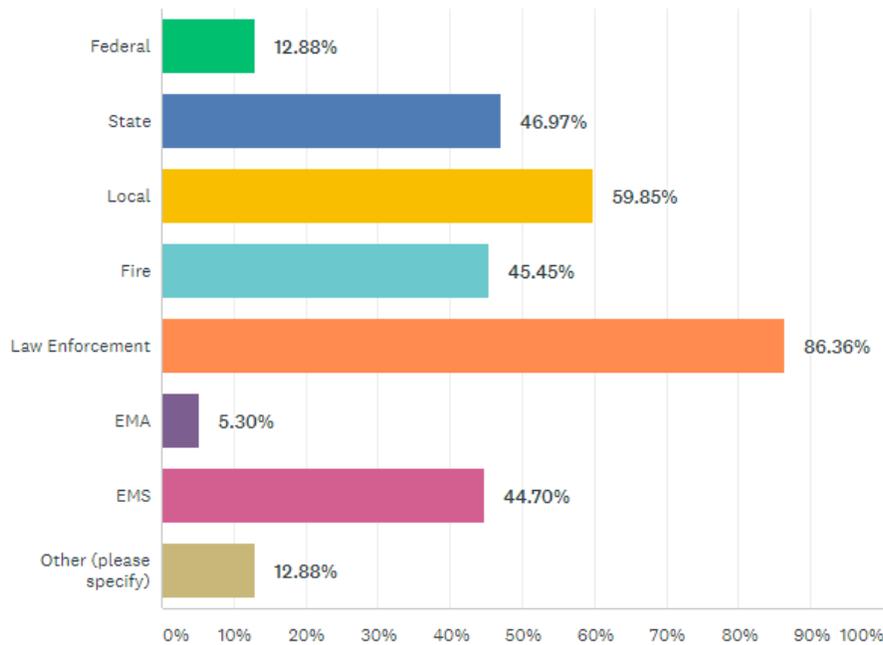
9.1.4 Q6. Which other agencies would you like to share your unit status and location information with?



- There is a consistently strong need to share location and unit status across agencies, especially among Law Enforcement and Fire and EMS personnel, but with a notable reduction of law enforcement respondents indicating they would like to share status and location with Fire and EMS agencies.

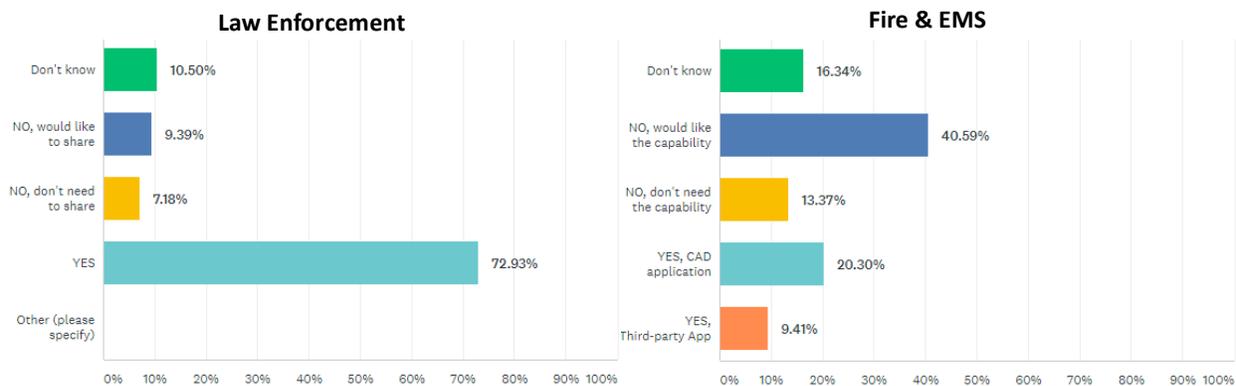


**9.1.5 Q7. Which other agencies do you currently share your unit status and location information with?**



- Respondents share status and location with law enforcement consistently, however, with Fire and EMS agencies at half the rate.

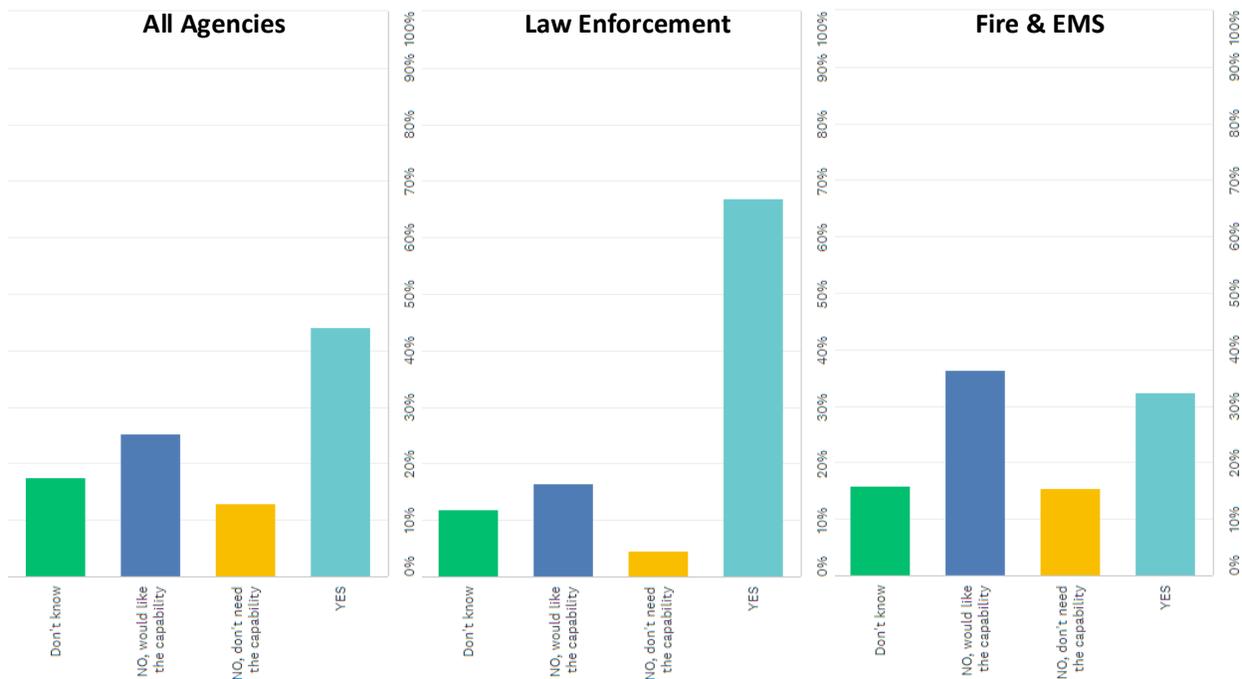
**9.1.6 Q8. Does your agency have a mobile application (or capability) used to provide incident location, unit status and unit location information to field units?**



- Law enforcement generally has a mobile application to provide field unit location and status, however, Fire and EMS department generally do not have the capability but indicate a strong desire for the capability.



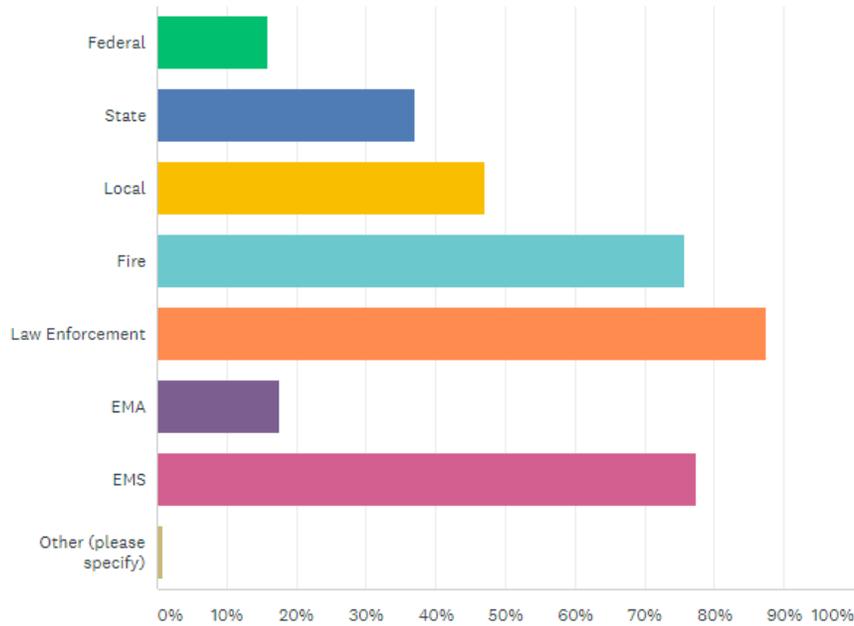
**9.1.7 Q9. Do other agencies share their incident location, unit/personnel status and location information with you or your agency?**



- Consistent with the earlier question, law enforcement generally has the capability to receive unit location and status with from other agencies, however, Fire and EMS department generally do not have the capability but indicate a strong desire for the capability.

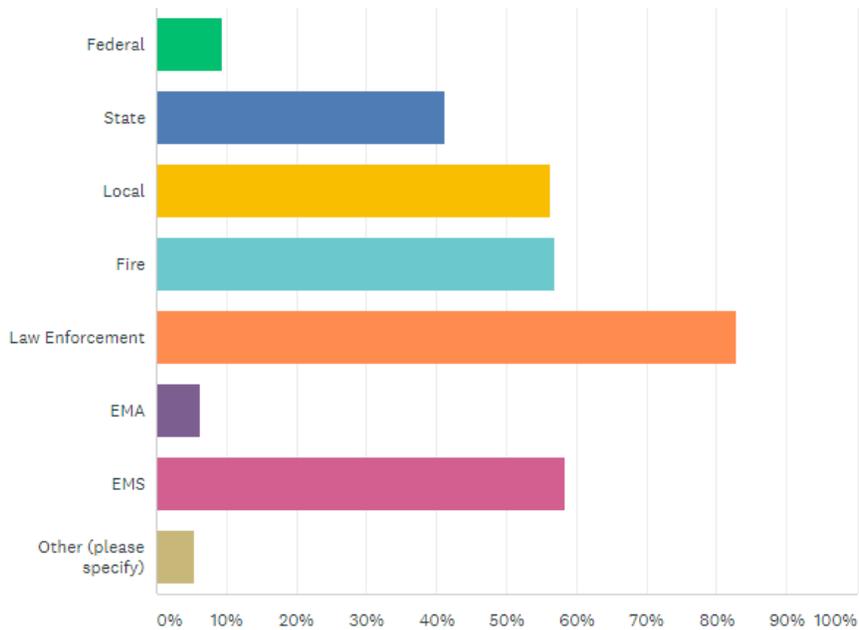


**9.1.8 Q10. Which other agencies would you like to receive shared incident location, unit/personnel status and location information from?**



- There is a strong need to receive location and unit status from the three first responder public safety agencies (law enforcement, fire & EMS).

