Public Education Department Data System Upgrades

A critical centerpiece in New Mexico's public education reform efforts is the ability to monitor progress in meeting the state's goals. While they tend to rest at the background of the reform conversation, data systems are fundamental to understanding how funding is allocated among school districts, schools, and even classrooms, and whether the investments are having the intended impact. The Public Education Department (PED) continues to struggle with multiple disconnected data sources, differences in local data entry practices, and outdated data validation techniques. A strong, user-friendly, transparent system of data management can empower the state to evaluate evidence-based interventions and funding targeted towards the findings in the *Martinez-Yazzie* lawsuit. At a minimum, public education data quality in the state should be evaluated on four key characteristics:

Accuracy. Data reported from each system should accurately reflect actual expenditures and student performance. The department should have an efficient process to validate data and ensure mistakes are corrected.

Comparability. Data reported from each system should allow comparisons among student subgroups, schools, school districts, and at the statewide level. Ideally, this should include complex comparisons that compare several interrelated factors, like student poverty, student performance, and expenditures on at-risk students.

Transparency. Data should be easy for stakeholders to access, providing an accountability mechanism for the state, school districts, schools, and local communities.

Timeliness. Data should be reported in a timely manner that allows stakeholders to execute immediate responses, whether its teachers responding to trends in individual student data or policymakers responding to funding and programmatic needs.

Public School Finance Data

In response to the 1st Judicial District Court's ruling in the *Martinez-Yazzie* lawsuit, the Legislature invested significant funding in the state equalization guarantee distribution's "at-risk index," a formula factor designed to provide more funding to school districts with a large number of students that are at risk of dropping out of the education system. To the dismay of policymakers, school districts and PED had difficulty demonstrating how the Legislature's targeted investments in at-risk students were making an impact for those students. The state has few mechanisms to

The 1st Judicial District Court found in the *Martinez-Yazzie* lawsuit that the state has significant budget oversight authority over school districts and charter schools, but the state has historically failed to exercise this authority. The court argued the state has the authority to ensure funds appropriated for specific purposes like at-risk student programs, Indian education programs, and bilingual and multicultural education programs are used for those specific purposes.

PED's current financial data system, the Operating Budget Management System (OBMS), currently only disaggregates information by school district and charter school, and does not provide information at the school site level.

The Legislature inadvertently double-funded the financial reporting system during the 2020 legislative session. In the June 2020 special legislative session, the Legislature corrected this mistake and reduced funding for the system to the intended $3 million.

Recent Public Education Department Data System Funding

(thousands)

Appropriation	Intended Purpose
$3,000.0	School budget transparency website (Laws 2020, Chapter 71, available FY21 through FY23)
$1,796.1 (FY20: $651.5, FY21: $1,144.6)	Statewide real-time data management system (General Appropriation Acts of 2019 and 2020, Section 7)
$1,558.4	Grant management system for local education agencies and tribal partners (General Appropriation Act of 2020, Section 7)
$500.0	Cyber security and data system upgrades (General Appropriation Act of 2020, Section 5)
$254.3	Educator preparation program data exchange system (General Appropriation Act of 2020, Section 7)

directly oversee school districts and charter schools, which have broad discretion over how they use formula funding. In response, the Legislature unanimously passed and the governor enacted Laws 2020, Chapter 71 (Senate Bill 96). The law requires the PED to develop and implement an online financial reporting system that allows comparisons in revenues, budgets, and per-student spending between schools, local education agencies, and regional education cooperatives (RECs).

Laws 2020, Chapter 71 included several provisions to improve the accuracy, comparability, transparency, and timeliness of school finance data. The law requires the data system to "drill-down" to the school site level and display administrative costs and actual expenditures by major budget categories, including expenditures for salaries and benefits. Additionally, school site budgets will need to show expenditures for specific services, including but not limited to services for at-risk students, bilingual multicultural education, and special education. The law also requires revisions to the department's chart of accounts to include new revenue tracking codes for revenue at all levels, including local, state, and federal funds.

Funding and Project Development

Alongside its statutory requirements, Laws 2020, Chapter 71 appropriated $3 million for use in FY21 through FY23 to develop the financial reporting system. To-date, PED has not spent any of those funds, however, preliminary information in the statewide human resources reporting (SHARE) portal indicates the department is developing a contract for project management and business analysis. On October 22, 2020, PED submitted a request to the Department of Information Technology (DoIT) to release a portion of the funds, describing the scope of the project and detailing the schedule and uses of funds. See **Attachment 1, "Initiation Request for Certification and Release of Funds Form."**

Financial Reporting System Project Initiation Phase. The request to DoIT describes the scope and intent of the financial reporting system. The initiation phase of the project, which began October 22, 2020, and is scheduled to end January 2021 involves a significant amount of stakeholder engagement. PED describes an intent to hold focus groups with schools, school districts, and RECs to conduct a gap analysis and identify common needs. Additionally, the department plans to define the types of reports and dashboards the data system should be able to produce. The department lists the following goals for the initiation phase of the project:

- *Establish a relationship with statewide stakeholders including school districts, define the project team and stakeholders, and conduct focus groups to identify reporting requirements;*

- *Purchase reporting tools to analyze the existing data in the financial system OBMS, evaluate data, and identify gaps to finalize the documentation of all requirements of the new system;*
- *Document the high-level schedule and project management plan for the project; and*
- *Prepare planning and support documentation including the project management plan and project charter for project certification committee to review.*

While it is still early in the development process, PED's financial reporting system appears to be approaching the project as being responsive to the needs of stakeholders. Early steps toward stakeholder engagement suggests the department plans to prioritize data transparency, but despite a statutory requirement that staff from the Legislative Finance Committee and the Legislative Education Study Committee be engaged as stakeholders, the project initiation request does not list legislative staff as stakeholders. It remains to be seen whether the system will be developed to maximize other characteristics of high-quality data systems, including accuracy, comparability, and timeliness.

