
AFRRCS Agency Handbook

Section: Governance Documents

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1. Governance Charter
2. Legacy System Interoperability
3. Lessons Learned Template

HANDBOOK REVISION HISTORY

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0.1	July 22, 2015	BS	First Draft
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AFRRCS Governance Charter

Program Name: Alberta First Responders Radio Communications System (AFRRCS)

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7.1	May 2018	CB	Updated document presented to Governance with corrections and changes to membership
8.0	June 2018	CB	Revised document endorsed by Governance Council June 19 2018
8.1	July 2018	CB	Revised list of membership

Section

A

AFRRCS Governance Introduction

This Governance Charter, originally approved in April 2007, was developed in consultation with first responder stakeholders. Updates are made to the Governance Charter as the AFRRCS program evolves. The Governance Charter was developed using the following approach.

- a. Conducted research on governance models and best practices.
- b. Held public consultations to obtain an understanding of governance issues and recommendations from a broad range of first responder agencies across Alberta. Nearly 300 participants attended seven public consultation meetings which were held in Edmonton, Calgary, Red Deer, Medicine Hat, Lethbridge, Grande Prairie and Lac La Biche, as well as a consultation with government departments.

AFRRCS Program Governance

Membership of AFRRCS Governance Council on the date of the approval for this version of the Governance Charter is:

- Alberta Emergency Management Agency, Executive Director, Provincial Operations
- Alberta Fire Chiefs Association, Deputy Fire Chief, Strathcona County Emergency Services
- Alberta Health Services, Associate Executive Director, EMS Dispatch Services
- Lacombe Police Services, Chief
- City of Grande Prairie, Fire Chief
- City of Edmonton, AFRRCS Chair, Chief, Fire Rescue Services
- Edmonton Police Service, Chief Administrative Officer
- Executive Director of Law Enforcement, Justice and Solicitor General,
- RCMP K Division, Criminal Operations Officer (CROPS)
- Assistant Deputy Minister of Provincial Telecommunications and Registries, Service Alberta.

Section

B

AFRRCS Vision, Mission Goals, and Objectives

The Alberta First Responder Radio Communications System (AFRRCS) is an interoperable province wide public safety grade radio system that supports first responders in providing safe and secure communities in which Albertans can live, work and raise their families.

I. Vision Statement

AFRRCS is Alberta's first responder land mobile radio solution.

II. Mission

To provide quality, cost effective, secure, reliable, accessible land mobile radio communications supporting all Alberta first responders.

III. Values

These are the AFRRCS values as defined by AFRRCS Governance:

- a. **Accountability:** We are committed to accountability and integrity in our stewardship of all stakeholders' investments.
- b. **Excellence:** We are committed to excellence, quality, and continuous improvement in pursuing the mission of AFRRCS.
- c. **Integrity:** We value integrity in our interactions with participants, stakeholders, and public.
- d. **Respect:** Respect is a standard for all interactions with participants, stakeholders, and public.
- e. **Teamwork:** We value teamwork, and promote partnership, consultation and open communication

IV Guiding Principles

- a. **The** Land Mobile Radio requirements of Alberta's first responders are AFRRCS first priority.
- b. Flexible Operating environment that facilitates the pursuit of Open Architecture for public safety radio technologies.
- c. Formal or de facto Industry Standards are used when making technology selections and setting standards. In the absence of Industry Standards, de facto standards for the applicable technology discipline will be employed.
- d. Policies and procedures for a single shared first responder's communications system apply to all first responder agencies.
- e. First responders have an understanding of services provided.
- f. Security is designed into all architectural elements balancing accessibility and ease of use with requirements for the protection of information.
- g. The land mobile radio solution is implemented within an architectural framework that is sound, consistent in use, and flexible to accommodate the diverse requirements of first responder agencies.
- h. Reporting metrics are used to assess system quality, operational status, and process improvement.
- i. The use of AFRRCS within agencies for day-to-day operability purposes shall be governed by each agency itself within the bounds of AFRRCS policies and procedures.
- j. How agencies work together within geographic areas is arranged through regional collaboration, either by way of collective organizations or mutual aid agreements. It is expected that these regional collaborations will continue to exist and play the primary role in guiding working relationships within the geographic areas. AFRRCS will provide these regional collaborations with the information they need to make decisions to enable interoperability in the manner the agencies see fit within the policies and procedures of AFRRCS.

V. Overarching Goals and Objectives for Sustainability of AFRRCS

The AFRRCS program's thematic goal is "AFRRCS will meet the radio voice communications needs of Alberta First Responder Agencies for all first responders to share one interoperable system". The supporting objectives are:

- a. AFRRCS shall provide an interoperable system for first responders.
- b. AFRRCS shall provide parity between urban and rural service levels
- c. AFRRCS shall provide ample capacity for first responders, traffic on the network should not exceed 75% of maximum capacity based on historical busy day data.
- d. AFRRCS is resilient and will continue to provide two way radio services during major events that increase first responder communication requirements.
- e. AFRRCS shall provide 95% mobile coverage on primary and secondary roads.
- f. AFRRCS is built on the P-25 Standards providing multiple choices for end user radio equipment.
- g. AFRRCS is scalable when needed; having the technical and organizational capability to permanently or temporarily increase capacity and coverage as required.
- h. Sustainment of AFRRCS objectives through upgrades and new infrastructure is provided through GoA investment based on reports from AFRRCS Operations Maintenance and Sustainability (OMS).
- i. AFRRCS is capable of passing encrypted traffic from end user radios to the targeted end user radios for de-encrypting.
- j. AFRRCS will deliver services responsively and in a timely manner as per agency agreements.