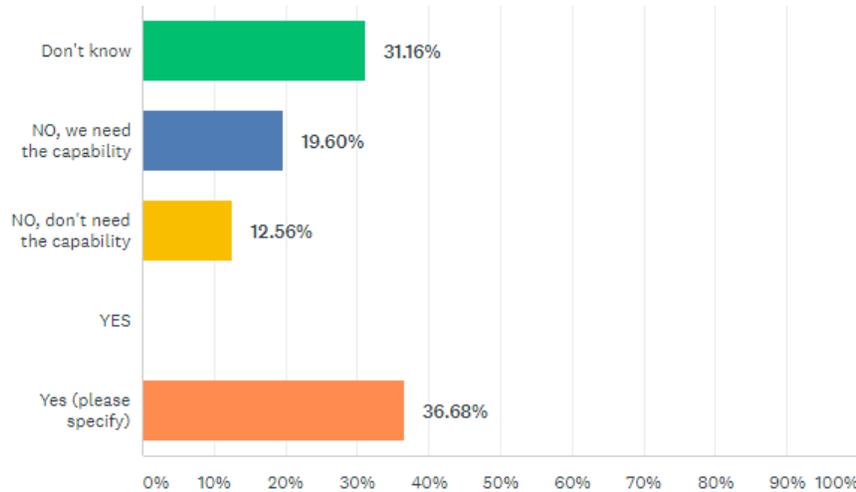
**9.1.9 Q11. Which other agencies do you/your agency currently receive shared incident location, unit/personnel status and location information from?**





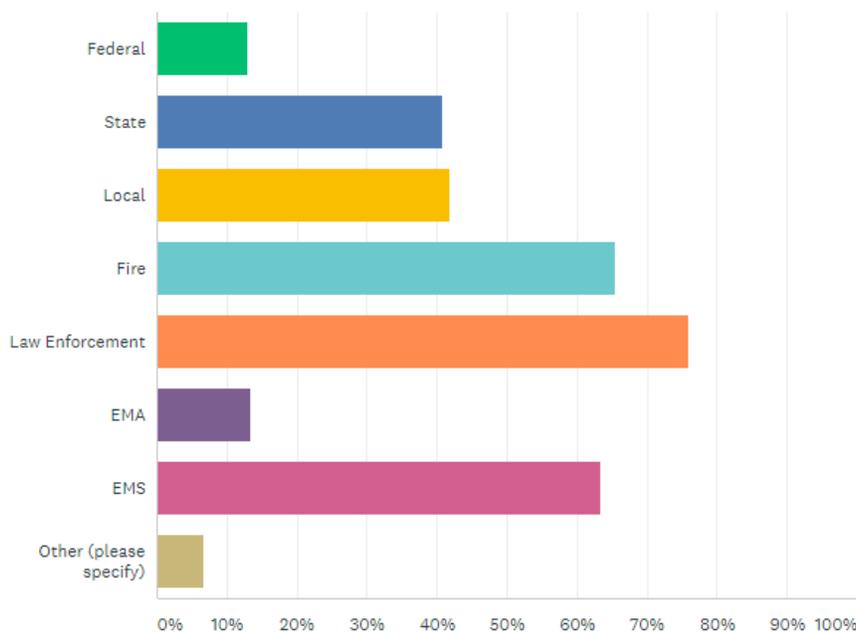
- There is a consistent desire among the majority of the respondents to share incident location, unit/personnel status and location information between the law enforcement, fire and EMS agencies.

**9.1.10 Q12. Does your agency have a mobile application (or capability) to provide alerts or to dispatch personnel to other agencies (or vice versa)?**



- A majority of respondents provide alerts or dispatches to other agencies (or the reverse) or need the capability, however, a large percentage do not know if they do.

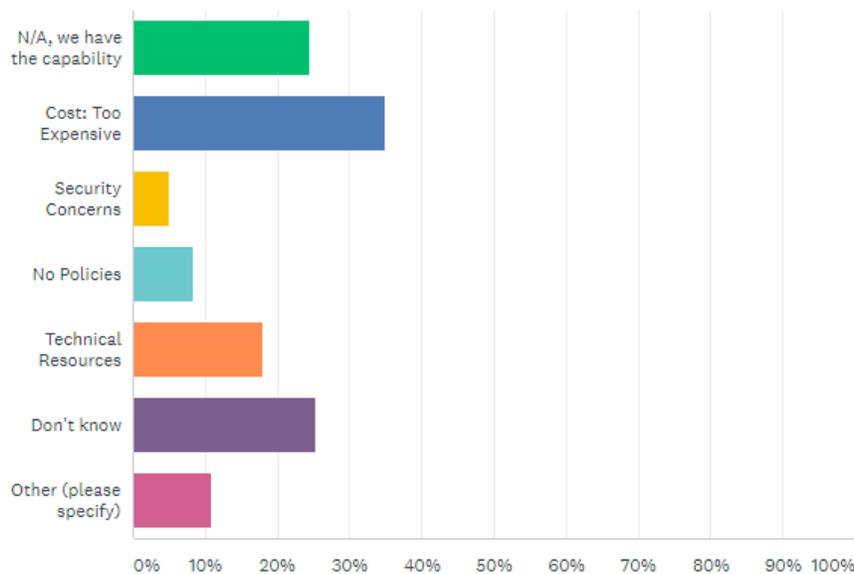
**9.1.11 Q13. Which other agencies would you like to provide alerts or dispatch personnel to?**





- Consistent with Q7 and Q11, the results of this survey question represent the need to share alerts and dispatches with other law enforcement, fire, and EMS agencies. However, there is a noticeable narrowing of the gap between law enforcement and fire/EMS agencies. In the case of Q11, there is a nearly 30 percent gap between law enforcement and fire/EMS sharing of location and unit status (82% to 56%). Here, sharing alerts with law enforcement agencies was lower (75%) while fire and EMS were substantially higher (roughly 65%).

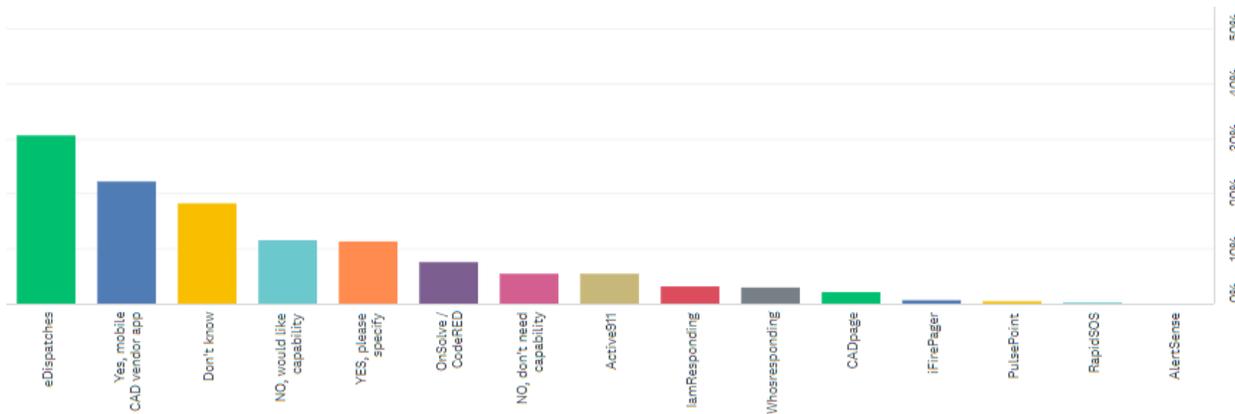
**9.1.12 Q15. If you selected that you do not have the capability for the above CAD, mobile, and status/location information sharing, but would like to have such capabilities, what are the reason(s) you lack such capabilities?**



- Cost is by far the biggest barrier to providing this capability followed by a lack of technical resources, however, nearly a quarter of respondents didn't know why they lack the capability. Among the other options issues noted were:
  - Lack of resources
  - A present need to upgrade equipment
  - Policy restrictions

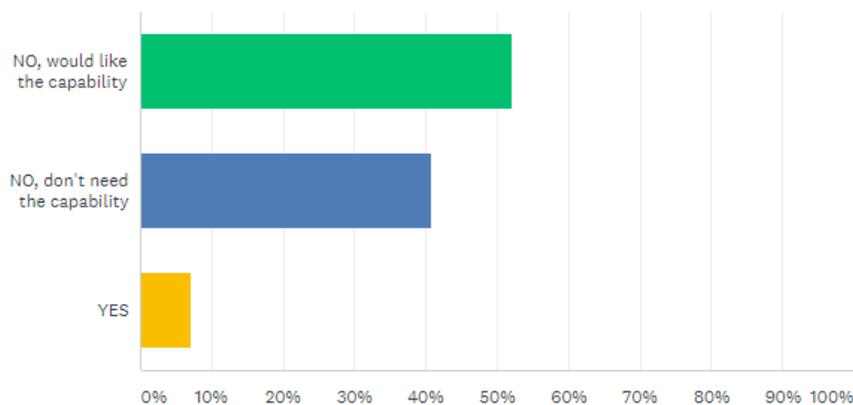


**9.1.13 Q16. Does your agency have a mobile application (or capability) to provide alerts/dispatches to field units to an emergency event?**



- Many respondents utilize push notification software (eDispatches, Code Red, etc.) to provide alerts and dispatches to field units. Twelve percent (12%) of agencies do not have the capability but would like to have it.

