

# Iterative Project Report for Programs & Multi-Year Phased Projects

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## GENERAL INFORMATION

**Program Name:** Public Health Systems Modernization

**Agency Name:** Department of Health

**Project Sponsors:** D365 Disease and Outbreak System - Michelle Dethloff

MAVEN Modernization – Michelle Dethloff

NDIIS Modernization – Molly Howell

**Program Manager:** Kris Vollmer

**Project Managers:** Stacie Wade and Craig Hovet

## PROGRAM DESCRIPTION

Public health depends on widespread and rapid access to data to drive decision-making, data is its foundation. As part of the Coronavirus Aid, Relief, and Economic Security Act or CARES Act of 2020, the North Dakota Department of Health (NDDoH) was the recipient of grant funding under Project C2: Data Modernization of CK19-1904, or Data Modernization – COVID.

The intent of this program is to accelerate the Department of Health's implementation of data modernization efforts across numerous public health information systems. Data modernization efforts include but are not limited to core data modernization infrastructure; adaptation and alignment with ND Enterprise Solutions, when applicable; implementation of electronic case reporting (eCR); and modernization of National Vital Statistics System. Public Health information systems identified for data modernization as part of the program have been included in Table 4: Program Budget. Additional systems may be identified during gap analysis.

The data modernization initiative is broken into three tiers. Each of the various projects, has been aligned with one of the following three tiers.

- Tier 1 – Core Data Modernization Infrastructure
- Tier 2 – Electronic Case Reporting (eCR) Scale Up
- Tier 2 – National Vital Statistics System (NVSS) Modernization

## BUSINESS NEEDS

Business needs focus on both business and technology modernization; process improvement; mobility; aging technology as well enhancing public health workforce capacity in order to accelerate data and health information system modernization. The primary objectives across the three tiers are:

- Strengthen data reporting, management, and analytics across public health
- Conduct proper surveillance – for all current and future public health threats
- Support the public health workforce in pursuing innovation and building state-of-the-art data science skills
- Deliver guidance that the citizens of North Dakota can trust

## PROGRAM/PROJECT FORMAT

**Program/Project Start Date:** January 1, 2021

**Budget Allocation at Time of Initial Start Date:** \$14,331,550

**How Many Projects Expected at Time of Initial Start Date:** 13

**Project Approach Description:** The program will include numerous system projects, using hybrid or phased implementations.

**Estimated End Date for All Projects Known at Time of Initial Start Date:** July 30, 2024

## PROGRAM/PROJECT ROAD MAP

The program 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. Projects may run concurrently.

Project/Phase	Title	Scope Statement	Estimated Months Duration	Estimated Budget
Project 1 Tier 1	Data Modernization Initiative (DMI)	Overarching project to lead and coordinate DoH's data modernization efforts and implement workforce enhancements to support the acceleration of data modernization	44 m	\$2,032,267
Project 2 Tier 1	Dyn365 Disease & Outbreak System	This project creates a new Dynamics 365 environment that will host both COVID-19 test registration/management and the contact tracing/case investigation surveys.	24 m	\$3,001,660
Project 3 Tier 1	MAVEN Modernization	This project will upgrade the MAVEN system to current versions. It will also consolidate investigation and tracing processes into a single system to improve data quality, data stability and reporting. Shifting case investigation and tracing processes currently in Contact Tracing to MAVEN.	21 m	\$300,000
Project 4 Tier 1	NDIIS Modernization	Create a more sustainable immunization information system by modernizing the NDIIS infrastructure (moving from on-prem to cloud based), improving user account provisioning and security features; and enhancing the user experience.	37 m	\$4,094,406
Tier 1	COVID Data Lake	TBD	TBD	\$888,708
Tier 1	HealthCare Standard	TBD	TBD	\$1,000,000
Tier 1	Electronic Lab Reporting	TBD	TBD	\$75,000
Tier 1	Lab StarLIMS v12 modifications and enhancements	Enhancements and modifications to StarLIMS v12 project that completed in April 2021	TBD	\$100,000
Tier 1	Laboratory Web Portal (Iconnect)	TBD	TBD	\$438,000
Tier 1	Lab E-connectivity Enhancements - LIMS	TBD	TBD	\$50,000
Project 5 Tier 2	Electronic Case Reporting Scale-Up	Accelerate the utilization of eCR for communicable and non-communicable diseases, utilizing the promotion of interoperability from health care EHR systems. NDDOH will develop bi-directional reporting back to providers through AIMS and RCKMS.	TBD	\$773,009

Project/Phase	Title	Scope Statement	Estimated Months Duration	Estimated Budget
Project 6 Tier 3	Vital Statistics System Modernization	Modernization existing EVERS system, create an electronic connection to the Death Investigation System using FHIR-based interoperability	TBD	\$1,347,500
Project 7 Tier 3	Death Investigation System	Procure a modern SAAS or off-the-shelf solution that is able to integrate with the Vital Statistics system.	TBD	\$231,000

**Notes:**

The StarLIMS V12 project was completed on 4/15/2021. It was tracked separately from the data modernization initiative, although it would have been considered within the scope of this program/initiative.