The entire project is scheduled to last a little over a year. A planning phase beginning after the project initiation and lasting until March 2021 would include evaluation of data in OBMS and a gap analysis. The department plans to begin implementing the new system in the 2021-2022 school year, and the project closeout is scheduled for January 2022.

Student Outcome Data

In its decision in the *Martinez-Yazzie* lawsuit, the 1st Judicial District Court drew a dichotomy between educational inputs and educational outcomes, using both as evidence that the state failed to provide a sufficient education for at-risk students. The department's financial reporting system will greatly improve the state's capacity to measure the sufficiency of educational inputs, or the funding allocated to programs for at-risk students. However, the metrics to measure educational outcomes have not evolved much over the past decade.

New Mexico relies heavily on static performance measures, such as proficiency rates, graduation rates, and enrollment counts to measure school performance and make decisions about school funding. Static performance measures do not provide stakeholders with real-time information about student participation and outcomes. This creates difficulties for policymakers, who are required to make decisions about funding for the upcoming school year without understanding if investments from the prior year are having an impact on student outcomes.

Real-Time Data System

The legislature appropriated $652 thousand in FY20 and $1.1 million in FY21 through DoIT's compliance and project management process for PED to begin work on a "real-time data system." A June 2019 project charter describes the current student data system, STARS, as having "many points of failure," highlighting an inefficient reliance

on human capital to enter data, export files, and requiring manual validation by PED staff. Instead, the charter proposes creating a system that interfaces with multiple student information systems in New Mexico, creating a system that reduces workloads for schools and school districts. See **Attachment 2, "Statewide Real-Time Data Management Solution."**

PED's proposed real-time data system would consolidate into a single portal data from multiple types of programs, including Ed-Facts federal reporting requirements, formative, interim, and summative assessment data, early childhood education enrollment and outcome data, special education maintenance of effort information, federal Perkins funding and uses, and school nutrition data. While not described in the original project charter, the department may also consider how the financial reporting system can play a role in a consolidated real-time data system.

Real-time data would allow stakeholders to track the state's performance in setting and meeting goals highlighted by the *Martinez-Yazzie* lawsuit, allowing the state to monitor student engagement and growth on a more regular basis. In a presentation to LESC in August, PED expressed interest in tying the real-time data system to the New Mexico Vistas dashboard, which would offer policymakers and local community stakeholders immediate and transparent access to student outcome data. Real-time accountability data would create another layer of transparency, giving the state the opportunity to conduct more regular evaluations of progress toward meeting goals defined in the *Martinez-Yazzie* lawsuit.

PED began the project with a $652 thousand appropriation in FY20. However, it appears little has been done with the $1.1 million appropriated in FY21, and progress on the project appears to have stalled in the wake of the Covid-19 pandemic. The project was originally scheduled to begin testing in December 2020 with a final system in use by the 2021-2022 school year. It is unclear whether this timeline is still reasonable, but the FY21 appropriation fully funded the estimated budget of the project, suggesting the project will not need additional funding from the Legislature.

Statewide Longitudinal Data System.

New Mexico's efforts to reform its education system span across multiple state agencies, as students pass from early childhood education, through the public education system, and into college or the workforce. Sometimes called "P-20" data systems, longitudinal data systems are designed to efficiently manage student data throughout a students' entire educational career. According to the National Center for Education Statistics, statewide longitudinal data systems can "help states, districts, schools, educators, and other stakeholders to make data-informed decisions to improve student learning and outcomes, as well as to facilitate research to increase student achievement and close achievement gaps."

In 2010, the Legislature created a framework for a "longitudinal education data system" in statute. Section 22-1-11 NMSA 1978, legislation originally endorsed by LESC,

was enacted following the recommendations of a New Mexico Data System Council. The law formalized the council in statute and tasked the council with conducting a needs assessment and creating a statewide longitudinal education data system. According to an LESC analysis on the 2010 legislation, the council had already begun work on the longitudinal data system. However, for unknown reasons, efforts to create a statewide longitudinal data system stalled shortly after Section 22-1-11 NMSA 1978 was enacted.

In recent years, the statewide longitudinal data system has regained momentum under leadership from the Higher Education Department (HED). A proposal for the system published in September 2020 explains how the warehouse will connect data systems using a unique student identification number throughout state-funded education programs, including the Early Childhood Education and Care Department, PED, HED, and the Department of Workforce Solutions. See **Attachment 3, "New Mexico Longitudinal Data System (NMLDS)."** The Legislature appropriated $274 thousand for planning and initiation of the project in FY21. HED's project proposal predicts $2 million will be needed in FY22, building to a total project cost of $3.5 million by the end of FY24.

PED's data system upgrades are apparently being developed independent of HED's efforts toward a statewide longitudinal grant system. The Legislature may wish to consider how it could incentivize greater cooperation between state agencies to ensure efforts are not duplicated and data structures remain efficient, transparent, and accurate.

Coordinated Data System Reforms

Three major education data system upgrades are currently occurring simultaneously in New Mexico, presenting a unique opportunity for the state to coordinate its resources and build a powerful data system aligned to systemic reform goals. The National Conference of State Legislatures' *No Time To Lose* report notes that in high-performing education systems, individual reforms act as pieces of a carefully designed system.