VI. Clarifications

In order to guide the understanding of these purposes and principles, the following explanations are provided.

AFRRCS is:

- a. A common, province-wide technical infrastructure for voice and low bandwidth data land mobile radio communications that can be used by agencies providing first and supplementary responder service, as well as other government public services, within and between jurisdictions and disciplines.
- b. A common service bundle, with optional enhancements, that can be used by all participating agencies to meet their operability and interoperability radio communications requirements.
- c. The common service can be used as a platform for additional or unique applications needed by individual agencies.

AFRRCS is not:

- a. A new way of managing agency businesses. Intra-agency communications, and command and control, remain at the discretion of the agency. Inter-agency communications protocols for (a) single discipline – multiple jurisdiction, (b) multiple discipline – single jurisdiction, and (c) multiple discipline – multiple jurisdiction will continue to be developed separate from the technical systems, whose architecture will provide the basis for the technical implementation of these protocols.
- b. Giving up control of agency radio usage. It does mean agencies have the advantage of using common infrastructure rather than investing in and operating the systems individually.

Section

C

AFRRCS Governance Model

AFRRCS will be governed to achieve the greater good of the public safety of citizens, and the safety of first responders. Key groups in AFRRCS governance:

Governance Council will represent the interests of the First Responders. First Responders are the main user of AFRRCS. AFRRCS Governance Council defines first responders as law enforcement, fire and rescue services, and emergency medical services. Governance Council is supported by the Service Council (sub council to oversee the provision of radio network services on behalf of users) and an Interoperability and Standards Council (sub council to establish common technical and inter-operating standards). Participants in governance councils will include representatives of OMS, and participating users.

Operations Maintenance and Sustainability (OMS) through the Ministry of Service Alberta will retain overall accountability and funding for AFRRCS. AFRRCS users will enter into an agreement directly with Service Alberta for the provision of services through service levels from the default minimum service level document and Schedule A in the AFRRCS ACCESS AGREEMENT.

Section

D

Governance Structure and Authority

I. Government Level

1. Service Alberta (SA) has authority to design, build, operate, and sustain AFRRCS.
2. The Assistant Deputy Minister (ADM) of Service Alberta has the responsibility to oversee AFRRCS, will be a member of Governance Council, but will not act as the chair.
3. Operations Maintenance and Sustainability (OMS) has the responsibility for the day to day management of AFRRCS within SA.
4. The SA Deputy Minister (DM) has ultimate decision making authority over AFRRCS including policy and financial matters.
5. The Executive Director of Law Enforcement within Justice and Solicitor General (JSG) will be a member of Governance Council.
6. OMS shall provide the following functions:
 - a. Use a sustainable long term investment approach, AFRRCS lifecycle expected to last 20 years, to provide and manage AFRRCS.
 - b. Work with Service Council to identify, validate, and promote services required by first responders.
 - c. Work with Service Council to update and monitor service levels over time.
 - d. Manage the relationships with users, directly and in conjunction with AFRRCS Governance Councils.
 - e. Design and implement a broad communications strategy to support the agencies' implementation of AFRRCS.
 - f. Work with Interoperability and Standards (IS) Council to identify, validate and promote technical standards for AFRRCS and AFRRCS users.
 - g. Work with Interoperability and Standards (IS) Council to ensure the standards for interoperability support the agencies' technical requirements over time.
 - h. Provide secretariat and business support for AFRRCS Governance Council.

II. Governance Council Level

1. Governance Council is the governance body which relies on volunteer members to address first responder communication issues that are prevalent to its members.
2. Membership on Governance Council is contingent upon the reliance and use of AFRRCS as their primary radio communications system in the day to day operations of the representative's agency.
3. Governance Council shall be responsible for establishing an ongoing selection and appointment process for its membership and the membership of the sub-councils.
4. Membership on Governance Service Sub-Council is contingent upon the reliance and use of AFRRCS as their primary radio communications system in the day to day operations of the representative's agency.
5. Service Council and Interoperability and Standards Council are created, make recommendations, and are responsible to the Governance Council. The terms of reference for these councils are established by Governance Council.