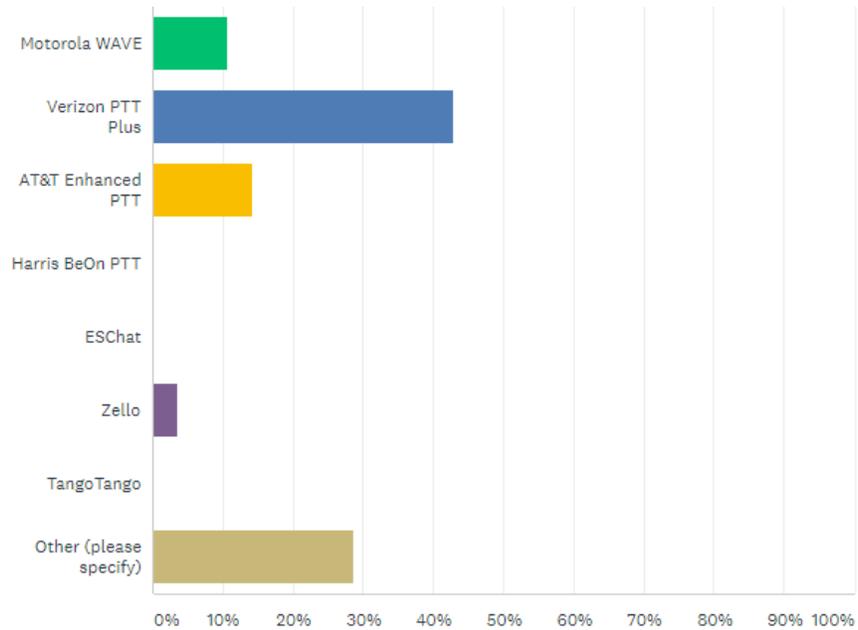
**9.1.14 Q17. Do you or your agency use a Push-to-Talk application (operating over a cellular network)?**



- Consistent across all public safety disciplines is a desire for a Push-to-Talk application that operates over wireless broadband. While less than 10% of respondents had the capability, more than 50% wanted it.



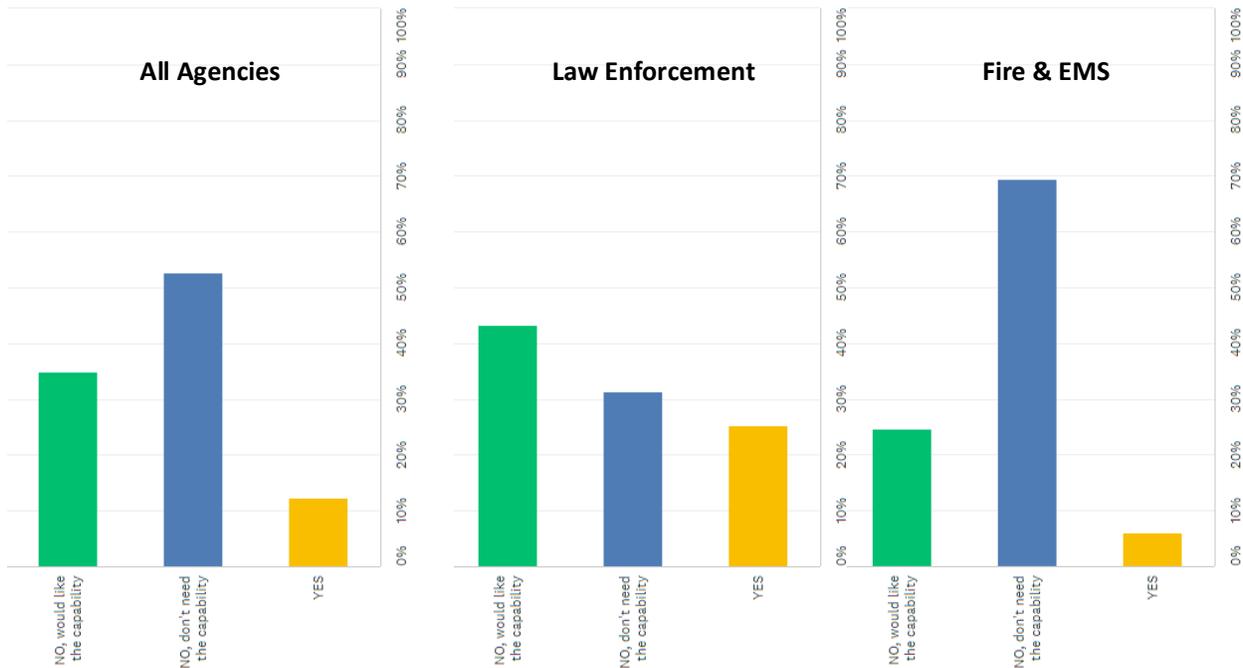
**9.1.15 Q18. Which smartphone/tablet application(s) do you use for Push-to-Talk over cellular?**



- The majority of respondents are leveraging carrier provided PTT applications.
- It should be noted that this question had an extremely low response rate of 3% and should not be considered reflective of the actual broad utilization of any particular application.



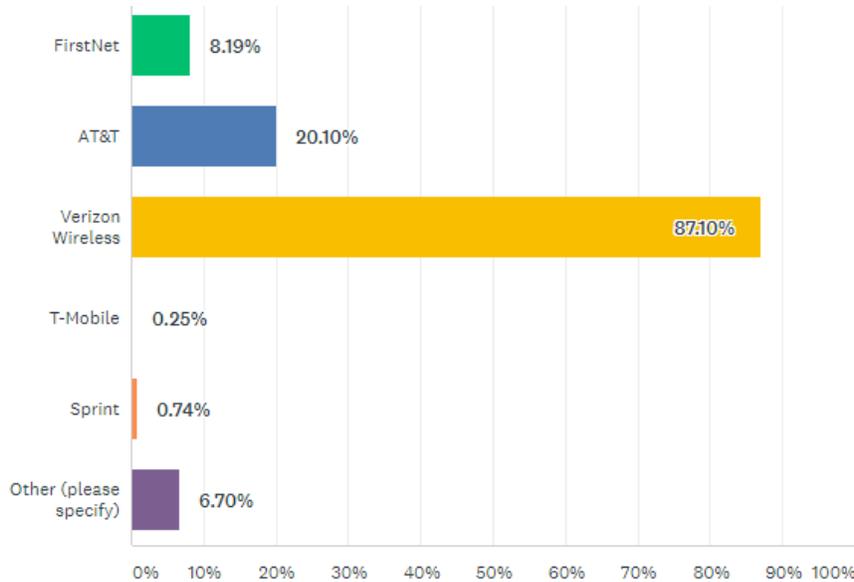
**9.1.16 Q19. Does your agency transmit or remotely stream video from your dash cam, body cam, drones, or other video source from the field to your command center or a central office, or from any location to mobile units?**



- The need for streaming video is predominately a law enforcement need. A quarter of law enforcement respondents have the capability, but over 40% would like it. However, there remains a sizeable need for this capability for Fire and EMS department where a quarter of respondents would like the capability.



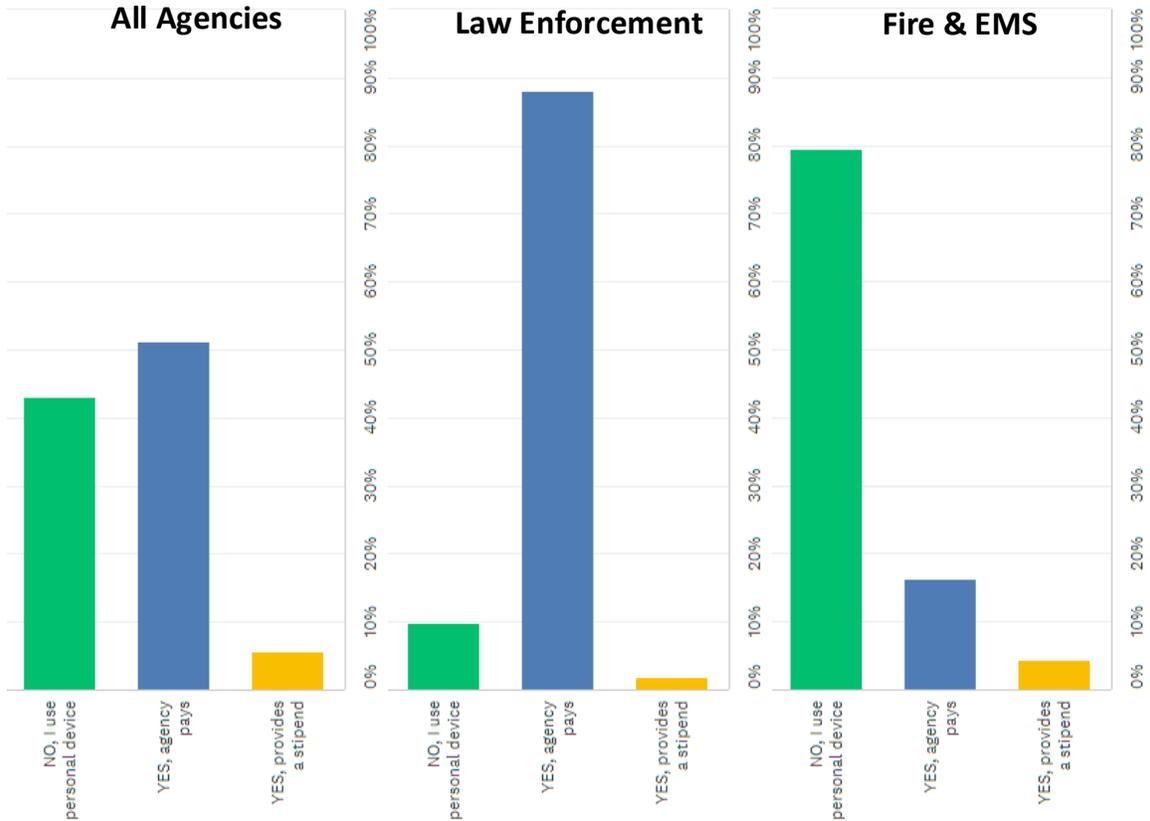
**9.1.17 Q21. Which wireless carrier(s) do you or your agency subscribe to?**



- The majority of respondents subscribe to Verizon Wireless. Note, this question allows respondents to select multiple wireless carriers resulting in more than 100 percent of the total. This implies that several respondents report using multiple carriers. Importantly, 20 percent of respondents use AT&T, while 8 percent use FirstNet. Subscription to other carriers is minimal. The other carriers noted in the responses included
  - Standing Rock Telecom
  - SRT
  - Cricket



