

ITERATIVE PROJECT REPORT FOR PROGRAMS & MULTI-YEAR PHASED PROJECTS

Submitted to Project Oversight on 08/10/2023

GENERAL INFORMATION

Program/Project Name: North Dakota Statewide Interoperable Radio Network (SIRN)

Agency Name: North Dakota Information Technology (NDIT)

Project Sponsor: Craig Felchle

Project Manager: Timothy Verasca

PROJECT DESCRIPTION

A significant portion of the public safety community has stated that current land mobile radio networks limit the ability of first responders to consistently work together in providing timely response for day to day, mutual aid, and task force operations due to technology and coverage limitations. Additionally, current public safety land mobile radio systems may not consistently meet regional/statewide needs in providing suitable functionality across all operating environments and locations.

Significant additional factors supporting the timing of meeting the business needs

1. Approximately 40% of all public safety communications equipment across the state is approaching “End of Support” from manufacturers (2018-2020)
2. Current interoperable communications are limited and require significant work arounds, while not readily supporting field interoperability and communications with the local 911 dispatch centers
3. Procurement and implementation of Mission Critical Communications must address at a minimum
 - a. Reliability
 - b. Coverage
 - c. Interoperability
 - d. Sustainability
4. Current Issues experienced within North Dakota
 - a. Coverage Challenges
 - b. Interoperability Challenges
 - c. End of Support Challenges (2018)

To ensure maximum adoption and an efficient communications ecosystem, the SIRN Program will be comprised of multiple projects, and will address the baseline needs put forth by the stakeholder community, provide a centralized management system, and integrate current and future radio systems while enabling federated control of local resources. SIRN solutions will be substantially anchored on existing public (State and Local) infrastructure to leverage all suitable investments.

The program solution for SIRN consists of three principal attributes:

- Deliver effective radio coverage and interoperability
- Ensure feature accessibility and timely/reliable maintenance
- Leverage inclusive Governance

Another way to describe this is the need to deliver the right combination of people, processes, and technologies; in that order. Based on legislative guidance, the SIEC in concert with NDIT will establish an overarching SIRN program based on selection and procurement of a key partner or partners in meeting the business need. Since the selected contractor will be critical in determining the priority of work, use of funds and identification of objectives for each approved project, along with specific business objectives and measurements will be developed and confirmed as part of planning for each project, with SIEC concurrence prior to baselining the project.

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BUSINESS NEEDS AND PROBLEMS

Per the Statewide Interoperable Radio Network Feasibility Study, public safety communications systems in the State of North Dakota are at a critical juncture. The State’s current mission critical networks are comprised of a patchwork of dozens of aging and disparate systems that have not kept pace with the public safety community’s evolving needs for increased reliability, performance, and interoperability. These land mobile radios serve as an essential communications tool for over 900 public safety and other public sector agencies comprised of 20,000 users and devices and 23 Public Safety Answering Points (“PSAP”, “Dispatch”, or 9-1-1 Call Centers”) distributed across all 53 counties and several state agencies. Many of these systems—primarily anchored on 1970s technology, and implemented individually by State, local, and municipal entities over the past three decades—will soon reach the end of their functional lifecycle and, as the vendors begin to sunset old technologies, will no longer be supported by their manufacturers.

PROJECT FORMAT

Program/Project Start Date: August 1, 2019

Budget Allocation at Time of Initial Start Date: \$120,000,000

How Many Phases Expected at Time of Initial Start Date: Three Phases, with sub phases or groups each being managed as a project

Phased Approach Description: Iterative waterfall

Estimated End Date for All Phases Known at Time of Initial Start Date: Term of the contract is 5 years (August 2024), with up to 4 one-year extensions.

PROJECT ROAD MAP

The project road map shows the high level plan or vision for the program/projects/phases. It is intended to offer a picture of the lifespan of all the effort that is expected to be required to achieve the business objectives.