6. Governance Council shall be the senior council body responsible for guiding AFRRCS to meet the requirements of the first responders. It shall have the mandate to provide oversight and leadership to AFRRCS.
 - a. Governance Council shall make decisions which can include recommendations from the Service Council and IS Council.
 - b. Governance Council shall decide priorities and approve user driven hardware and software component improvement and augmentation requests in consideration of available funding. Should funding not be available Governance Council shall decide priorities and make recommendations for funding.
 - c. Governance Council shall advise on new participants in AFRRCS within the scope of the AFRRCS regulatory environment.
 - d. Governance Council shall serve as the escalation and decision body for unresolved disputes arising from the AFRRCS standard form agreements.
 - e. Governance Council shall serve as the approval body to Default Minimum Service Level Changes.
 - f. Governance Council shall approve any changes to the Secondary Responder fee levels.
7. Service Council shall be the body responsible for representing the interests of all **AFRRCS** radio system users, and for recommendations on AFRRCS services and service levels.
8. Interoperability and Standards Council shall be the body responsible for the creation, adoption, and use of standards required for an interoperable radio system. These include technical and behavioral standards.
9. Each of the governance sub council bodies may create and establish terms of reference for sub-committees (comprised of council members) or working groups (comprised of council members and/or others, at council discretion), and may delegate portions of their mandate.
10. Governance Council meetings are in-person meetings and shall be held at least three times a year.
11. Governance councils shall operate through a consensus decision making model. Consensus Decision making is defined as arriving at a decision that may not necessarily be preferred but is a decision that serves the greater good of AFRRCS that all members can support.
12. Delegates will be allowed to attend in place of council members if they carry consistent decision making authority for their agency. It is expected that the council member will brief the delegate on the required background for the meeting.
13. The chairs of each council will be selected by the council members from a pool of volunteers. If the Chair is not available to attend a meeting the chair will appoint an alternate chair for the meeting.
14. The Governance Charter shall be reviewed and amended every two years by Governance Council.

Appendix

A

Governance Council Yearly Report

The following report should be completed by AFRRCS Governance Council at the end of each GoA fiscal year.

Item:	Satisfied (Yes or No)	Comments
Overall scope and direction of AFRRCS.		
AFRRCS service levels.		
Participants on AFRRCS.		
Governance council membership.		
TOR of IS Council and Service Council.		
Council chairs.		
AFRRCS strategic plan.		
Communications and relationship with users.		
Technical and Interoperability standards.		

Appendix

B

Governance Council Structure Strengths and Weaknesses

The following strengths and weaknesses of the informal Governance Council structure, governance through volunteers, have been identified based on research of other governance models.

Strengths:

- Highly dependent on volunteer members that have a vested interest to advance public safety interoperability
- Most responsive to change as it allows the governance councils to adjust as the operating landscape evolves
- Avoids delays associated with lengthy political review and approval process
- Allows the governance council to publish rules and policies in a responsive way

Weaknesses:

- May experience challenges funding large-scale initiatives
- Governance councils are limited to members' area of expertise
- Limited enforceability authority
- Potential to disruption as key members change roles due to the voluntary-nature of membership
- Governance members may prioritize individual objectives over program objectives

(some points referenced from [Emergency Communications Governance Guide for State, Local, Tribal, and Territorial Officials September 2015](#))

I. Duties and Responsibilities

Under mandate from the Governance Council, the Interoperability and Standards Council shall:

- a. Develop and recommend policies and procedures for agency and individual use of AFRRCS. These are intended to be a set of standards and rules that describe how agencies and individuals behave and interact on and with the system, to promote interoperability across disciplines and jurisdictions. Policies, procedures, standards and rules shall be in compliance with legislation, regulations, or any other agreements by the Government of Alberta or other governments, including border areas.
- b. The council is responsible for developing and recommending policies that ensure end user behaviors and technology do not negatively affect the use, reliability and sustainability of the AFRRCS radio system.
- c. Provide guidance, and a set of standards and rules, for agencies to develop regional collaborations (formal or informal) to achieve interoperability within a geographic area.
- d. Provide oversight of matters related to the use of the network for interoperability purposes through working groups, if required.
- e. Enable the adoption and use of uniform technical terms, features, applications and standards by users of AFRRCS.
- f. Enable the adoption of a uniform set of behaviors and performance standards for both agencies and individuals in their daily use, operability, and interoperability efforts within and among the community of users.
- g. Provide oversight of the implementation of technical standards once they have been established.
- h. Provide oversight of the implementation of behavioral standards once they have been established.

Appendix

D

Service Council Terms Of Reference

I. Duties and Responsibilities

Under mandate from the Governance Council, the Service Council shall:

- a. Represent all radio system users in ongoing discussions on AFRRCS performance with a focus on the operating environment and the use of AFRRCS within any given agency.
- b. To act as the conduit between agencies and the service delivery organization.
- c. Work with OMS to establish Service Level Objectives that are achievable, sustainable and meet the requirements of the agencies and the public safety community in the interests of all users of the radio communications system.
- d. Representing the agencies, review AFRRCS service performance and act as the escalation point for agencies regarding AFRRCS performance and service issues
- e. Be the designated change management point for agency requests for changes, modifications and additions to the AFRRCS list of services. Review, refuse or recommend agency requests for changes, modifications and additions to the AFRRCS list of services
- f. Compile all recommended requests for changes modifications and additions to AFRRCS into a prioritized listing and provide to OMS and the AFRRCS Governance Council for review and possible action including justification for recommendation or refusal
- g. Create a dispute resolution and remedy process, and be the designated reception point for agency and inter-agency disputes realizing that Governance Council will always remain the final escalation point for disputes.
- h. Develop and recommend operating policies and procedures for agencies, individuals and for service delivery of AFRRCS. These are intended to be a set of operational standards and best practices that describe how agencies, individuals and service delivery shall behave and interact on and with the system.
- i. Policies, procedures, standards and rules shall be in compliance with legislation, regulations, or any other agreements by the Government of Alberta or other governments, including border areas.
- j. Enable the adoption and use of uniform terms, conditions, schedules and standard language by agencies and AFRRCS service delivery organization.