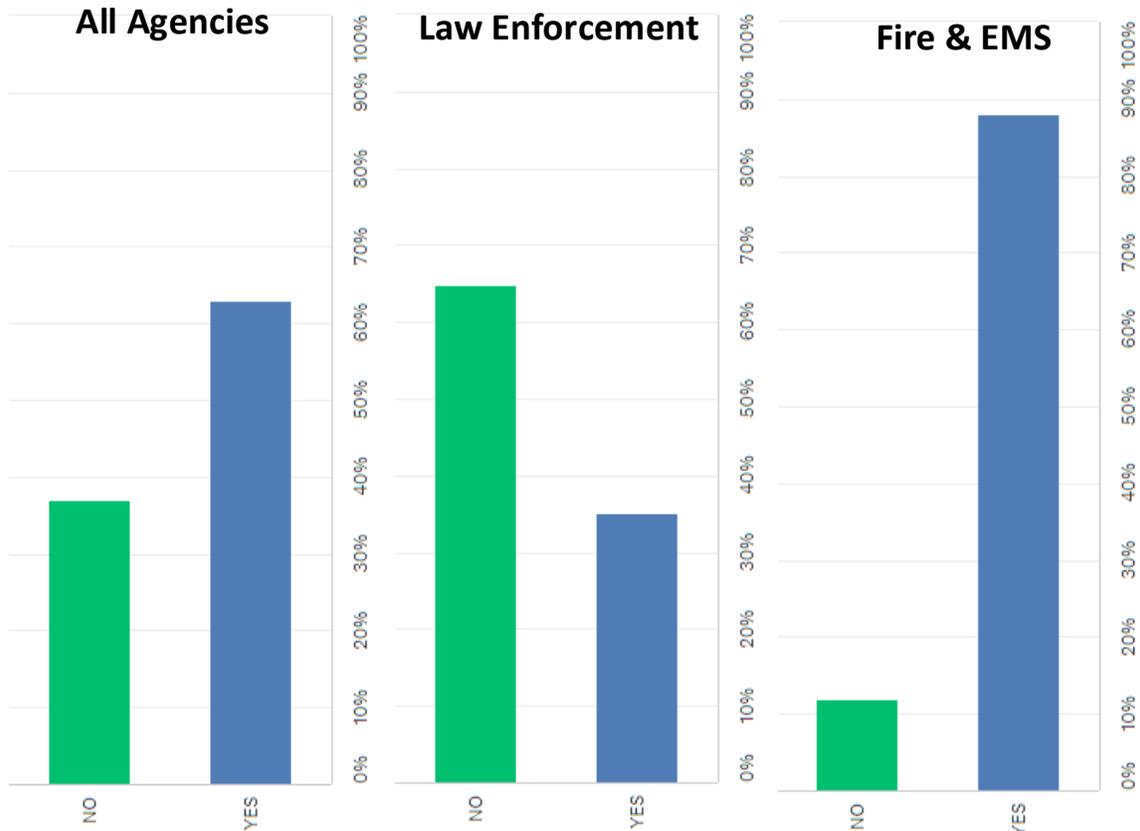
**9.1.18 Q22. Did your agency provide, purchase or reimburse you for your smartphone or smartphone service?**



- There is a large variance between law enforcement and Fire/EMS respondents regarding smartphone that are support financially by public safety agencies. The vast majority of law enforcement respondents report that their agency pays for their smartphone while less than 20 percent of Fire and EMS respondents report agency paid service.



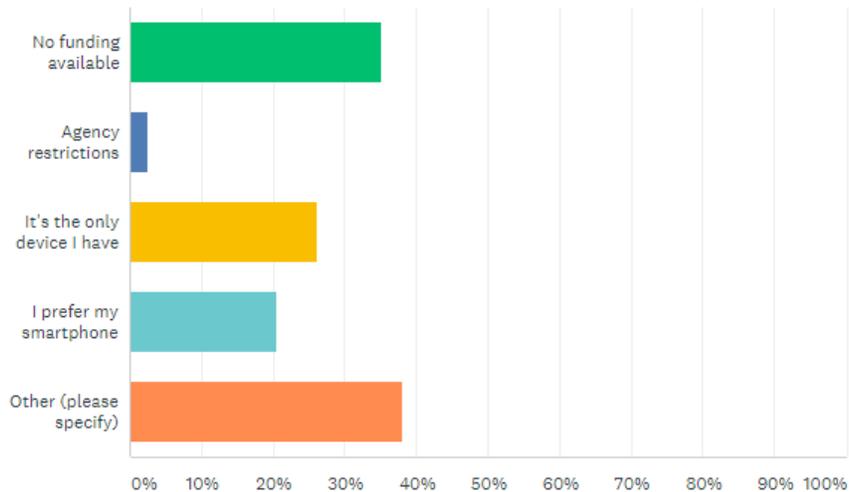
**9.1.19 Q23. Do you use your personal smartphone for emergencies or in support of emergency responses?**



- Even with the lack of financial support, most firefighters and EMS personnel subscribe to broadband services and overwhelmingly use their personal devices to support emergency calls for service. Unsurprisingly, law enforcement users, who as noted in Q22 above, generally have agency paid devices, are generally not using personal devices. But interestingly, while 90 percent of law enforcement respondents had agency paid devices, more than 35% of the respondents indicated they used their personal devices for emergency response. In other words, this suggests that 25% of the respondents use their personal and agency paid devices for emergency response.



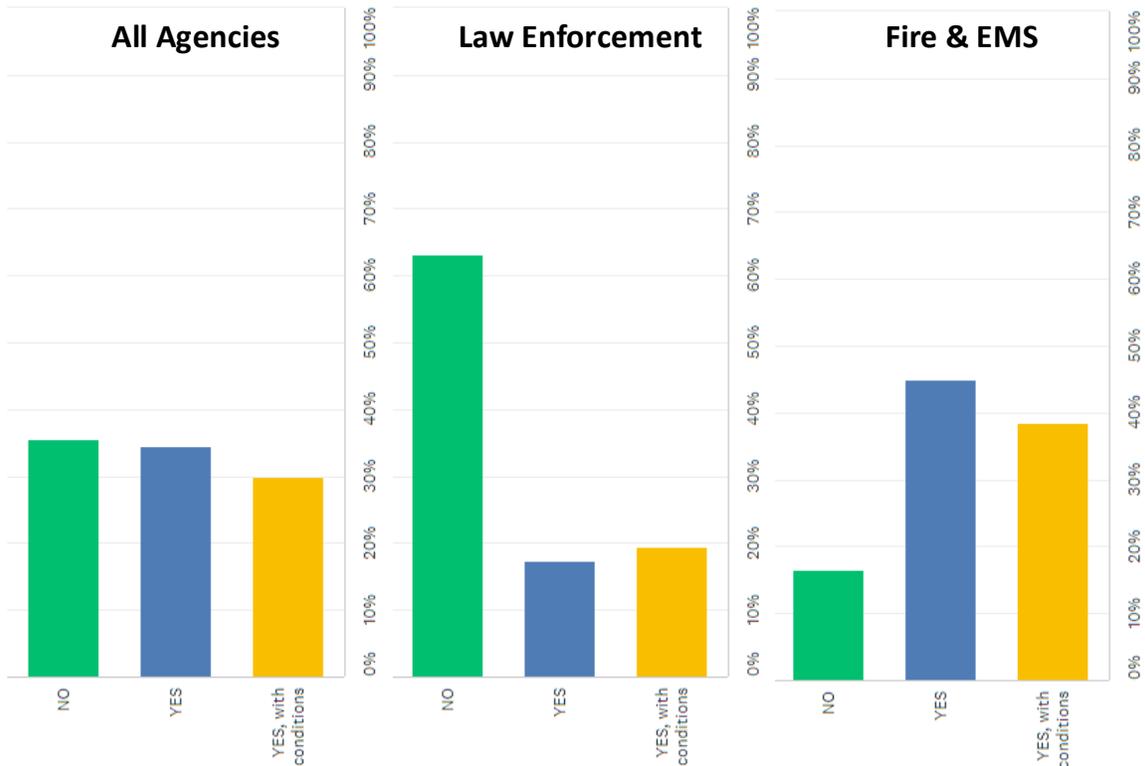
**9.1.20 Q24. Why do you use your personal device to support incident response?**



- Funding was the single most cited reason regarding the use of a personal device. The other responses from respondents included:
  - Law enforcement has restrictions concerning the use of personal devices for incident response.
  - Several first responders report using personal device when the radio network is overloaded
  - Several first responders report favoring their personal device and would prefer not to carry multiple smartphones



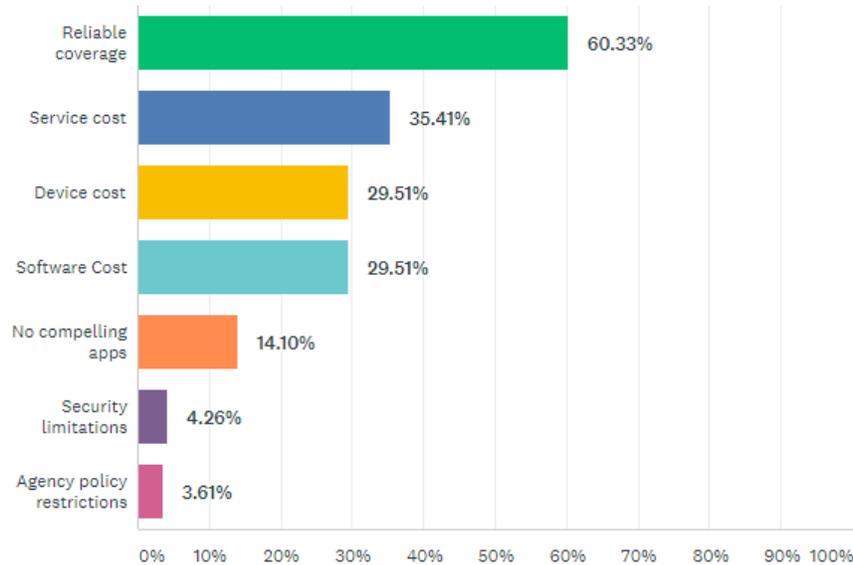
**9.1.21 Q25. Would you allow your personal device to access your agency’s or a statewide application for public safety operations (e.g., load an app that enables other units to see your location and status when you are in service)?**



- With the exception of law enforcement personnel, there is a significant majority of first responders who are willing to have public safety applications installed on their personal devices.
- Law enforcement has restrictions concerning the use of personal devices for incident response.
- A substantial number of respondents, roughly 30% of all respondents, indicated that they would be willing to use personal devices but with conditions. Some of the issues cited include:
  - Use only in emergencies
  - A changing of the policy restrictions that currently prohibit the use for some agencies
  - Must provide conditions to use personal devices to ensure privacy and limit access
  - Must restrict open records access to personal devices
  - It has no impact on cost of service or reduces the cost of service