Data systems, as the backbone of the state's public education system, should be viewed as a means to evaluate the state's reform efforts and a tool to empower stakeholders to create change. Deep and lasting data system reform will require buy-in from the state's education community. This includes a commitment from the Legislature to adequately fund the reforms, a commitment from the executive to build the new systems and train others in their use, and a commitment from educators and administrators to adopt the new systems and use them to their greatest potential.

Possible Questions

- How will PED ensure data in each of its systems are accurate, comparable, transparent, and timely?
- What is the status of PED's work on the real-time data system? Has Covid-19 delayed the original schedule to implement the system next year?
- How has PED interacted with HED in its work toward a statewide longitudinal data system? How will the longitudinal data system interface with the new systems under development.

NM DEPARTMENT OF INFORMATION TECHNOLOGY

Initiation Request for Certification and Release of Funds Form

ALL CERTIFIED PROJECTS MUST FOLLOW NM STATE POLICIES AND PROCUREMENT CODE

Project Governance	
Project Name	Public Education Department Statewide Financial Reporting Project
Initiation Certification Date	October 22, 2020
Project Start Date	November 16, 2020
Planned End Date	January 22, 2022
Lead Agency	Public Education Department
Other Agencies	
Executive Sponsor	Adan Delgado, Deputy Secretary, Finance & Operations
Agency Head	Ryan Stewart, Secretary of Education
Agency CIO/IT Lead	Mary H. Montoya, Chief Information Officer
Project Manager	Mark DeCamp

Project Abstract
Per Senate Bill 96, the requirements for this project are that no later than December 31, 2021, the Public Education Department (PED) will, with input from stakeholders, implement and maintain a statewide financial reporting system based on a statewide standard chart of accounts (COA). The PED and locally chartered charter schools, state-chartered charter schools, school districts and regional education cooperatives can use the system to report and obtain necessary financial information. The project will include establishment of a standard chart of accounts from school-to-PED, improvements on data collection, and standard reporting and dashboards.

Critical path to the success of this project includes the following cross functional team deliverables: the definition of a standard chart of accounts, standard position definitions and reporting requirements, and the implementation of the chart of accounts into the Local Educational Agency (LEA) Financial Information Systems (FISs), the roll up into PED's Operating Budget Management System (OBMS), and reporting and dashboards for presenting of standard reports. .

The scope of the Initiation phase of this project will include the development of the following:
- Establish a relationship with statewide stakeholders including school districts; define the project team and stakeholders; and conduct focus group(s) to identify reporting requirements
- Purchase reporting tools to analyze the existing data in the financial system OBMS; evaluate data and identify gaps to finalize the documentation of all requirements of the new system
- Document the high-level schedule and Project Management Plan for the project
- Prepare planning and support documentation including the Project Management Plan and Project Charter for Project Certification Committee (PCC) Planning to review.

Appropriation History Include All Funding Sources, e.g. Federal, State, County, Municipal Laws or Grants.		
Fiscal Year	**Funding Source**	**Amount**
FY21	Other State Funds: Education Reform Fund	$3,000,000.00
Total Appropriation:		$3,000,000
Total Appropriation Minus Total Certified Funds (include this request):		$2,660,000

Certification History			
Date Include this request.	**Certification Phase**	**Amount**	**Funding Source** Use specific citations matching preceding table.
October 22, 2020 (this request)	Initiation	$340,000	Other State Funds: Education Reform Fund
Total Certified:		$340,000	

Project and Product Deliverables		
Deliverable	**Due Date**	**Project Phase**
PCC Certification for Project Initiation Approved	10/22/2020	Initiation
Stakeholder Identification	12/15/2020	Initiation
Final Project Charter	1/20/2020	Initiation
Focus Group Assessment and Summarization	1/25/2021	Initiation
PCC Certification for Project Planning Approved	1/28/2021	Initiation
Data Evaluation and Gap Analysis	2/17/2021	Planning
Requirements Documented	3/10/2021	Planning
Final Project Management Plan	3/22/2021	Planning
PCC Certification Implementation Approved	3/25/2021	Planning
Chart of Account Implementation	8/31/2021	Implementation
Reporting and Dashboard Implementation	10/29/2021	Implementation
PCC Certification for Project Closeout	01/20/2022	Closeout

	Estimated Project Budget					
	Do not include maintenance and operations.					
Comments:						
Milestone	Description	FY21	FY22	FY23	FY24	Total
Project Management	Project Management, PCC, and status reporting	$145,600	$146,400			$292,000
Business Analysis Services	Initial focus groups, and requirements, testing	$194,133	$249,600			$443,733
Professional Services	Report and Dashboard development	$473,200	$1,544,822			$2,018,022
Training and Adoption	Reporting Training, and documentation in support of use		$78,000			$78,000
IV&V	Contract with IV&V vendor	$23,856	$53,676			$77,532
License	Tableau for data analysis	$3,045				$3,045
Total:		$836,789	$2,072,498			$2,912,332

	Request for Proposals (RFPs) and Contracts				
Comments: Working with a state approved vendor, initiation will define/align project scope with the requirements as stated in SB96.					
RFP or Contract #	*Status	Vendor	Description		Total Value
Contract	Submitted for Review	TEKSystems	Project Management and Business Analysts Services		$334,377
				Total Value:	$334,377

*RFP Status: **In Development** (Agency is drafting); **Submitted for Review** (Sent to either DoIT or SPD for approval); **Solicited** (Open to the public/released); **Awarded** (Vendor selected); **Closed** (Submission deadline has passed). **Contract Status: In Development** (Agency is drafting); **Submitted for Review** (Sent to either DoIT or SPD); **In Negotiations** (Draft sent to Contractor for review/approval); **Executed** (All required signatures obtained); **Closed** (Final payment made).