AFRRCS

Legacy System Interoperability Guide

Section: Governance

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1.0	Nov 28 2017	Curtis Brochu	Finalized Draft Version

Section

1

Background

1.0 Background

Alberta first Responders Radio Communications System (AFRRCS) is a P-25 open standard, province wide Land Mobile Radio (LMR) system that covers much of the provincial land mass. The specific coverage criterion is found in the AFRRCS Access Agreement. AFRRCS is available for municipal first responder use on a fee free basis throughout the province under the same AFRRCS Access Agreement identified earlier.

These decisions were based upon the original concept of AFRRCS which conceived and implemented one system province wide, becoming available on a voluntary basis to municipalities without administration or licensing fees payable to the Government of Alberta. AFRRCS successfully implemented this concept and operates in that manner today.

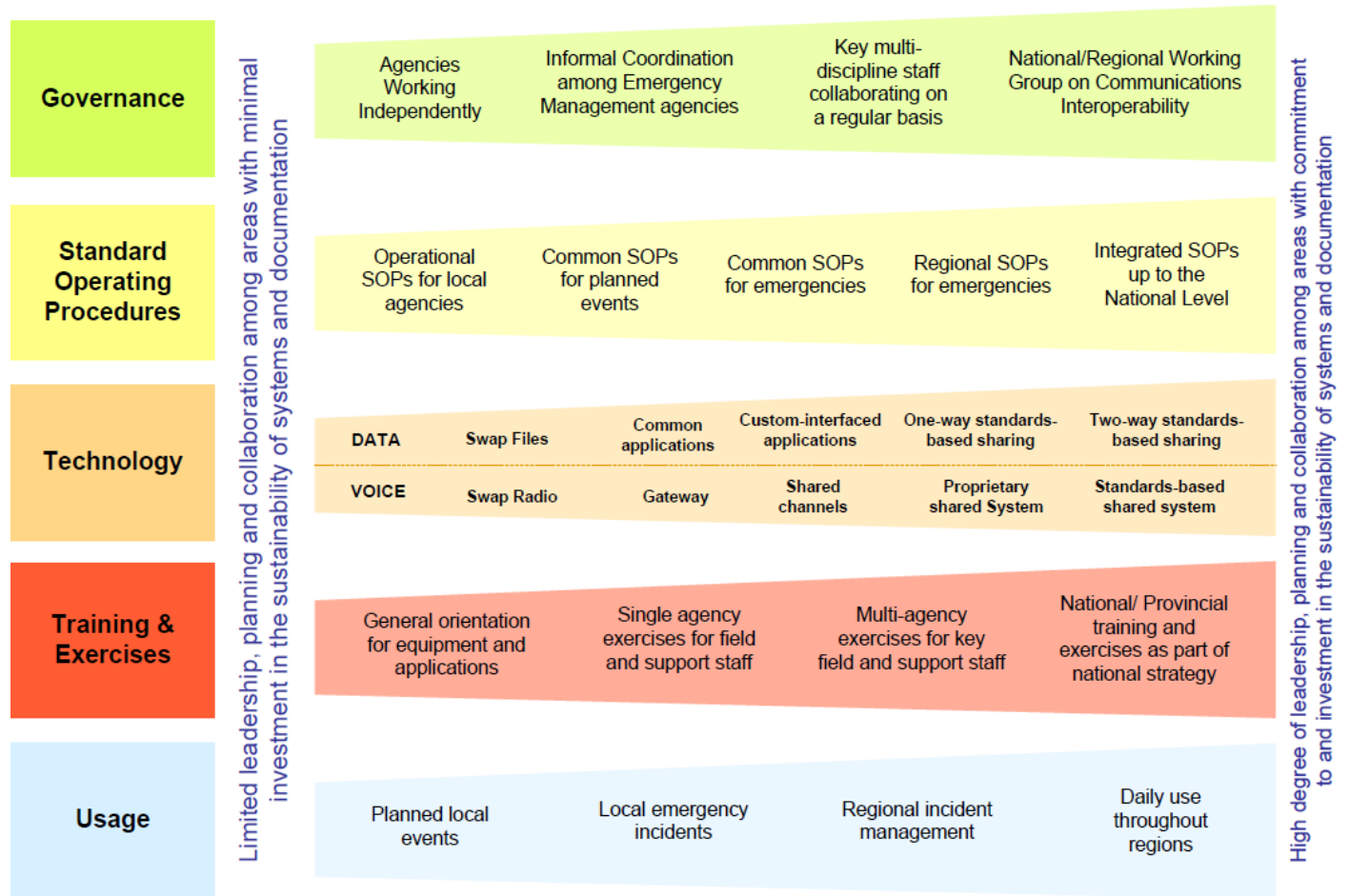
This document contains the complete list of acceptable methods for establishing interoperability between AFRRCS user agencies and agencies or municipalities that have chosen to use alternative or legacy communications systems. There are interoperability solutions not contained within this document. Those solutions are not contained within this document because of the costs and obligations those solutions place on AFRRCS in support of agencies that are not using AFRRCS.