Project or Phase	Title	Scope Statement	Estimated Duration (months)	Estimated Budget
Phase 1 Group 1	Core & Consoles (5)	Establish Network Core and Five (5) PSAP equipment replacements (Grand Forks, Minot, Stutsman, Barnes, & Richland	11 Months	\$5,741,102.14
Phase 1 Group 2	Console Replacement	Console replacement group 2	12 Months	\$3,628,966.65
Phase 1 Group 3	Console Replacement	Console replacement group 3	TBD	TBD
Phase 1 Group 4	Console Replacement	Console replacement group 4	TBD	TBD
Phase 2 Group 1	RF Buildout & Simulcast	RF Buildout of state-owned towers, tower construction, enclosure construction and Simulcast	41 Months	\$21,525,454.52
Phase 2 Group 2	RF Buildout & Simulcast	RF Buildout of leased tower sites and Simulcast	30 Months	\$10,683,594.70

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Project or Phase	Title	Scope Statement	Estimated Duration (months)	Estimated Budget
Phase 2 Group 3	RF Buildout & Simulcast	RF Buildout of leased tower sites	TBD	TBD
Phase 3 Group 1 RR	State Radio Reimbursement	State of North Dakota City/County Law Enforcement, Fire Fighters, and Emergency Medical Personnel.	57 Months	\$30,000,000.00
Phase 3 Group 2	Radio SIRN	Department of Corrections & Rehabilitation NDSP, MRCC, JRCC, YCC & HRCC, P&P	15 Months	\$2,057,164.35

PROJECT BASELINES

The baselines below are entered for only those projects or phases that have been planned. At the completion of a project or phase a new planning effort will occur to baseline the next project/phase and any known actual finish dates and costs for completed projects/phases will be recorded. The startup report will be submitted again with the new information.

Project or Phase	Program/Project Start Date	Baseline Execution Start Date	Baseline End Date	Baseline Budget	Actual Finish Date	Schedule Variance	Actual Cost	Cost Variance
Project Phase 1								
Group 1	2012	8/2019	8/2020	\$5,741,102.14	8/2020	0	\$5,547,151.67	-\$193,950.47
Group 2	2012	1/2020	9/2021	\$4,429,290.65	TBD	TBD	TBD	TBD
Group 3	2012	1/2021	1/2022	\$1,877,307.89	TBD	TBD	TBD	TBD
Group 4	2012	10/2021	3/2023	\$1,471,150.44	TBD	TBD	TBD	TBD
Group 5	2012	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Project Phase 2								
Group 1	2012	8/2019	12/2022	\$25,582,657.04	TBD	TBD	TBD	TBD
Group 2	2012	7/2019	3/2022	\$10,683,594.70	TBD	TBD	TBD	TBD
Group 3	2012	3/2021	12/2023	\$16,523,924.01	TBD	TBD	TBD	TBD
Group 4	2012	2/2022	9/2024	\$24,513,057.90	TBD	TBD	TBD	TBD
Group 5	2012	10/2022	9/2024	\$13,938,734.31	TBD	TBD	TBD	TBD
Project Phase 3								
Group 1	2012	7/2020	1/2024	\$30,000,000.00	TBD	TBD	TBD	TBD
Group 2	2021	12/2021	2/2023	\$2,057,164.35	8/2023	122 days	\$2,067,651.12	\$10,486.77
Project Phase 4								
Group 1	2012	TBD	TBD	TBD	TBD	TBD	TBD	TBD

OBJECTIVES

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Group	Business Objective	Measurement Description	Met/ Not Met	Measurement Outcome
Phase 1				
Group 1	Establish SIRN Network Core, DSR & PSAP Console Replacement	Establishment of a fully redundant core and installation of fully functional PSAP equipment	Met	No impacts to daily operations at the PSAP level.
Group 2	PSAP (Public Service Answering Point) Console replacement	Installation of fully functional PSAP equipment	Met	No impacts to daily operations at the PSAP level.
Group 3	PSAP (Public Service Answering Point) Console replacement	Installation of fully functional PSAP equipment	Met	No impacts to daily operations at the PSAP level.
Group 4	PSAP (Public Service Answering Point) Console replacement	Installation of fully functional PSAP equipment	Met	No impacts to daily operations at the PSAP level.
Group 5	Planning			
Phase 2				
Group 1	RF Buildout of NDDOT state-owned towers, tower construction, enclosure construction and simulcast.	Establishment of Motorola's new network at all State-owned sites.		State Radio able to operate on new State network.
Group 2	RF Buildout of tower sites and simulcast.	Establishment of Motorola's new network at Early Adopters lease sites.		Early Adopters able to operate on new network built out.
Group 3	RF Buildout of tower sites and simulcast.	Establishment of Motorola's new network at all leased & ITD owned sites.		Mobile Radio coverage tower build-out continuation.
Group 4	RF Buildout of tower sites and simulcast.	Establishment of Motorola's new network at all leased & ITD owned sites.		Portable Radio coverage tower build-out continuation.
Group 5	RF Buildout of tower sites.	Establishment of Motorola's new network at all leased sites.		Portable Radio coverage tower build-out continuation.
Group 6	Planning			
Phase 3				
Group 1	Radio Reimbursement Tracking	Maximum participation in SIRN 2020 project by North Dakota Cities and Counties		Exhaust all funds
Group 2	Radio SIRN Internal coverage testing at locations: NDSP, MRCC, JRCC, YCC & HRCC	On installation day test for 100% coverage internally at DOCR facilities by facility. This will be measured by using the Master Model/Serial Number spreadsheet to track the pass/fail rate for each radio assigned to the facility and tested.	Met	
Group 2	Radio SIRN External Testing – Parole and Probation (P&P)	Parole & Probation will test for 95% mobile and 85% portable dependent on SIRN	TBD	The radios all work as expected however with SIRN not being up yet and will not be for some