NEW MEXICO
Public Education Department
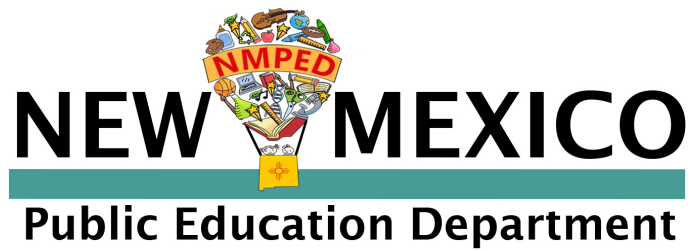
STATEWIDE REAL-TIME DATA MANAGEMENT SOLUTION

PROJECT CHARTER

EXECUTIVE SPONSOR – ADAN DELGADO, DEPUTY SECRETARY OF EDUCATION

BUSINESS OWNER – MATTHEW GOODLAW, CHIEF INFORMATION OFFICER

PROJECT MANAGER – JEAN WOOD

ORIGINAL PLAN DATE: JUNE 27, 2019

VERSION: 1.1

TABLE OF CONTENTS

REVISION HISTORY

REVISION NUMBER	DATE	COMMENT
1.0	6/12/2019	Initial Submission
1.1	6/20/2019	Update after EPMO feedback

1.0 PROJECT BACKGROUND

1.1 EXECUTIVE SUMMARY -RATIONALE FOR THE PROJECT

The New Mexico Public Education Department (NMPED) has collected and centralized Student, Teacher, and School information from all the 160 districts and charter schools since 2006. Four times a year we collect the data then the data is validated and certified by NMPED bureaus.

Most of the data is used in support of the Every Student Succeeds Act (ESSA), the Ed-Facts Initiative (Ed-Facts), and the State Equalization Guarantee (SEG) as well as the financial data in support of education grants that initially resides in disparate district information systems, student, financial, and human resource systems.

In 2006, the State of New Mexico implemented the current system, STARS, for the purposes of data collection, storage, and reporting, of the New Mexico's student data which is imported from independent school districts and charter schools. The purpose of this implementation was to support Federal reporting, support State funding calculations to districts, support the empowerment of classroom educators, improve State assessment and accountability, and to ease inter-district communication for transfers and longitudinal data.

The existing system has many points of failure as it relies on significant human resources, by each of the district entities, to export the data from their local system, to upload the data via comma separated value (CSV) files, and by the NMPED Bureau staff having to validate and approve the data via reports.

The new implementation will include capabilities that are configurable to support data communication with and collection from the Student Information Systems (SIS) at each of the school districts and charter schools, transformation to a common data structure, validation, matching, loading, and PED required data certification processes. The scope of this project, and the NMPED ITD's initial implementation of these capabilities, will facilitate the integration of all independent school district and charter school's student information systems with a NMPED's centralized student information system, data store, and longitudinal data warehouse.

The project has already performed an RFP in pursuit of a Commercial-off-the-shelf (COTS) Data Management System with the capabilities necessary to support the automation of the process. The final statement of work with the selected vendor will include, a road map, professional implementation of their product, and implementation including but not limited to, training and documentation activities, knowledge transfer and post implementation support.

NEW MEXICO
Public Education Department

1.2 SUMMARY OF THE FOUNDATION PLANNING AND DOCUMENTATION FOR THE PROJECT

Alternatives Analysis and planned approach were documented in the SFY 2020 Full Business Case for Public Education Department Real-Time Data infrastructure, prepared for C2 funding request.

Requirements for the project are documented in the Request for Proposal for Public Education Data Management System (RFP #90-92400-19-24339)

1.3 PROJECT CERTIFICATION REQUIREMENTS

CRITERIA	YES/NO	EXPLANATION
Project is mission critical to the agency	Yes	Implementation will enable strategically aligned support for the Districts, Schools, NMPED Bureau business processes and Federal reporting.
Project cost is equal to or in excess of $100,000.00	Yes	Estimated cost over two years is $1,600,226
Project impacts customer on-line access	Yes	Improved timeliness of data collection and data quality will have a positive impact on Districts access to data and reduce resource costs.
Project is one deemed appropriate by the Secretary of the DoIT	Yes	Requesting Certification on June 27, 2019
Will an IT Architecture Review be required?	Yes	Project will comply with NM DoIT policy and provide TARC information prior to implementation phase.

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2.0 JUSTIFICATION, OBJECTIVES AND IMPACTS

2.1 AGENCY JUSTIFICATION

NUMBER	DESCRIPTION
NM PED	The project supports NM Public Education Department's mission to partner with educators and supports the core values of being Collaborative, Transformative and Innovative.

2.2 BUSINESS OBJECTIVES

NUMBER	DESCRIPTION
BUSINESS OBJECTIVE 1	Reduce burden on Local Educational Agencies (LEAs) and Bureau Staff and costs associated with data collection, validation, and reporting requirements.
RATIONALE	The current system relies on significant human resources, by each of the district entities, to export the data from their local system, to upload the data via comma separated value (CSV) files, and manually imported into the centralized NMPED repositories during a 10 day window, at four times during each school year.
ACCEPTANCE CRITERIA	Provide automated real time data collection replacing the manual process.
RATIONALE	The current system relies reports to validate the bureau business rules. Each agency validates the data, and request districts to repair and resubmit. A real time data validation solution will support pushing these validations to the front end of the process, reducing the burden of PED Bureau Staff.
ACCEPTANCE CRITERIA	Provide automated real time data validation replacing the manual process.
BUSINESS OBJECTIVE 2	Improve data quality and cost of change management by providing a more consistent approach to data management, improving pre-validation, and enforcing data quality.
RATIONALE	The current process includes a 10 day manual review process by PED staff after which school districts and charter schools are advised of any exceptions via email. Updates made to the district data, is not always put in the source system, instead, sometimes in the CSV transfer file.