1.1 Interoperability Continuum

The concept of standards based, shared system is the most effective technology state on the SAFECOM Interoperability Continuum, and the Canadian version of that continuum is displayed below. As can be seen “System of System” approaches are further to the left on the continuum which describes less effective methods for achieving interoperability between agencies. AFRRCS does not advocate or support lesser solutions than the one that has been created and implemented. AFRRCS was conceived and built to the requirements of the rightmost “Standards Based Shared System” which is universally described as the most effective technology for voice communications interoperability. Using any solution to the left is a less effective method of interoperability.

A system of system approach requires radio system interfaces or gateway devices to create a path for voice transmissions converted to data streams to be exchanged between the radio systems. As with any interface or gateway connections significant configuration and maintenance is required as the independent radio systems engage in normal and predictable system evolution which takes many forms. A few examples are version upgrades, security patches, and general network maintenance. Small changes to one system or the other have the ability to disrupt the interface communication on an irregular but frequent basis. AFRRCS has deliberately chosen to allow agencies the opportunity to use AFRRCS on a fee free basis. This is a preferable and more reliable alternative than connecting AFRRCS to other systems. It is well established policy within AFRRCS since inception that AFRRCS will not be a system of systems and inter-system interfaces will be reserved for specific special circumstances outside of the AFRRCS jurisdiction, such as the Saskatchewan Province Wide Radio system.

Canadian Communications Interoperability Continuum



Reproduced from the “Communications Interoperability Strategy for Canada”, November 15, 2011

Section

2

Radio Based Interoperability

2.0 Radio Based Interoperability Choices for non AFRRCS agency

Municipal first responder agency adoption of AFRRCS is voluntary and the decision to choose to use AFRRCS or any other communication alternative rests solely with the agency and the municipality. The decision making process and the due diligence that is required in that process are entirely the municipality's and AFRRCS will provide information that enables objective decision making by the municipality or agency.

AFRRCS and user agencies establish roles and responsibilities through the AFRRCS Access Agreement which is the document that sets out the AFRRCS obligations and commitments to the user agency. While there are no negative consequences for an agency or municipality that chooses to use alternative communications systems, that choice also establishes a situation devoid of any AFRRCS obligations to that municipality or agency. There are however constraints on interoperability that are inherent in that decision. Municipal first responder services that voluntarily choose to operate on an alternative communication system should factor these interoperability constraints into their decision making.

This section outlines possible radio based solutions that could be implemented by non AFRRCS user agencies which are seeking to communicate with other agencies that are using AFRRCS for their communication solutions. The question of how to communicate across disparate systems is not a new one for first responder agencies; it has existed as long as the municipal radio system has existed. As before solutions are dependent upon the varying agencies willingness to work together and fund the solutions that meet the local agency requirements.

2.1 Shared Radios

A non AFRRCS agency (NAA) may negotiate with an AFRRCS User agency to be provided a radio(s) by the user agency with the user agency talkgroups and programming in the radio. This solution will allow the NAA to communicate with the user agency as if the NAA was a responding officer of the AFRRCS user agency. All use of radios remains subject to the user agency's Access Agreement regardless of the employment or response agency affiliation of whoever is using the radio. Costs and sharing arrangements are the responsibilities of the two agencies choosing to share radios. In these situations AFRRCS has no obligations to the NAA regarding the radio or system capability or suitability for purpose. AFRRCS will only support and respond to requests from the designated representative of the AFRRCS user agency. Any costs of implementing this solution, of whatever manner, are the responsibility of the NAA.

2.2 Locally Repeated Signals

AFRRCS has created one Common Event Talkgroups (CET) for every County/Municipal District and five CETs for each of the following cities/metropolitan areas: Calgary, Edmonton, Fort McMurray, Grande Prairie, Lethbridge, Medicine Hat, and Red Deer. These CETs are designed to allow local municipal responders the ability to communicate across agencies through a shared talkgroup. AFRRCS allows the use of these talkgroups in whatever manner best serves the requirements of the local AFRRCS user agencies. NAA do not have access to these common event talkgroups because they are not AFRRCS user agencies

There is no Standard Operating Protocol (SOP) for these talkgroups and each locale is able to develop their own SOPs that best suit their needs. Should the local AFRRCS user agencies agree, AFRRCS allows for a local agency to donate a radio to an interoperability gateway to rebroadcast AFRRCS communications over an alternative communication system. This would also rebroadcast that alternative communication system over the local area CET. This is allowed, but the gateway must be locally hosted, managed, maintained and supported by an agency within the coverage area of that CET. AFRRCS allows for this solution but has no obligations regarding the solutions effectiveness, coverage or dependability. AFRRCS will reserve the right to limit the alternative communication system rebroadcast over AFRRCS if that rebroadcast impacts or limits an AFRRCS user agency's ability to communicate on AFRRCS in any manner. As described earlier AFRRCS establishes obligations to user agencies and will act independently to meet those obligations if the situation requires such action. Any costs of implementing this solution, of whatever manner, are the responsibility of the NAA.