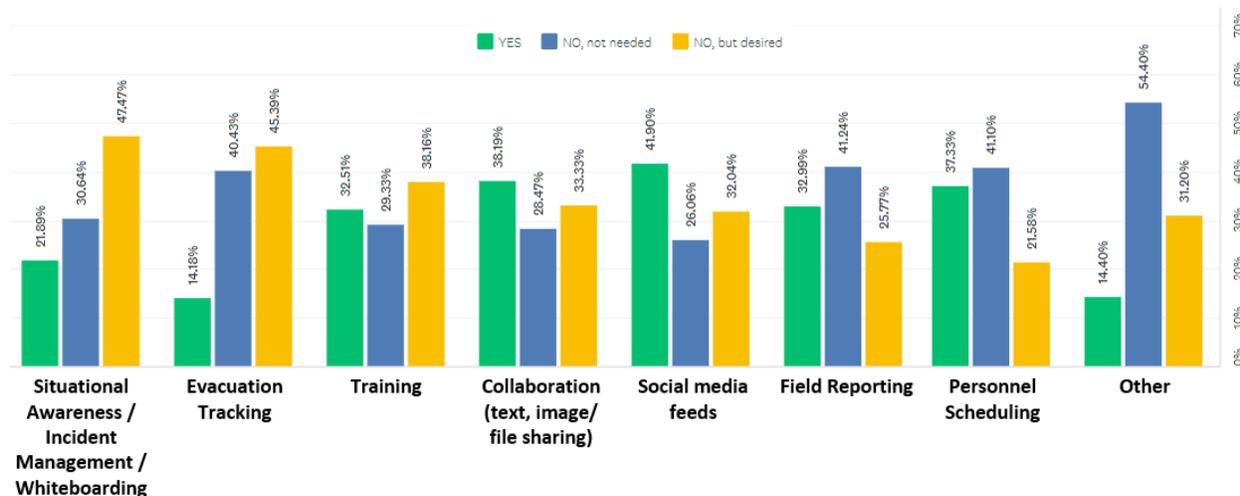


**9.1.22 Q26. We previously asked about barriers to CAD/location use. What barriers hinder your use of wireless broadband overall and/or other applications? Check all that apply and please give examples in the comment field below.**



- Coverage is the major barrier to broadband use followed by the cost of services, devices and applications.

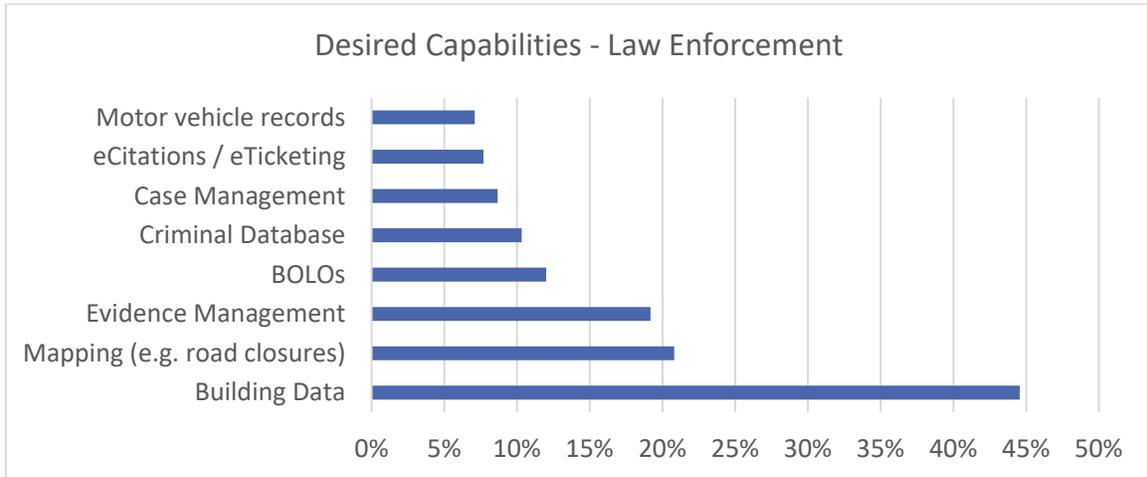
**9.1.23 Q27. For each of the following categories, please indicate if you or your agency currently have the wireless broadband capability and whether or not it is desirable. If you have the capability, please indicate the vendor for the software application you use to provide such a capability.**



- In order of capabilities that are “desired”; situational awareness and evacuation tracking rank the highest capabilities desired.



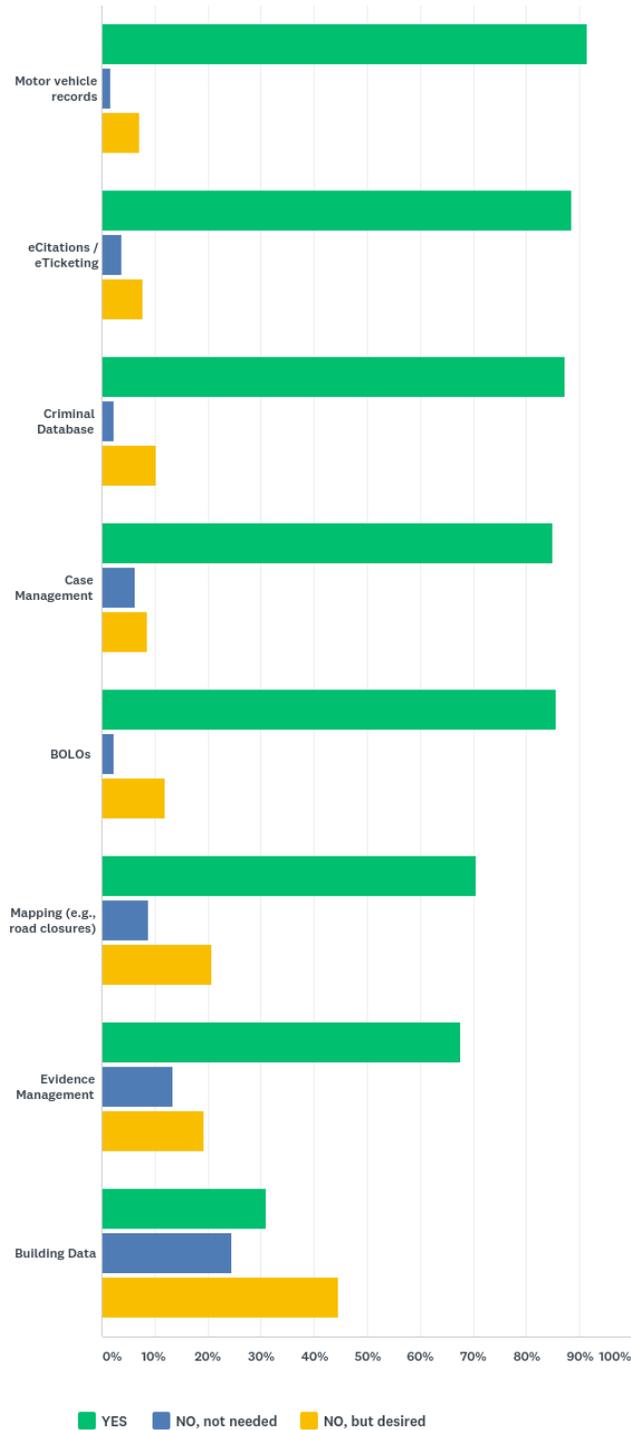
**9.1.24 Q29 If your agency is involved in Law Enforcement operations, please indicate if you or your agency currently have the wireless broadband capability and whether or not it is desirable.**



- In order of capabilities that are “desired”; access to building data and road closure mapping rank the highest capabilities desired.



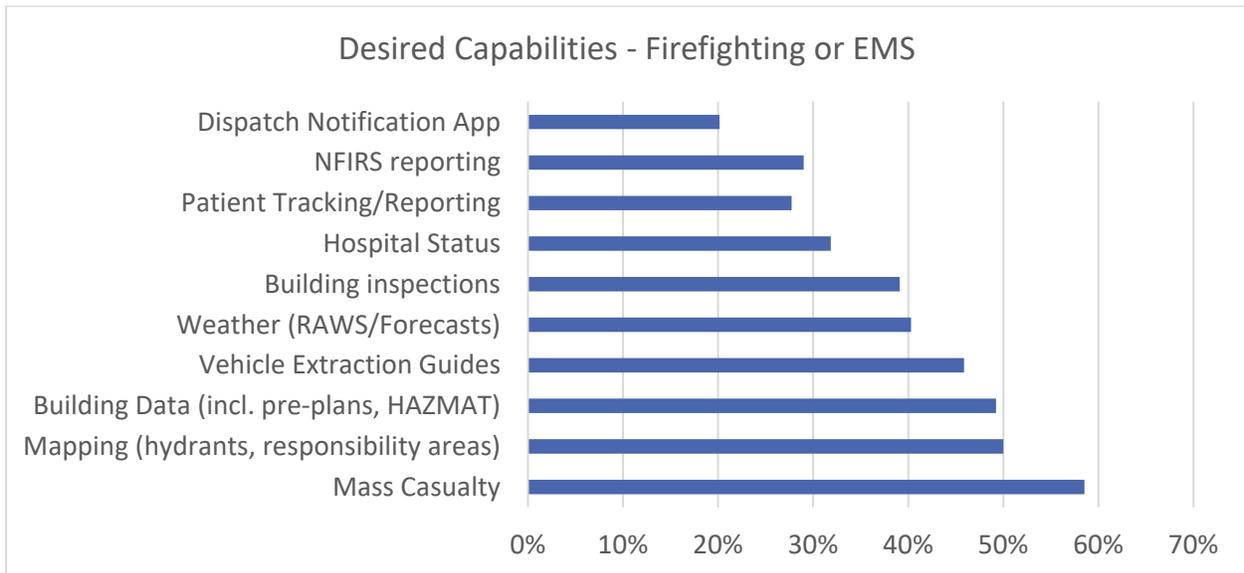
Q29 If your agency is involved in Law Enforcement operations, please indicate if you or your agency currently have the wireless broadband capability and whether or not it is desirable. Other disciplines may skip this question.