NEW MEXICO
Public Education Department

NUMBER	DESCRIPTION
ACCEPTANCE CRITERIA	Provide a configurable data validation engine in the front end of the process, in real time, that performs the data validation and notification of any exceptions to the data provider.
BUSINESS OBJECTIVE 3	Increase efficiency and effectiveness of business processes through integration and improved process flows, improving data availability and quality.
RATIONALE	Current data collection and validation process id primarily manual and takes 20-plus days to complete one cycle if there are no exceptions.
ACCEPTANCE CRITERIA	New system collects, validates and reports exceptions to School Districts and Charter Schools in hours in 24 hours or less.
BUSINESS OBJECTIVE 4	Improve analytical capacity
RATIONALE	Modernization of the architecture of the PED integrated Longitudinal Data Store (LDS) enables the creation of data marts to be used for retrieving data in specific areas. Reducing the time to collect and validate data increases time that data is available for analysis.
ACCEPTANCE CRITERIA	Establishment of new LDS and Data Marts for Performance, Federal Reporting, and Analytics.

2.3 TECHNICAL OBJECTIVES

NUMBER	DESCRIPTION
TECHNICAL OBJECTIVE 1	Deploy a real-time data collector to replace the LEA's current process of extracting and uploading CSV data files to STARS.
RATIONALE	The current system relies on significant human resources, by each of the district entities, to export the data from their local system, to upload the data via comma separated value (CSV) files, and manually imported into the centralized NMPED repositories during a 10 day window, at four times during each school year.
ACCEPTANCE CRITERIA	Elimination of the manual extract/upload process at 160 School Districts and Charter Schools.

NEW MEXICO
Public Education Department

NUMBER	DESCRIPTION
TECHNICAL OBJECTIVE 2	Modernize the architecture for Ed-Facts Federal Reporting, Test demographic/roster, Assessment data staging, and integrate early Childhood Education, Special Ed MOE, APR Perkins and Nutrition Portal.
RATIONALE	Modernization of the architecture of the PED integrated Longitudinal Data Store (LDS) enables the creation of data marts to be used for retrieving data in specific areas. Reducing the time to collect and validate data increases time that data is available for analysis.
ACCEPTANCE CRITERIA	Establishment of new LDS and Data Marts for Performance, Federal Reporting, and Analytics.
TECHNICAL OBJECTIVE 3	Implement singular approach to Unique ID and centralize some level of reporting from Early Childhood Education Data to Post-secondary Interagency Data, central repository and reporting.
RATIONALE	Consistent approach to Unique ID enables reporting data across School Districts, Charter Schools, and Post-Secondary educational Institutions.
ACCEPTANCE CRITERIA	Establishment of business rules for Unique ID assignment.

2.4 IMPACT ON ORGANIZATION

AREA	DESCRIPTION
END USER	The burden of manual processes on both Local Educational Agencies (LEAs) and PED staff, costs associated with data collection, validation and reporting requirements will be reduced.
BUSINESS PROCESSES	Manual processes for both LEAs (data collection) and PED staff (validation) will be replaced by an automated system.
IT OPERATIONS AND STAFFING	IT staff will manage and maintain the new data management system and tools.

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2.5 TRANSITION TO OPERATIONS

AREA	DESCRIPTION
PRELIMINARY OPERATIONS LOCATION AND STAFFING PLANS	Infrastructure support and Database Administration will transition from selected Vendor at go-live and be provided by NMPED IT team.
DATA SECURITY, BUSINESS CONTINUITY	The data that is received or sent goes through a secure web server and is authenticated by active directory. Firewall is provided by DoIT and PED's F5 Load Balancer. All backup and disaster recovery is conducted through Veritas Backup software and is stored on tape offsite.
MAINTENANCE STRATEGY	The project plan will specify deliverables for transition to operations that are expected to be delivered and implemented well in advance to the project's end date. Ongoing vendor maintenance and support will be included in our contract.
INTEROPERABILITY	The interoperability of LEA data sources have several specific deliverables including the interfaces to be built to connect to each School District and Charter School Student Information System (SIS). These will be delivered and tested well in advance to the project's end date
RECORD RETENTION	Data retention on NMPED servers is for 5 years in accordance with the New Mexico Administrative Code 1.21.2.185
CONSOLIDATION STRATEGY	The new data architecture will enable the consolidation of data supporting Ed-Facts Federal Reporting, Test demographic/roster, Assessment data staging, and integrate early Childhood Education, Special Ed MOE, APR Perkins and Nutrition Portal.

3.0 PROJECT/PRODUCT SCOPE OF WORK

3.1 DELIVERABLES

3.1.1 PROJECT DELIVERABLES

NMPED has a Project Management Office (PMO) within the IT Division and, in 2017, established an ITD Project Management lifecycle and IT PMO Project Guidebook.

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The IT Project manager will work directly with the Vendor Project Manager on the management and oversight of all project deliverables, including:

- Project Charter for Certification

- Certification Form and Release of Funds

- Project Management Plan

- IV&V Contract and Reports

- IT Licensing and Service Contracts

- Risk Assessment(s) and Management

- Documentation for TARC

- Project Work Plan and Schedule (MS Project)

- Monthly Project Status Reports

- Project Closeout Report

3.1.2 PRODUCT DELIVERABLES

NMPED As-is to To-be Solution Roadmap	This deliverable will include information gathering; documentation of the as-is and to-be processes; and documentation of future state architecture recommendations
Software Licensing	After RFP selection process is complete, detailed list of required licensing to be provided.
Software Installation	Installation of product components in Development, Test and Production environments.
Connect 160 NM Districts to Central Operational Data Store (ODS)	This deliverable includes connectors to School District and Charter School SIS systems provided by various vendors: Skyward (3 districts), Tyler (7 districts), Jupiter (2 districts), Edupoint (5 districts), Powerschool (54 districts), Infinite Campus (3 districts) and other vendors (20 districts).
Implement NMPED-specific Data Validation rules	Complete the writing and insertion, into the data management tool, of 300 validation rules.