2.3 Simplex Frequencies

AFRRCS does have five licensed simplex frequencies in the 700MHz band and will provide permission for NAA to license those frequencies for use within the NAA agency radios. This will allow "site" communications between user agencies and NAA. The range for these frequencies is limited, dependent upon the radio type and configuration and is not repeated on AFRRCS. These are radio to radio communications that exist outside of AFRRCS infrastructure. These should be reserved for close quarter communication while in line-of-sight with others while on the same incident scene. The limited range of this solution makes this a viable solution for site communication and less capable for coordinating among and between responders who are geographically located outside the actual emergency site.

Due to the interoperable nature of AFRRCS simplex frequencies, these channels are not to be programmed with encryption. It is recommended for agencies that have encrypted simplex requirements to directly liaise with Innovation, Science and Economic Development Canada, (ISED). Any NAA wishing to take advantage of this interoperability solution should contact AFRRCS for a simplex license permission letter to be supplied to ISED for authority to license the frequencies within their radios. Any costs of implementing this solution, of whatever manner, are the responsibility of the NAA.

Section

3

Dispatch Based Interoperability***3.0 Dispatch Based Interoperability Choices for non AFRRCS agency***

The interoperability solutions within this section rely on the local dispatch agency(s) to implement, either through a SOP or on request by responding agencies. These solutions require the active intervention and oftentimes direct inter-agency communications between and among dispatch centre officers. It is common for a Dispatch Centre to be considered as an AFRRCS user agency simply based upon their inclusion as part of a first responder migration to AFRRCS. However Dispatch Centres occupy a unique position within the first responder community and AFRRCS has and will continue to create dispatch agencies as stand-alone AFRRCS user agency where the requirement exists and the dispatch agency is willing to enter into an AFRRCS Access Agreement.

3.1 Dispatch “Patch” where the Dispatch Centre is an AFRRCS user agency

This solution relies upon a dispatch centre to “Patch” two or more talkgroups/channels together to form one common communication link. AFRRCS strongly recommends that AFRRCS user agencies take advantage of CETs or shared talkgroups and avoid patching AFRRCS talkgroups to other AFRRCS talkgroups due to the potential negative impact such patches can create for other users. For a dispatch agency to patch an AFRRCS talkgroup the dispatch agency must first have the talkgroup available for patching on the agency’s dispatch console. There are various methods for having the talkgroup available on the dispatch console enabling this form of interoperability.

3.1.1 Dispatch “Patch” using an Internet Protocol Connection

In this situation the Dispatch centre has included in or has entered into an AFRRCS Access Agreement and is an AFRRCS user agency and has established one or more Internet Protocol (IP) connections to AFRRCS either through an Inter-Sub-System-Interface (ISSI) or through a native technology connection. In this situation the Dispatch Centre does not need to be located in the first responder’s operational jurisdiction and can create this capability regardless of the Dispatch Centre’s physical location.

In this case the Dispatch agency can arrange for an AFRRCS user agency talkgroups to be programmed into their dispatch console. The dispatch console will also require connectivity through whatever means the dispatch agency uses to connect to and provide services on the alternative communication system used by the NAA. With both communication systems available on one dispatch console the dispatch centre officer can create a temporary “patch” between the two systems using one AFRRCS talkgroup and as many of the alternative communication system’s resources (talkgroups, channels, frequencies) as necessary for the appropriate response to any given event. These patches are temporary in nature and are established for any given event and discontinued when the requirement generated by the event has been met. Any costs of implementing this solution, of whatever manner, are the responsibility of the dispatch centre.

3.1.2 Dispatch “Patch” using Common Air Interface when Dispatch is inside the Coverage Area

In this situation the Dispatch centre is included in or has entered into an AFRRCS Access Agreement and is an AFRRCS user Agency, but has not established one or more Internet Protocol (IP) connections to AFRRCS. This situation will be rare and represents a dispatch centre that is physically located within the coverage envelope serving the operational jurisdiction of the AFRRCS first responder user agency they provide dispatch services to. The dispatch console will also need to have connectivity through whatever

means the dispatch agency uses to connect to and provide services on the alternative communication system used by the NAA. With both communication systems available on one dispatch console the dispatch centre officer can create a temporary “patch” between the two systems using one AFRRCS talkgroup and as many of the alternative communication system’s resources (talkgroups, channels, frequencies) as necessary for the appropriate response to any given event. These patches are temporary in nature and are established for any given event and discontinued when the requirement generated by the event has been met. Any costs of implementing this solution, of whatever manner, are the responsibility of the dispatch centre.