9.1.25



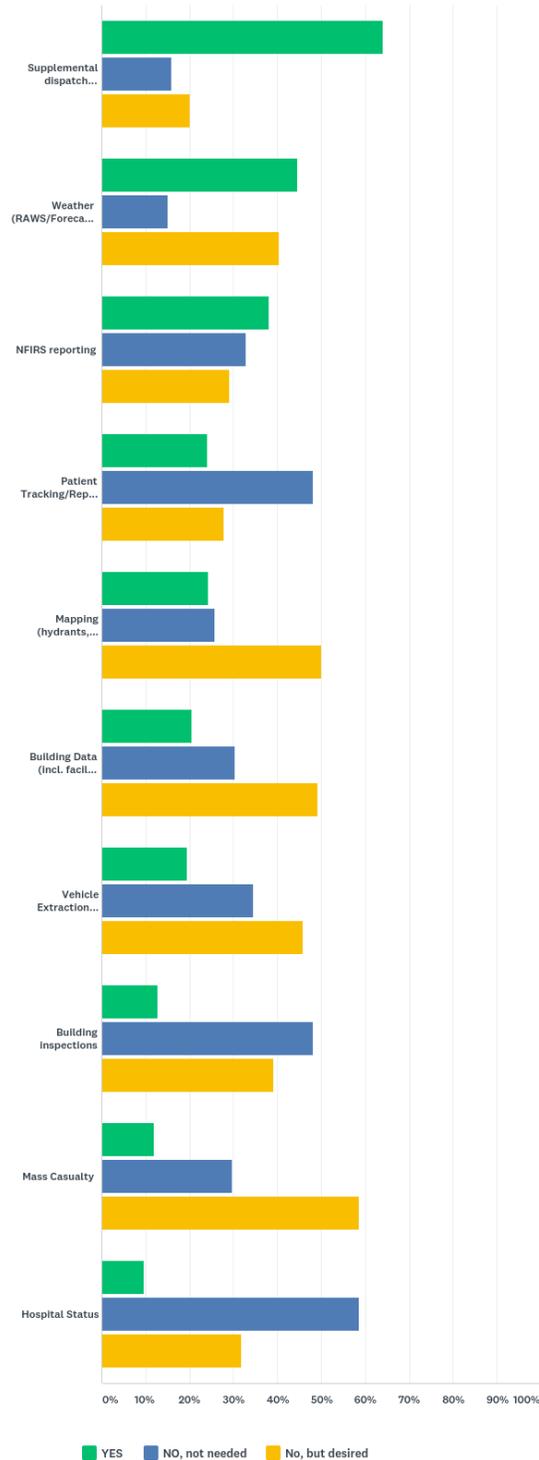
**Q30. If your agency is involved in Firefighting or EMS operations, please indicate if you or your agency currently have the wireless broadband capability and whether or not it is desirable.**



- Those respondents who identified as Fire or EMS had substantial interests in new capabilities. Access to mass casualty, mapping, building data, vehicle extraction guides, weather, and building inspections using broadband all exceeded 33 percent.

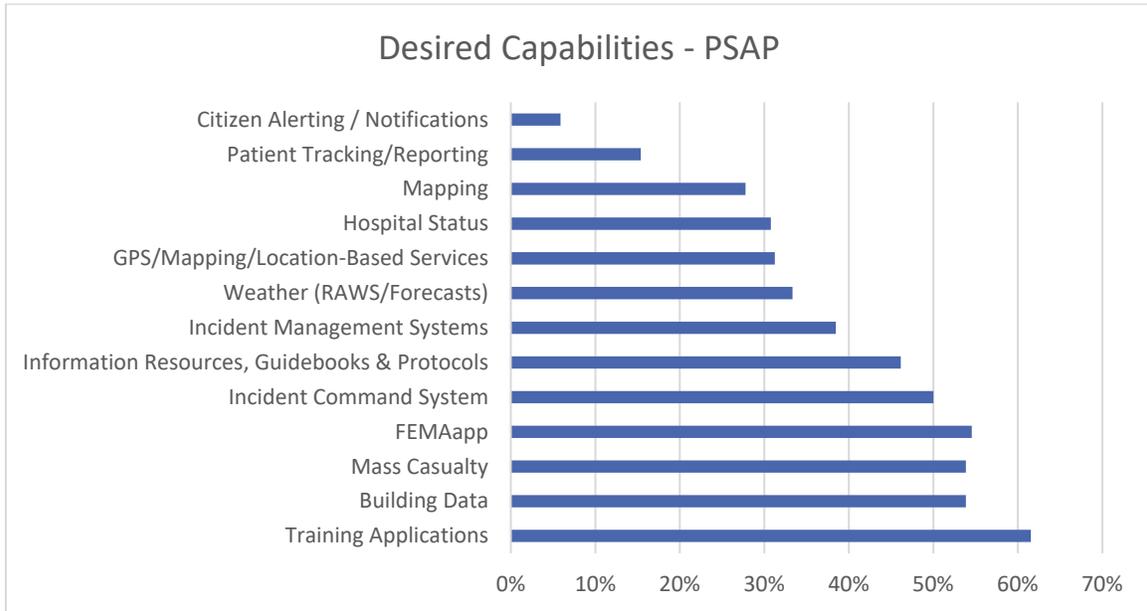


Q30 If your agency is involved in Firefighting or EMS operations, please indicate if you or your agency currently have the wireless broadband capability and whether or not it is desirable. Other disciplines may skip this question.





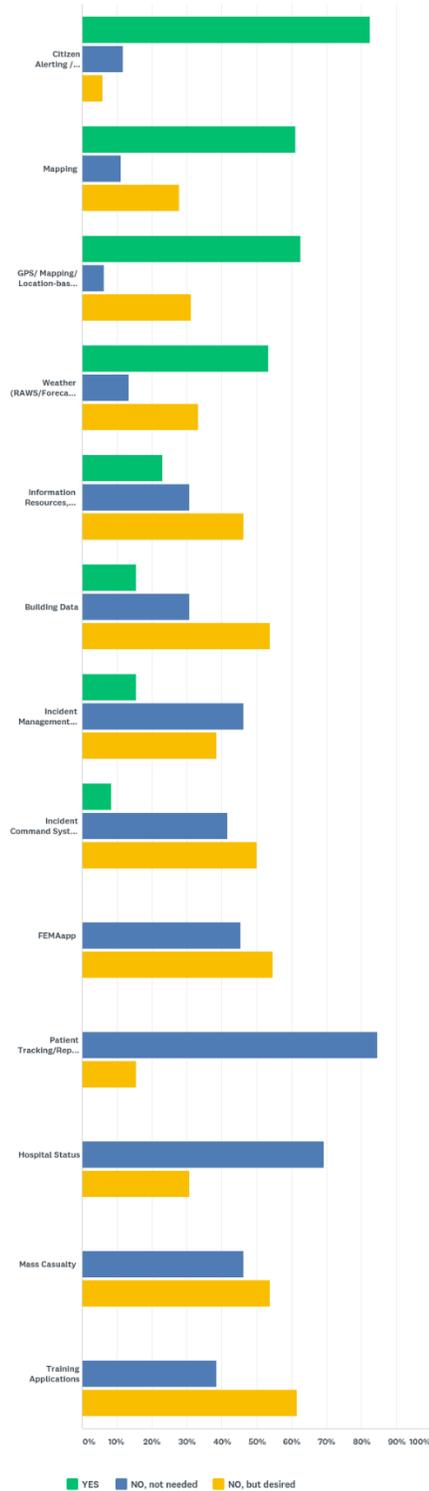
**9.1.26 Q31. If your agency is a PSAP or 9-1-1 Call Center and is involved in dispatching, please indicate if you or your agency currently have the wireless broadband capability and whether or not it is desirable.**



- Access to training applications, building data, mass casualty and FEMA application rise to the top of the list of applications “desired” by PSAP or 9-1-1 call center respondents.
- Note, the response rate for this question was very low; only one in three PSAP respondents (a total of 16 respondents) provided an answer to this question.

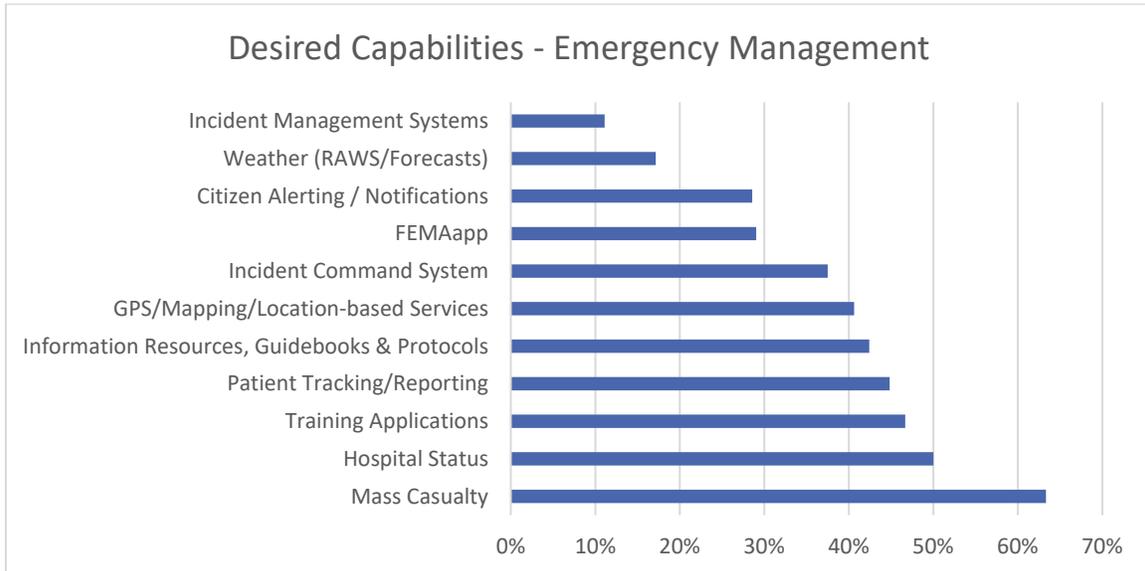


Q31 If your agency is a PSAP or 9-1-1 Call Center and is involved in dispatching, please indicate if you or your agency currently have the wireless broadband capability and whether or not it is desirable. Other disciplines may skip this question.