Additional systems may be identified during gap analysis.

**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 iterative report will be submitted again with the new information.

Project/Phase	Project/Phase Start Date	Baseline End Date	Baseline Budget	Funding Source	Actual Finish Date	Schedule Variance	Actual Cost	Cost Variance
Dyn365 Disease & Outbreak System*	01/01/2021	12/30/2022	\$3,001,660	Federal				
MAVEN Mod	6/10/2021	12/30/2022	\$300,000	Federal				
NDIIS Mod	06/01/2021	06/30/2024	\$4,094,406	Federal				

**Notes:**

Dyn365 Disease and Outbreak system (DaO) is version 2.0 of Contact Tracing and Test Reg. DaO is bringing the separate systems of COVID-19 Contact Tracing and COVID-19 Test Registration/Screening into a single shared environment. This creates a unified system with common data tables, functionality, and flows.

## OBJECTIVES

Project/ Phase	Business Objective	Measurement Description	Met/ Not Met	Measurement Outcome
Dyn365 Disease & Outbreak System	Upgrade, migrate, and merge Contact Tracing and Test Registration to a single application to reduce maintenance, improve application ease of use, implement additional customer driven features, and lower cost of ownership	Design, develop, migrate, test, and release a merged platform from Contact Tracing and Test Registration application on the Microsoft Dyn365 platform per DoH requirements		
MAVEN Modernization	<p>Improve data quality</p> <p>Improve data stability</p> <p>Reduce duplicative work</p> <p>More efficient use of staff time</p> <p>Easier access to data/improve data sharing</p> <p>Improve and increase system/data auditing to improve system security to align with State practices</p>	<p>Complete upgrade to MAVEN V6.2 in test and production environments</p> <p>Modernization subsystems</p> <ul style="list-style-type: none"> <li>• Vaccine Breakthrough</li> <li>• Mortality</li> <li>• Case Manager</li> <li>• HAI</li> <li>• Hospitalization</li> <li>• Childcare, school, camp</li> <li>• Contact Tracing</li> <li>• Case Closing</li> <li>• Travel</li> <li>• Workplace</li> </ul> <p>Upgrade user security platform</p> <p>Integrate with Dyn365 for survey management</p> <p>Design, develop and release data integration with the DOH Data Lake, Datawarehouse and PowerBI</p>		

Project/Phase	Business Objective	Measurement Description	Met/Not Met	Measurement Outcome
NDIIS Modernization	Move to a cloud hosted environment	Implementation of a rearchitected NDIIS using cloud-based infrastructure and features including utilization of the State's Azure B2C for user management		
	Modernize NDIIS infrastructure			
	Enhance the user interface experience			
	Streamline new user account setup/security practices to align with State			

### KEY LESSONS LEARNED AND SUCCESS STORIES

A lessons learned effort is performed after each project or phase is completed. This process uses surveys and meetings to determine what happened in the project/phase and identifies actions for improvement going forward. Typical findings include, "What did we do well?" and "What didn't go well and how can we fix it the next time?"

Project/Phase	Key Lessons Learned and Success Stories

### KEY CONSTRAINTS AND/OR RISKS

Risk	Impact	Response
Funding Constraints	Several different funding sources are contributing to this program. Failure to complete work and pay for service prior to the end of funding will result in the loss of funds.	We will mitigate this risk by breaking the program into projects and projects into milestones and being invoiced accordingly to avoid loss of funds.
Resource Constraints	Negative schedule variance, inability to complete projects	This is a significant initiative; staff efforts may need to be reprioritized. Technical resources may need to be procured.
Technology Constraints	Negative schedule variance, inability to complete projects	Technology platforms, tools, system may need to be procured.
Timeline Constraints	The program is funded 100% by federal grants. Each grant has timelines for specific activities as well as timelines for completion. Failure to complete task and projects by the end of funding may result in the loss of funds.	We will mitigate this risk by breaking the program into projects. Each project will have its own milestones. Timelines for grant reporting will be clearly identified as milestones.