NEW MEXICO
Public Education Department

Testing Plan	Contractor shall deliver a complete test plan and test scenarios that can be used for each SIS implementation; work with NMPED to execute the plan and resolve testing errors.
System Admin Training and Knowledge Transfer	Training will consist of initial training and documentation, on the job training including SIS Vendor Schools Interoperability Framework and data administration training for production support and data management staff. Knowledge Transfer includes: 1. System architecture documentation and training necessary to enable NMPED staff to scale application components; 2. System user guide documentation and hand-off to enable NMPED support team to change business rules, and configure changes or additions to data stores and/or interfaces.
Vendor Project Management	Vendor participation in Sprint meetings, facilitation of knowledge transfer/training

3.2 SUCCESS AND QUALITY METRICS

NUMBER	DESCRIPTION
QUALITY METRIC 1	Successful data collection from School Districts and Charter Schools via new mechanism with the elimination of manual processes.
QUALITY METRIC 2	Successful automated data validation from implemented business rules.

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Public Education Department

4.0 SCHEDULE ESTIMATE

The Following Project Milestones have been tentatively identified.

MILESTONE	DATE
Project Kick-off	8/01/2019
NMPED As-is to To-Be Solution Roadmap	8/31/2019
Software Licensing	9/15/2019
Software Installations on NMPED Environments (Development, testing & Production)	9/30/2019
Implementation of NMPED-specific Data Validation Rules	12/30/2019
Attach 160 NM Districts and Charter Schools to Central Operational Store (ODS)	9/15/2020
Functional Testing Complete	12/1/2020
System Admin and User Training	1/30/2021
Connect Remaining NM School Districts and Charter Schools	5/30/2021
Project Closeout	6/30/2021

5.0 BUDGET ESTIMATE

Estimated budget numbers are for 2 year project, FY2020-2021.

5.1 FUNDING SOURCE(S)

SOURCE	AMOUNT	ASSOCIATED RESTRICTIONS
PED GENERAL FUND	$ 651,500	Laws of 2019, Chapter 271, Section 7(32)
TBD	$ 948,726	
TOTAL	$ 1,600,226	

NEW MEXICO
Public Education Department

5.2. BUDGET BY MAJOR DELIVERABLE OR TYPE OF EXPENSE

ITEM	COST ESTIMATE FY2020	COST ESTIMATE FY2021
Professional Services	$ 381,105	$ 249,600
Hardware/Infrastructure	$ 67,500	
Software Licensing	$ 745,600	
Independent Validation and Verification	$ 72,111	$ 84,310
TOTAL	$ 1,266,316	$ 333,910

5.3 BUDGET BY PROJECT PHASE OR CERTIFICATION PHASE

To be completed after vendor selection is complete and contract completed.

NEW MEXICO
Public Education Department

6.0 PROJECT AUTHORITY AND ORGANIZATIONAL STRUCTURE

6.1 STAKEHOLDERS

NAME	STAKE IN PROJECT	ORG	TITLE
Adan Delgado	Executive Sponsor	PED	Deputy Secretary
Timothy Hand	PED Business Owner	PED	Deputy Secretary
Matt Goodlaw	CIO Technology Owner	PED	Chief Information Officer
Richard Trujillo	Deputy Chief Technology Officer	PED	Deputy Chief Information Officer
Tomas Aguirre	Systems Administration	PED	Systems and Network Administration Manager
Mark DeCamp	Program Manager	PED	Lead Project Manager
Jean Wood	Project Manager	PED	Project Manager/Business Analyst
PED staff	End User	PED	Various
New Mexico School Districts Staff	End User	NM School Districts (89)	Various
New Mexico Charter Schools Staff	End User	NM Charter Schools (78)	Various
Vendor staff to be named*	Various	Vendor	Various

* To be completed after vendor selection is complete and contract completed.