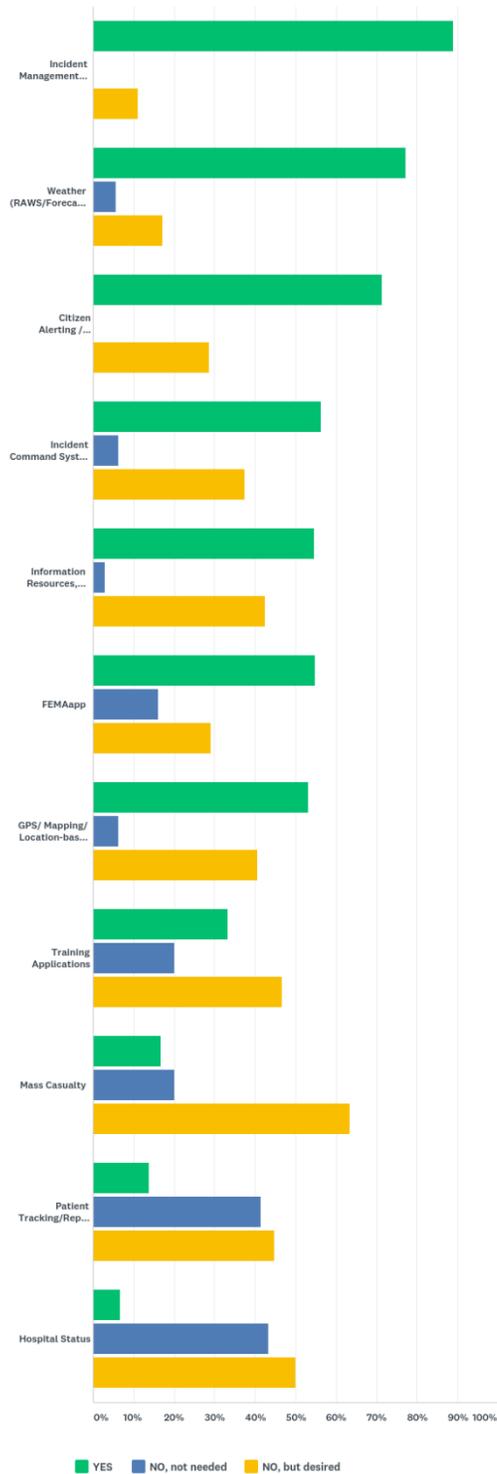
**9.1.27 Q32. If your agency is involved in emergency management, please indicate if you or your agency currently have the wireless broadband capability and whether or not it is desirable.**



- The mass casualty application is most “desired” by emergency management respondents. More than a third of respondents desired incident command system, mapping, information resources, patient tracking, training, and hospital status over broadband.

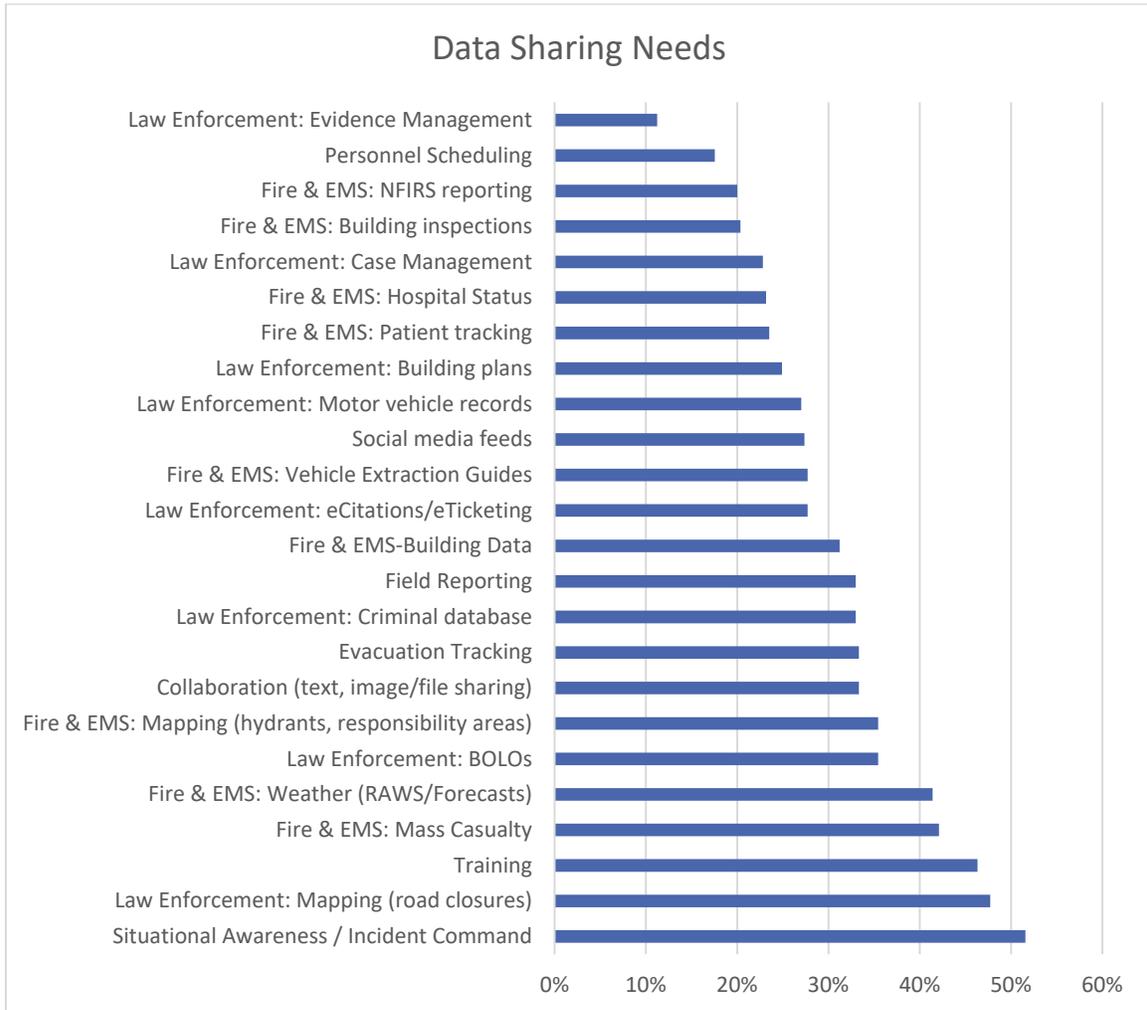


Q32 If your agency is involved in emergency management, please indicate if you or your agency currently have the wireless broadband capability and whether or not it is desirable. Other disciplines may skip this question.





**9.1.28 Q33. Other than those already mentioned above (such as CAD, location, alerting, status, video, and ePTT), what data elements would you like to share with other agencies (either sharing your information with other agencies or vice versa)?**



- An application that can provide situational awareness and incident command data ranks as the most “desired” by all respondents. However, seven different capabilities were identified by a third or more of the respondents to be able to share, including mapping, training, mass casualty, weather, mapping, collaboration, and evacuation tracking.

## 10 APPENDIX B – INDIVIDUAL CRIB RATINGS

The following tables provide a region-by-region breakdown of the ratings by individual CRIB members during the CRIB reviews. Each CRIB member was given an opportunity to rate each gap on a scale from 1 to 10, with 10 being the most important to address. The aggregate score for each gap is provided as an average of the individual ratings. The gaps are sorted to produce a rank per CRIB. The agency represented by the individual is provided in the top row per table. Multiple tables are provided per CRIB to include all voting CRIB members. Priority and important gaps are marked in dark and light green, respectively.

### 10.1 Northeast CRIB

Northeast CRIB			Benson	Cavalier	Eddy	Foster	Grand Forks
Rank	<b>GAPS: On Scale of 1 to 10 where 10 = Greatest importance</b>	Score	Scott Todahl	Karen Kempert	Todd Allmaras	David Utke	Becky Ault
1	<i>Incident Notification Mobile Client</i>	9.43	7	8	10	9	10
2	<i>CAD-to-CAD Incident Data</i>	8.36	8	8	7	8	8
3	<i>Location &amp; Unit Status</i>	8.14	10	8	7	8	9
4	<i>Caution Notices, Person-of-Interest &amp; Contact History</i>	7.64	8	7	8	8	6
5	<i>Situational Awareness Incident Map</i>	7.57	7	8	6	8	6
6	<i>PTT over Broadband</i>	7.29	6	10	9	6	9
7	<i>Central Repository for Map Data</i>	7.21	7	6	7	7	6
8	<i>Prisoner Transport</i>	7	5	8			7
9	Road Status Information Maps	6.71	7	6	8	6	6
10	Cross-Agency Messaging App	5.14	6	6	4	5	4
11	Emergency Road Maintenance	5.07	5	6	5	5	4



Northeast CRIB			Griggs	Nelson	Nelson	Pembina	Ramsey
Rank	GAPS: On Scale of 1 to 10 where 10 = Greatest importance	Score	Wayne Oien	Keith Olson	Angela Herda	Samantha Weeks	Steve Nelson
1	<i>Incident Notification Mobile Client</i>	9.43	10	10	10	10	10
2	<i>CAD-to-CAD Incident Data</i>	8.36	10	10	10	9	7
3	<i>Location &amp; Unit Status</i>	8.14	8	8	8	8	8
4	<i>Caution Notices, Person-of-Interest &amp; Contact History</i>	7.64	5	10	10	8	8
5	<i>Situational Awareness Incident Map</i>	7.57	8	8	8	6	10
6	<i>PTT over Broadband</i>	7.29	10	7	8	4	5
7	<i>Central Repository for Map Data</i>	7.21	6	8	10	6	7
8	<i>Prisoner Transport</i>	7	7	8	8	5	10
9	Road Status Information Maps	6.71	6	8	7	6	8
10	Cross-Agency Messaging App	5.14	5	7	7	4	5
11	Emergency Road Maintenance	5.07	4	7	5	4	5

Northeast CRIB			Steele	Towner	Trail	Walsh
Rank	GAPS: On Scale of 1 to 10 where 10 = Greatest importance	Score	Ben Gates	Lori Beck	Jerry Tollefson	Brent Nelson
1	<i>Incident Notification Mobile Client</i>	9.43	10	9	10	9
2	<i>CAD-to-CAD Incident Data</i>	8.36	7	10	7	8
3	<i>Location &amp; Unit Status</i>	8.14	7	8	8	9
4	<i>Caution Notices, Person-of-Interest &amp; Contact History</i>	7.64	6	10	6	7
5	<i>Situational Awareness Incident Map</i>	7.57	8	7	8	8
6	<i>PTT over Broadband</i>	7.29	5	9	5	9
7	<i>Central Repository for Map Data</i>	7.21	9	6	8	8
8	<i>Prisoner Transport</i>	7		8	4	7
9	Road Status Information Maps	6.71	7	6	7	6
10	Cross-Agency Messaging App	5.14	5	4	5	5
11	Emergency Road Maintenance	5.07	6	5	5	5