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		program completion date which is Statewide and Regional. This will also include any trunked radio/main master control room radios. This will be measured using coverage acceptance test plan (CATP). See link CATP .		time we can't fully test on that system. Currently we have no issues with functionality or range.
Phase 4				
Group 1	Planning			

POST-IMPLEMENTATION REPORT

Post-Implementation Reports are to be performed after each project or phase is completed. A "PIR" is a process that utilizes surveys and meetings to determine what happened in the project/phase and identifies actions for improvement going forward. Typical PIR findings include, "What did we do well?" "What did we learn?" "What should we do differently next time?"

Project or Phase	Lesson learned, success story, idea for next time, etc.
Phase 1	
Group 1	Lessons Learned. Local Motorola Partner Shops required more training, preparation, and on-site investigations to more efficiently transition PSAP's.
Group 2	<ul style="list-style-type: none"> • Clarifying and updating financials to complete closeout
Group 3	<ul style="list-style-type: none"> • One PSAP site remodeled prior to site completion, delaying final R56 reporting. Closeout TBD.
Group 4	<ul style="list-style-type: none"> • Awaiting contract extension to closeout
Phase 2	
Phase 3	
Phase 3 Group 2	NDSP & MRCC radios needed rework/retouch which was mainly code plug related. To avoid this on future projects, ensure code plugs are well vetted and approved prior to installation of the code plug into the radios . In this event, the vendor (ECI) put incorrect talk groups in the radios (Parole & Probation) in radios that were not going to be on the trunked system, as well as, the radios on the trunked SIRN system.
Phase 3 Group 2	<ul style="list-style-type: none"> • The zone testing that was done prior to implementation day helped a lot. • Deployment day went better than expected. • The project meetings were well organized. • Project communication was good. • "Everything was good." • "Angie did a great job."
Phase 3 Group 2	Look at the needs and not just replacement of existing radio systems. They started out short, so they are no further ahead than when we started. Budget was an issue not enough money was allocated for such a project, I would put the fault on Motorola's quoting process leaving us with a number of unplanned costs mainly on programming and required features.
Phase 3 Group 2	Working with Motorola was painful. Orders were shipped incorrectly, and ETAs were off completely. Cost was miss calculated by Motorola but worked to our benefit. It took several months to correct billing issues (mistakes made by Motorola).
Phase 3 Group 2	Next time – not force everyone into product that is not wanted.

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Project or Phase	Lesson learned, success story, idea for next time, etc.
Phase 3 Group 2	"I entered the project late due to position changes. It would have been nice to be able to read the previous notes when I started."
Phase 4	

KEY CONSTRAINTS AND/OR RISKS

The program has the following constraints:

- NDIT and Public Safety Agency Resources (business, technical) are limited in the number of staff available
- The full program schedule cannot be established due to the long duration; therefore, schedule management is constrained to each phase of the project
- Future funding appropriations are necessary to complete all phases
- Cost, schedule, scope, and quality are often in conflict during releases. The sponsor and ESC elected to prioritize these constraints as follows for the program:
 1. Scope
 2. Quality
 3. Cost
 4. Schedule

The program has the following risks:

- North Dakota weather – since there is considerable amounts of civil work to be completed. The North Dakota weather is a risk to all phases of the project. The team will attempt to schedule outdoor civil work based on average weather patterns. However, weather may fluctuate outside of the normal patters and impact the project.
- Supply Chain – Significant components required for this project have seen lead times grow from months to years. The team is working on finding alternative sources and implementations to minimize the effects of these delays.