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6.2 PROJECT GOVERNANCE PLAN
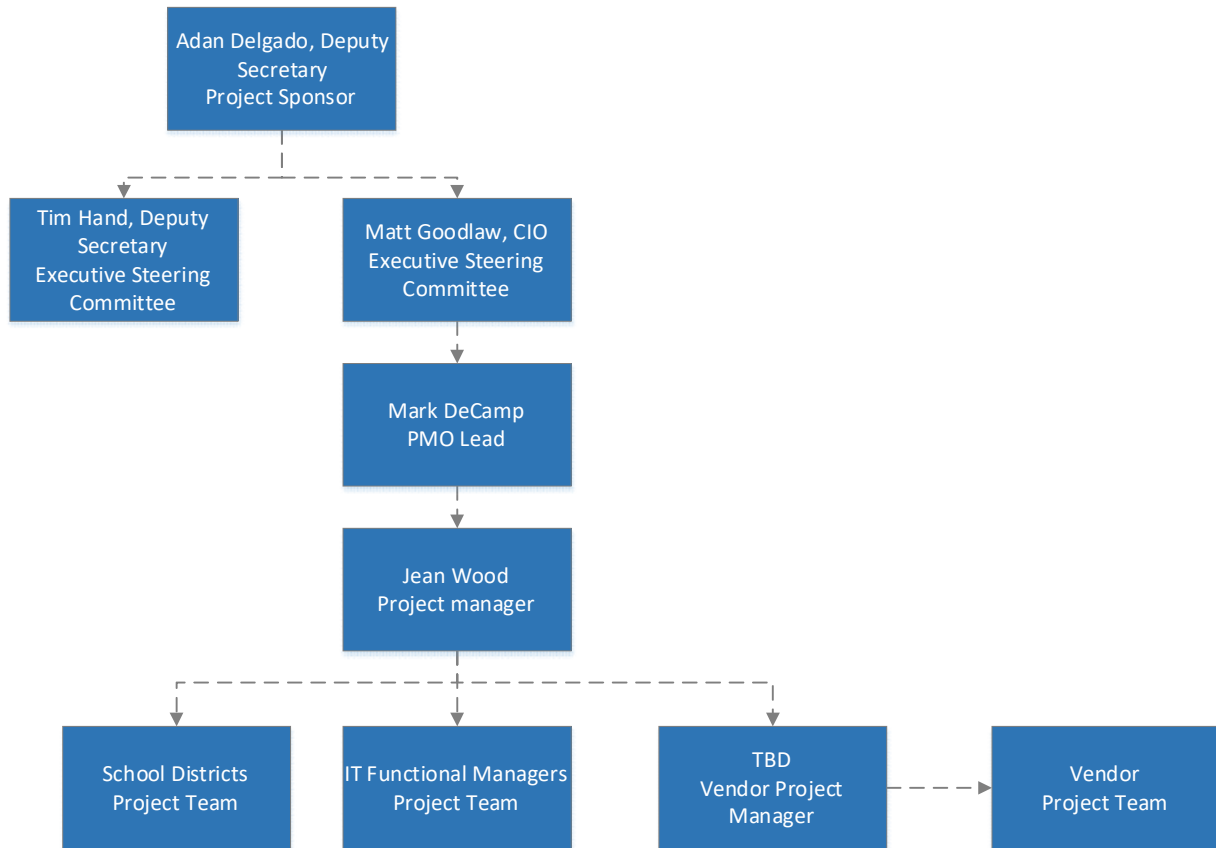
6.3 PROJECT MANAGER

6.3.1 PROJECT MANAGER CONTACT INFORMATION

NAME	ORGANIZATION	PHONE #(S)	EMAIL
Jean Wood	PED ITD	505-827-6486	jean.wood@state.nm.us

6.3.2 PROJECT MANAGER BACKGROUND

Jean Wood has more than 20 years' experience in project management, business analysis, software product development and technical support, including 10 years of hands-on experience leading or contributing to technology projects for local and state governments in New Mexico and Michigan.

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6.4 PROJECT TEAM ROLES AND RESPONSIBILITIES

ROLE	RESPONSIBILITY
Project Sponsor	Provide strategic direction and policy approvals where required. The Project Sponsor will champion the project within the organization and ensure the overall success of the project.
Exec. Steering Committee	Provide high-level project oversight, vision, and direction. Determine and commit appropriate resources. Resolve issues and problems. Provides oversight for the Project Manager, the IT contract, and other IT support provided to the Parent Resources Project.
Project Manager	Ultimately responsible for the delivery of the project. Responsible for developing and managing all project deliverables. Ensures tasks and resources are managed to keep project on schedule. Accountable for overall completion and acceptance.
(Vendor) Project Manager	Ultimately responsible for all contract project deliverables as stated in the contract statement of work. Responsible for developing and managing all contract, and sub project, project deliverables. Ensures tasks and resources are managed to keep project on schedule. Accountable for overall completion and acceptance.
Sub-Contractors	Responsible for all contract project deliverables as stated in the contract statement of work between the primary contractor and the sub-contractor.
IT Functional Managers	Provides appropriately skilled personnel to the project as necessary. Manage areas of risk, uncertainty or conflict related to technical areas as related to the project.
Project Team	Provides quality assurance support and other duties as assigned. Reports to the Project Manager.

6.5 PROJECT MANAGEMENT METHODOLOGY

NMPED has a Project Management Office (PMO) within the IT Division and in 2017 established an ITD Project management Lifecycle, and IT PMO Project Guidebook. SCRUM backlog management will be used for work assignments for the iterative development process.

The IT Project Manager will work directly with the Project Manager on the management and oversight of all project deliverables.

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7.0 CONSTRAINTS

NUMBER	DESCRIPTION
1	Replace existing STARS Longitudinal Data Base before end of annual contract on June 30, 2020.
2	New system must be in production prior to beginning of the data collection cycle for STARS data, October 13, 2020.

8.0 DEPENDENCIES

NUMBER	DESCRIPTION	TYPE M,D,E
1	Project Certification Committee (PCC) approval Initiation certification	M
2	Project Certification Committee approval of certification-related waiver/exception requests	M
3	PCC approval of combined Planning/Implementation certification	M
4	Complete Full Draft of Contract	M
5	Complete DoIT e-review	M
6	DFA Contract approval	M

- **M**andatory dependencies are dependencies that are inherent to the work being done.
- **D- Di**scretionary dependencies are dependencies defined by the project management team. This may also encompass particular approaches because a specific sequence of activities is preferred, but not mandatory in the project life cycle.
- **E-E**xternal dependencies are dependencies that involve a relationship between project activities and non-project activities such as purchasing/procurement

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9.0 ASSUMPTIONS

NUMBER	DESCRIPTION
1	Stakeholders remain fully engaged through the project life.
2	Decisions on any issues requiring approval will be made timely.
3	Vendor contract decision and availability to begin project will be timely.