## 10.2 Northwest CRIB

Northwest CRIB			Renville	McKenzie	McKenzie	McLean	Mountrail
Rank	GAPS: On Scale of 1 to 10 where 10 = Greatest importance	Score	Kristy Titus	Karolin Jappe	Lloyd Clock	Noelle Kroll	Corey Bristol
1	Caution Notices, Person-of-Interest & Contact History	10	10	10	10	10	10
2	Prisoner Transport	7.7	7	7	7	7	7
3	Incident Notification Mobile Client	7.4	7	8	10	7	7
4	Situational Awareness Incident Map	7.4	8	8	9	8	6
5	Location & Unit Status	7.15	3	10	10	7.5	1
6	CAD-to-CAD Incident Data	7	8		10	8	7
7	Road Status Information Maps	5.6	6	8	4	5	5
8	Emergency Road Maintenance	5.3	6	8	6	5	4
9	Central Repository for Map Data	5	5	6	8	6	3
10	Cross-Agency Messaging App	2.7	2	5	3	4	1
11	PTT over Broadband	2.11	0		3	4	1

Northwest CRIB			Renville	Ward	Ward	Williams	Williams
Rank	GAPS: On Scale of 1 to 10 where 10 = Greatest importance	Score	Rena Johnson	Margaret Haugan	Larry Haug	Verland Kcande	Derrick Walker
1	Caution Notices, Person-of-Interest & Contact History	10	10	10	10	10	10
2	Prisoner Transport	7.7	7	8	7	10	10
3	Incident Notification Mobile Client	7.4	7	7	7	8	6
4	Situational Awareness Incident Map	7.4	7	7	6	8	7
5	Location & Unit Status	7.15	7	8	8	7	10
6	CAD-to-CAD Incident Data	7	8	6	6	4	6
7	Road Status Information Maps	5.6	6	5	5	6	6
8	Emergency Road Maintenance	5.3	6	5	4	6	3
9	Central Repository for Map Data	5	5	5	3	5	4
10	Cross-Agency Messaging App	2.7	2	2	3	1	4
11	PTT over Broadband	2.11	2	3	3	3	0



### 10.3 Southeast CRIB

Southeast CRIB			Stutsman	Barnes	Barnes	Barnes	Cass
Rank	GAPS: On Scale of 1 - 10 10 = Greatest importance	Score	Frank Balak	Sara Miller	Peter Christiansen	Holly Neuberger	Brian Zastoupil
1	Caution Notices, Person-of-Interest & Contact History	9.1	8	9	9	9	10
2	Situational Awareness Incident Map	9	10	9	9	9	10
3	Location & Unit Status	7.91	8	9	7	8	8
4	Central Repository for Map Data	7.78	7	8	8	8	8
5	Road Status Information Maps	7.68	9.5	6	9	8	8
6	Incident Notification Mobile Client	7.4	7	7	8	7	
7	Prisoner Transport	7.38	8	8	8	9	
8	CAD-to-CAD Incident Data	6.82	8	7	6	7	6
9	PTT over Broadband	5.7	10	4	6	8	4
10	Cross-Agency Messaging App	5.11	6	8	5	5	5
11	Emergency Road Maintenance	4.64	6	4	6	6	1

Southeast CRIB			Dickey	LaMoure	Ransom	Richland	Stutsman	Stutsman
Rank	GAPS: On Scale of 1 – 10 10 = Greatest importance	Score	Curt Halmrest	Jeff Fleck	Rob Waletzko	Jill A Breuer	Justin Blinsky	Andrew Berkey
1	Caution Notices, Person-of-Interest & Contact History	9.1	8	10	8	10	10	
2	Situational Awareness Incident Map	9	9	7	9	9	9	
3	Location & Unit Status	7.91	7	9	7	9	8	7
4	Central Repository for Map Data	7.78	8	8		8	7	
5	Road Status Information Maps	7.68	6	7	6	9	7	9
6	Incident Notification Mobile Client	7.4	8	8	8	6	7	8
7	Prisoner Transport	7.38	7	8		5	6	
8	CAD-to-CAD Incident Data	6.82	6	7	6	7	8	7
9	PTT over Broadband	5.7	6	4	6	5	4	
10	Cross-Agency Messaging App	5.11	4	4		5	4	
11	Emergency Road Maintenance	4.64	5	4	3	6	4	6

## 10.4 Southwest CRIB

Southwest CRIB			Adams	Adams	Billings	Billings	Bowman
Rank	GAPS: On Scale of 1 to 10 where 10 = Greatest importance	Score	Michele Gaylord	Travis Collins	Kyle Shockley	Pat Rummel	Karla Germann
1	Caution Notices, Person-of-Interest & Contact History	9.5	9.5	9	10	10	10
2	Central Repository for Map Data	9	9	8	10	10	9
3	Emergency Road Maintenance	8.4	8	7.5	10	10	10
4	Road Status Information Maps	8.2	7.5	7.5	10	10	8
5	Incident Notification Mobile Client	8.17	8	7	7	8	9
6	Location & Unit Status	7.77	6	6	8	8	9
7	Situational Awareness Incident Map	7.33	8	7	8	6	9
8	CAD-to-CAD Incident Data	7	6.5	6.5	6	7	9
9	Prisoner Transport	6.11	6	6	5.5	5	5
10	PTT over Broadband	5.9	7	6	8	9	4
11	Cross-Agency Messaging App	5.83	7	6.5	6	6	5

Southwest CRIB			Burleigh	Dunn	Emmons	Golden Valley	Grant
Rank	GAPS: On Scale of 1 to 10 where 10 = Greatest importance	Score	Brooks Martin	Sandy Rohde	Nolan Anderson	Henry Gerving	Patrick Diehl
1	Caution Notices, Person-of-Interest & Contact History	9.5	9	10	10	8	8
2	Central Repository for Map Data	9	8	9	10	7	9
3	Emergency Road Maintenance	8.4	7	9.5	8	7	8
4	Road Status Information Maps	8.2	8	8	9	6	9
5	Incident Notification Mobile Client	8.17	8.5	8	10	4	9
6	Location & Unit Status	7.77	7.5	8	8	7	9
7	Situational Awareness Incident Map	7.33	6	7	8	5	9
8	CAD-to-CAD Incident Data	7	9	6	7	7	8
9	Prisoner Transport	6.11		6	7	5	5
10	PTT over Broadband	5.9	6.5	4	4	4	6
11	Cross-Agency Messaging App	5.83	6	6	5	3	5



	<b>Southwest CRIB</b>		Hettinger	Morton	Oliver	Stark	Stark
Rank	<b>GAPS: On Scale of 1 to 10 where 10 = Greatest importance</b>	Score	Tracy Kruger	Lynn Woodall	Carmen Reed	Bill Fahlsing	Mike Hanel
1	Caution Notices, Person-of-Interest & Contact History	9.5	10	10	9	10	10
2	Central Repository for Map Data	9	10	8	10	10	8
3	Emergency Road Maintenance	8.4	9	7	9	9	7
4	Road Status Information Maps	8.2	9	9	9	7	6
5	Incident Notification Mobile Client	8.17	8	9	9	9	9
6	Location & Unit Status	7.77	8	9	7	8	8
7	Situational Awareness Incident Map	7.33	7	8	7	7	8
8	CAD-to-CAD Incident Data	7	6	8	7	6	6
9	Prisoner Transport	6.11	6	8	5	9	7
10	PTT over Broadband	5.9	5	8	7	5	5
11	Cross-Agency Messaging App	5.83	5	6	7	6	8



## 11 APPENDIX C – POLICY SUMMARY

Gaps & Capabilities	Policy Summary
Caution Notices, Person-of-Interest & Contact History	<ul style="list-style-type: none"> <li>■ Would need to align and comply with applicable federal, state and local requirements for access to sensitive law enforcement data</li> </ul>
Incident Notification Mobile Client	<ul style="list-style-type: none"> <li>■ No policy issues identified</li> </ul>
Location & Unit Status	<ul style="list-style-type: none"> <li>■ No policy issues identified</li> </ul>
Situational Awareness Incident Map	<ul style="list-style-type: none"> <li>■ No policy issues identified</li> </ul>
Central Repository for Map Data	<ul style="list-style-type: none"> <li>■ Some data is considered sensitive; therefore, the policy will need to address the control and access to the data</li> </ul>
Prisoner Transport	<ul style="list-style-type: none"> <li>■ No policy issues identified; however, issues of safety, coordination and liability will need to be addressed by the policy governing the usage of the solution</li> </ul>
Road Status Information Maps	<ul style="list-style-type: none"> <li>■ Any data that is published on the DOT platform should abide by strict quality standards. DOT indicates that all public facing data would need to ensure a high degree of reliability before it is published on their web interface</li> <li>■ Per the Southwest CRIB, data that becomes part of a statewide platform is no longer protected from disclosures, and therefore, if the locally provided data is required by NDDOT to be outside of the public realm, the legislature may need to exempt the local road status data from public disclosure.</li> </ul>



Gaps & Capabilities	Policy Summary
CAD-to-CAD Incident Data	<ul style="list-style-type: none"> <li>■ There are sensitivities regarding the sharing of the location of off and on-duty personnel [to be defined by policy]</li> <li>■ Not all data should be shared with everyone. The sharing mechanism should be able to partition law enforcement data or HIPPA sensitive data from non-relevant users.</li> </ul>
Emergency Road Maintenance	<ul style="list-style-type: none"> <li>■ No policy issues identified</li> </ul>
Cross-Agency Messaging App	<ul style="list-style-type: none"> <li>■ Potential issues regarding the “ownership’ of data</li> <li>■ No policy issues identified</li> </ul>
PTT over Broadband	<ul style="list-style-type: none"> <li>■ Question: Would PTT application need to abide by Open Records law? Would need to confirm with ND AG’s office.</li> <li>■ Interface into SIRN may require other policy considerations such as security, impacts on capacity, and end-to-end encryption requirements.</li> </ul>