

**State of Nebraska Office of the CIO, Public Safety Communications****Communications Planning Road Map**

This Communications Road Map provides an overview of solutions to upgrade and improve communications for dispatchers and first responders across the state. Sharing communications resources and familiarity with local procedures ensures critical information is able to be exchanged accurately, rapidly, and reliably. The *local communication system* is essential for supporting public safety responders and dispatchers. The *right solution* is that which improves the overall communications and interoperability for all participating agencies. It is important to consider the needs of legacy communications resources while migrating to an advanced communications system. *It is not necessary to replace everything!*

**SRS Console System****Motorola MCC7500 2 Position Console System**

The SRS console system is an *option* to replace your local dispatch console, if it is incapable of being upgraded, or may be nearing end-of-support from the manufacturer. It is *networked to the SRS and allows operation of SRS talk resources and maintains connectivity with your existing local communication channels*. While providing advanced features and enhanced capabilities, the console screen looks nearly identical to the Motorola Centracom Elite, making transitioning to the new console much easier.

- Operates SRS and local talk resources from the local dispatcher position.
- Connects to the existing local repeaters, paging encoders, and siren controls.
- No requirement to replace tower site equipment or other local infrastructure.

*Example: Your law enforcement agency purchases new radios to migrate to the SRS, while the fire department remains on their current system. All your local agencies are supported whether they migrate to the SRS or continue using their current systems.*



The console system design includes the hardware to connect to the state SRS master site, and connect to the local conventional resources. The State of Nebraska OCIO and Motorola provide ongoing support with your local service shop, which will be qualified to service the equipment. All resources are arranged in a clean logical order on the dispatch screen tailored to the needs of the dispatcher and the local communications operation.

Equipment	Function	Cost
MCC 7500 Console System	2 Position Elite Dispatch	\$198,860.00
VPM	Voice Processing	
GGM 8000 Gateway Router	Tie In Existing Local Systems	
LAN Switch/Site Router	Connect to SRS Master Site	
Engineering and Installation	Install, Configure, Test	

**Console System Hardware and Installation One-Time Cost**

**Logging Recorder**

An SRS compatible logging recorder is an *option* if the local logging recorder is at end of life or if there is a need to record both SRS and non-SRS communications. A proposal can be provided to upgrade the local logging system to a Motorola certified NICE logging system. Additionally, if the local agency wants to become an SRS user, the state OCIO supports a logging system for SRS calls. A Motorola compatible logging system provides the ability to record and retrieve both the local communications call history and SRS traffic from one location.

**User Radio Equipment**

The local agency has the *option* to upgrade its mobile radios to talk on the SRS. Replacing your radios is required only if you want to move your users onto the SRS. This is not a requirement to upgrade your console system. A wide variety of radios, features and options are available to fit the needs of different agencies. Not everyone needs all the “bells and whistles” and for the purpose of this road map, a low-tier mobile radio and high tier multi-band portable radio are shown with options appropriate for a law enforcement agency. For other local agencies, a low-tier radio may be suitable, or a high-tier radio may be required if more features are appropriate.



APX 4500 VHF Mobile Radio



APX 7000 VHF/UHF Portable Radio

Radio features and costs are determined in a detailed discussion with the agency based on its needs. Some agencies need to communicate on multiple frequency bands, and encryption is an optional feature used for supporting secure law enforcement communications. Radio costs can range from \$2,000 to \$6,000+ depending on features and capabilities needed.\* Other manufacturer’s radios will be tested on the SRS in the near future providing more options.

Equipment	Supports	Cost Estimate*
Motorola APX Mobile low tier	SRS and Local VHF	\$3,400+
Motorola APX Portable high tier	SRS and Local VHF-UHF	\$5,500+
Other manufacturer radios	SRS and Local VHF	TBD

**Examples of Mobile and Portable Radio Cost**

Before committing to a radio purchase, OCIO develops the agency migration plan and provides a detailed equipment list based on the agency’s needs for review. Programming support and a detailed plan is developed, including support for training and ongoing equipment lifecycle management.

**Consolette Radio Backup**

An APX7500 Consolette radio is connected to the local dispatch console to provide limited SRS communications. ***The SRS console system is networked to the SRS and provides more features and enhanced capabilities to communicate on the SRS and operate local talk resources than a non-networked console or radio control station can provide.*** If the network connection to the SRS is interrupted, the consolette radio can provide limited back-up dispatch functions until network connectivity is restored. The consolette also supports the statewide ROC plan that provide non-SRS users the ability to communicate on the SRS on a limited interoperability basis.



SRS Consolette Radio – Provides Communication Back-up

Equipment	Supports	Cost Estimate
Motorola APX Consolette	SRS Radio Back-up	\$10,000+

**Tower Site Addition**

The SRS was designed for 95% statewide mobile radio coverage. However, most local agencies expect portable radio coverage throughout their service area. In some cases adding a tower may be needed to increase portable radio coverage in certain areas.

OCIO can schedule a day to drive the local area with your agency and demonstrate radio coverage. If there is a need to improve coverage a plan can be proposed to add a tower site and the cost. In most areas of the state there is overlapping radio coverage from several towers.

Planning a tower addition would be in consideration of the overall benefit to the SRS and your agency.



There are several ways to participate on the SRS, as outlined in this Communications Road Map. Participation can include one or more of these options and is based on a discussion with the interested agency. Each solution includes detailed planning.

1. **Console and Logging Systems** as described above.
2. **User Radios** that operate on the SRS.
3. **Consolette** that connects to the Local Console System providing SRS talk resources at the dispatch center.

## **Requirements Checklist**

To track the process and ensure officials have the necessary information, OCIO created a planning process to identify the agency's needs and plan around the individual agency's requirements, and life cycle management to ensure the support requirements and maintenance needs are budgeted.

**OCIO Support Services** – The State of Nebraska manages the statewide radio system and supports interoperability planning with public safety agencies. Training on equipment use, talk resources and tactical scenarios is essential for dispatchers and users to understand to use their communications resources effectively. Participation on the SRS begins with:

- ✓ **Intent to Participate** – The requesting agency completes the (non-binding) form and returns to OCIO to start the planning process.
- ✓ **Agency Profile** – The requesting agency completes the form and returns to OCIO to identify the local communications environment.
- ✓ **Agency Migration Plan** – The planning steps cover the necessary information to understand the need for radio coverage, equipment, communications resources and service agreement terms.
- ✓ **OCIO Service Agreement** – OCIO develops a Service Agreement with the agency and identifies terms and costs for the equipment and services to be included (console system, logging recorder, talk resources, subscriber radio, support, etc.).

**Vendor Support Services** – OCIO coordinates systems planning with partner vendors and radio service shops. What this means to you is that the state and supporting vendors understand the need to provide consistent and reliable service to your agency. This helps eliminate misunderstandings concerning contracted responsibilities and you know who to call when there are problems.

- ✓ Console and Logger System design provided by Motorola.
- ✓ Installation and Support Services provided by Radio Service Shops and Motorola.
- ✓ SRS support provided by OCIO.

## **Ongoing Support Cost**

The cost for ongoing maintenance and support is identified through the detailed agency discussions. OCIO develops a Service Agreement with the agency and identifies terms and

costs. Vendor service providers may provide separate maintenance agreements based on the agency's requirements.

**For questions about the SRS** – Contact the State of Nebraska Office of the Chief Information Officer.

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