3.2 Dispatch “Patch” when Dispatch is not an AFRRCS User Agency

In this situation the Dispatch Centre has not entered into nor is it included in a First Responder AFRRCS Access Agreement. In this situation, the Dispatch Centre does not have access to AFRRCS First Responder talkgroups, limiting the AFRRCS resources available to the Dispatch Centre to the five AFRRCS simplex frequencies. The simplex frequencies may be programmed into the Dispatch console and that will allow a dispatch “Patch” solution to be implemented when the Dispatch Centre is within the range and line of sight of the first responder agency using the simplex frequency. In these situations the patch solution does exist, but it is limited geographically and must follow the local jurisdiction directions set out by the AFRRCS user agencies that rely on the simplex frequencies as one of their interoperability solutions. Use of simplex frequencies is governed by local AFRRCS user agencies as set out in the AFRRCS Governance Interoperability Policy.

Section

4

Appendix

- a. The Communications Interoperability Strategy for Canada may be found at the following link. <https://www.publicsafety.gc.ca/cnt/rsrscs/pblctns/ntrprblt-strtg/index-en.aspx#cisc-A1>
- b. Use of the AFRRCS 700MHz simplex frequencies may be guided by local AFRRCS agencies as required
- c. Simplex frequencies are frequently used for Incident Scene Command for multi-agency events. AFRRCS user agencies should consider using AFRRCS SIMP1 (770.18125 MHz) as the default incident scene channel and that the users have convenient access to the channel programmed in their radios.
- d. Simplex frequencies should be programmed as a P25 conventional frequency in a digital format with the default TX NAC: \$293 (HEX) or 659 (decimal) (US Department of Homeland Security National Interoperability Field Operations Guide (NIFOG)).
<https://www.dhs.gov/sites/default/files/publications/National%20Interoperability%20Field%20Operations%20Guide%20v1%206%201.pdf>

AFRRCS

Migration Process Lessons Learned Template

Section: Governance

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Section

1

Background

1.0 Background

Alberta first Responders Radio Communications System (AFRRCS) is a P-25 open standard, province wide Land Mobile Radio (LMR) system that covers much of the provincial land mass. The direction and guidance for AFRRCS is provided by the AFRRCS Governance Council which is composed of leaders in public safety services from across Alberta. Governance members are all involved in an agency migration to AFRRCS and believe in sharing knowledge learned through the migration process with other services considering or undertaking their own migration to AFRRCS.

This Lessons Learned Template is a tool conceived by the AFRRCS Governance Council developed by the AFRRCS Transformation Team, designed to allow an organization to capture and share information developed and acquired in and through their migration. The objective for this template is to inform AFRRCS and all stakeholders of real and potential challenges and successes observed, or encountered in an AFRRCS migration. Use and completion of this template is optional for any agency. All agencies choosing to use and submit information based upon this template do so with the understanding that any information provided to AFRRCS through this template will be shared with all other AFRRCS users.

The body of this document frames questions around various activities that will have been undertaken during the migration process. The questions are framed in a positive manner allowing the template user to quickly develop a sense for answers that begin with “No”. For answers that begin with “No” the desired response is an explanation of the problem or issue that precipitated the “No” answer followed by the actions undertaken to mitigate and solve the problem. This will provide the necessary information for other users to avoid the problem and build upon the learnings of the agency that originally experienced the problem. This ongoing evolution in capturing and further developing solutions to these types of issues will enrich the document and provide future agencies with advanced knowledge and the ability to develop more effective and efficient migration processes.

Section

2

Education Lessons Learned

2.0 Education

Any agency choosing to migrate to AFRRCS either as a replacement for an existing legacy communications system or as an alternative communications system did so based upon information that was developed or acquired from several sources. The process of becoming educated is essential to informed decision making and being aware of the options and impacts of those decisions. This section seeks to identify lessons learned regarding where information is acquired, the credibility and thoroughness of that information and finally the understanding of the consequences of the decision once it is arrived at. The process for acquiring, developing, composing and informing decision makers within the agency hierarchy is essential to a successful migration to AFRRCS. The result should be a properly informed decision by the first responder agency.

2.1 Information Gathering

2.1.1 Information Sources

Did the decision makers receive sufficient information from these potential information sources:

- 1) AFRRCS
- 2) Radio Vendors
- 3) Radio Manufacturers
- 4) Telecommunications companies (as necessary)
- 5) Consultants and contracted personnel
- 6) Neighbouring agencies both:
 - a) AFRRCS users
 - b) Non-user agencies
- 7) Agency associations
- 8) Municipal Associations
- 9) Local elected officials
- 10) Local administration officials
- 11) Other sources such as
 - a) Radio Reference
 - b) Internet
 - c) News articles
 - d) Consultants
- 12) Other

2.1.2 Information Quality

Was the information:

- 1) Accurate
- 2) Complete
- 3) Un-Biased
- 4) Concise
- 5) Understandable
- 6) Realistic
- 7) Thorough
- 8) Timely
- 9) Other

2.2 Informed Decision Making

Did the information gathered lead to decision making that identified potential:

- 1) Implications
- 2) Benefits
- 3) Consequences
- 4) Challenges
- 5) Costs
 - a) One-Time
 - b) Ongoing
- 6) Timeframes
- 7) Processes
- 8) Support
- 9) Escalations
- 10) Agreements
- 11) Contacts
- 12) Other

Are there other learnings associated with the Information Gathering phase that could be shared with other agencies contemplating a migration to AFRRCS?

Ultimately the information gathered in advance of a migration should have created informed decision making that provided the appropriate authority to be confident in their decision and aware of the potential benefits and consequences that would arise from their decision to migrate to AFRRCS.

Section

3

Migration Lessons Learned

3.0 Migration

Migration from an existing or legacy system is a process with clear dependencies which can be set out on a critical path of activities. The end state or success is easily defined as operational use of AFRRCS for public safety communications. The challenge with a migration lies not in vague or ambiguous outcomes; rather the challenge comes from complexity and the myriad steps necessary to successfully complete a migration. The successful migration is based on planning through the steps from budgeting through training, change management, logistics and cutover.

3.1 Budgeting and Procurement

Was the budgeting for and procurement of various materials and services:

- 1) Understood
- 2) Accurate
- 3) Legally compliant
- 4) Facilitated by the Service Alberta Standing Offer for Radios
- 5) Predictable
- 6) Vendor capable
- 7) Timely
- 8) Other

3.2 Technology

Were the technology responsibilities parameters and requirements for the programming and capability decisions of radios, base stations and dispatch consoles:

- 1) Understood
- 2) Planned
- 3) Delivered
- 4) Implemented
- 5) Correct in the first effort
- 6) Timely
- 7) Supported
- 8) Aligned with budgetary numbers
- 9) Other

3.3 Training and Change Management

Were the training and change management programs for agency employees:

- 1) Implemented
- 2) Successful
- 3) Well received
- 4) Documented
- 5) Thorough
- 6) Effective
- 7) Targeted to specific audiences
- 8) Exhaustive
- 9) Measured
- 10) Other

3.4 Logistics

Were the processes necessary to provision, program, distribute and install radios and other devices:

- 1) Understood
- 2) Planned
- 3) Achievable
- 4) Comprehensive
- 5) Supported
- 6) Timely
- 7) Correct in the first effort
- 8) Effective
- 9) Cost effective
- 10) Other

3.5 Cutover

Was the process of cutover from the existing system to AFRRCS:

- 1) Planned
- 2) Understood by all participants
- 3) Documented
- 4) Defined (Scope)
- 5) Briefed
- 6) Achievable
- 7) Supported
- 8) Effective
- 9) Non-disruptive
- 10) Sustained (not backed out)
- 11) Time Bound
- 12) Other

Are there other learnings associated with the Migration phase that could be shared with other agencies contemplating a migration to AFRRCS?

Ultimately the activities undertaken in the Migration phase will have identified areas where planning and implementation will have led to a successful outcome. This phase is where most activities are undertaken in a sequential and timely manner that leads to a successful cutover. Learnings from this phase will be the most easily applied and easily reproducible learnings for other agencies to incorporate into their migration. This is the area of greatest practical benefit from this template.

Section

4

Post Migration Lessons Learned

4.0 Post Migration

The Post Migration process begins after the cutover process is complete. This is the period where unforeseen consequences and unintended impacts to operations may materialize significantly affecting how the first responder agency conducts business. These impacts may be positive as well as negative, it is not a given that all impacts are negative. Careful examination of the changes that occur particularly in operational practices at this time will lead to identification of actions that should have been undertaken to prevent negative impacts and the opportunity for institutionalization of actions that created positive impacts.

4.1 Sustained Operations

After cutover were operations:

- 1) Normally sustained
- 2) Able to remain on AFRRCS
- 3) Unchanged
- 4) Improved
- 5) Accepting
- 6) Evaluated for impacts
- 7) Less complicated
- 8) Other

4.2 Ancillary Developments

After migration was complete were the impacts as expected in areas such as:

- 1) Policies
- 2) Procedures
- 3) Budgets
- 4) Numbers of employees
- 5) Training
- 6) Down time
- 7) Radio Coverage
- 8) Fleet vehicles
- 9) Support personnel
- 10) Duplicated efforts
- 11) Other

Are there other learnings associated with the Post Migration phase that could be shared with other agencies contemplating a migration to AFRRCS?

Ultimately the review process in the Post Migration phase will identify areas throughout the entire process that have contributed to or detracted from a successful outcome. Energy spent in this review has the potential to benefit other agencies the most given the wide-ranging and multiple aspect approach to this review. Learnings from this phase will be broader in scope and should cover a wider range of issues including personnel, organizational behaviour and impact. This is the area of greatest organizational improvement benefits that can be derived from this template.

Section

5

Summary

This Template has been created to provide AFRRCS user agencies an opportunity to self-evaluate the success of their migration to AFRRCS and capture significant findings to be better informed for future migrations. The ultimate purpose is to share this information across agencies to work collectively to improve the migration process for all user agencies.

Particular attention should be paid to any question in the template that precipitated a “No” answer. A “No” answer by itself does not identify a problem; many of the concepts listed in this document may have been deliberately and successfully omitted from an agency’s migration plan. The benefit of “No” answers where a yes was anticipated provide the greatest opportunity for lessons learned and can provide advance knowledge and intelligence to other agencies undergoing the same process.

In conclusion the use of this form and the information contained within it is a voluntary provision of information with intent of sharing lessons learned across the community of AFRRCS users. It is intended to be approached with a positive attitude and the objective of learning and sharing those lessons which are learned with difficulty.