10.0 SIGNIFICANT RISKS AND MITIGATION STRATEGY

Risk 1

Description – There may be hold-out districts that are reluctant to invest the time and effort to help plan and implement the real time ecosystem.	Probability: Low	Impact: High
	Mitigation Strategy: During the planning phase, districts will be afford the opportunity to provide input and guidance to shape the resulting roadmap. Efforts will be made to promote the value to school district and charter schools for a comprehensive information architecture that bridges the gaps across local and state agencies.	
	Contingency Plan Continue As-is (manual) processes for hold-out districts until they see value and are willing to invest time and effort to enable the automatic collection of their data.	

Risk 2

Description – There may be holdout organizations within NMPED that are reluctant to invest the time and effort to help plan and implement the real time ecosystem	Probability: Low	Impact : Medium
	Mitigation Strategy: During Planning Phase, the organizations within NMPED will be afforded the opportunity to provide input and guidance to shape the resulting roadmap. Efforts will be made to promote the value to school district and charter schools for a comprehensive information architecture that bridges the gaps across local and state agencies.	
	Contingency Plan: Architecture design will allow future data sharing from holdout organizations.	

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Risk 3

Description – Trust among the various bureaus may inhibit data sharing and moving together toward a common vision.	Probability: High	Impact : Medium
	Mitigation Strategy: During Planning Phase, the NMPED bureaus will be afforded the opportunity to provide input and guidance to shape the resulting roadmap.	
	Contingency Plan: Architecture will be designed to allow future data sharing upon buy-in from Bureau	

11.0 COMMUNICATION PLAN FOR EXECUTIVE REPORTING

WHAT	WHO/TARGET	PURPOSE	WHEN/ FREQUENCY	TYPE/METHODS
Project Status	Project Sponsor Executive Steering Committee	Awareness of project status, risks, issues, or changes.	Monthly	Email/Face to Face
Vendor Project Status	Project Manager	Validate schedule, scope, and cost is on track.	Weekly	Project Status Report, Risk, Issues Logs, Project Team Meetings
Project Awareness and Implementation	All Stakeholders	Project awareness and implementation readiness.	Prior to implementation	Send via e-mail

12.0 INDEPENDENT VERIFICATION AND VALIDATION - IV&V

Project/Product Area	Include –Yes/No
Project Management	Yes
Business Process Impact	Yes

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13.0 PROJECT CHARTER AGENCY APPROVAL SIGNATURES

	SIGNATURE	DATE
EXECUTIVE SPONSOR		
BUSINESS OWNER		
PROJECT MANAGER		

14.0 PROJECT CHARTER CERTIFICATION APPROVAL SIGNATURE

	SIGNATURE	DATE
DOIT / PCC APPROVAL		

NEW MEXICO
Public Education Department

New Mexico Longitudinal Data System (NMLDS)

Request for Certification: Initiation
August 27, 2020

Bogi Malecki, CIO

NEW MEXICO

HIGHER EDUCATION DEPARTMENT

Helping Students Succeed

MISSION

The mission of the New Mexico Higher Education Department (NMHED) is to provide financial, academic, and policy oversight and support to the New Mexico public higher education institutions and our formal community partners for the purpose of promoting efficiency, accountability, and student success.

2

Project Objective

Build a system which collects, validates and combines key child, student and worker data into a federated data warehouse.
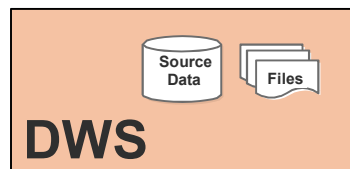
Business Goal

Help educators, workforce developers and policymakers identify student challenges early on, make targeted interventions and investments, and determine what educational practices and programs drive student success from childhood into the workforce.

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3

Project Overview

## From this...

ECECD
Source Data · Files

Data sets include:
- *Childcare Providers Certifications*
- *Childcare Providers Licensure*
- *Child Care Eligibility case load*
- *Pre-K Assessments*
- *Pre-K Providers*
- *Home Visiting Referrals*

DWS
Source Data · Files

Data sets include:
- *Employment Figures*
- *Occupations & Wages*
- *Occupational Outlook*
- *Employment Projections*
- *Labor Force & Unemployment data*

Manual CSV files

Manual CSV files

Manual CSV files

PED
Source Data · Files
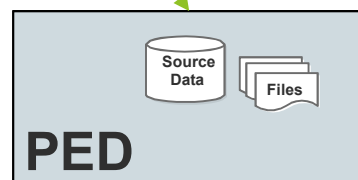
170+ District and State Charter data sets include:
- *Teacher information*
- *Course data*
- *Student information*
- *Attendance data*
- *License data*
- *Assessments data*

HED
Source Data · Files
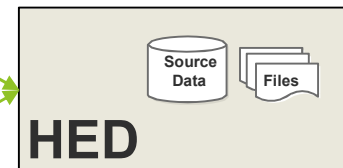
Data sets include:
- *Student Information*
- *Institutional Course information*
- *Institutional Financial Aid data*
- *Student Course data*
- *Student Financial Aid data*

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4

Project Overview

To this...

Acronyms
DWS = Department of Workforce Solutions
ECECD = Early Childhood Education & Care Dept
HED = Higher Education Department
LDS = Longitudinal Data Store
ODS = Operational Data Store
PED = Public Education Department

ECECD
Source Data
Files
REST Client

PED
Source Data
Files
REST Client

HED
Source Data
Files
REST Client

DWS
Source Data
Files
REST Client

ECECD ODS
PED ODS
HED ODS
DWS ODS

Master Unique ID DB
State Unique ID System
Data Broker REST API Endpoints
File Processor Service
Data Validation Engine

Validated Data

NMLDS

End User Portal

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5
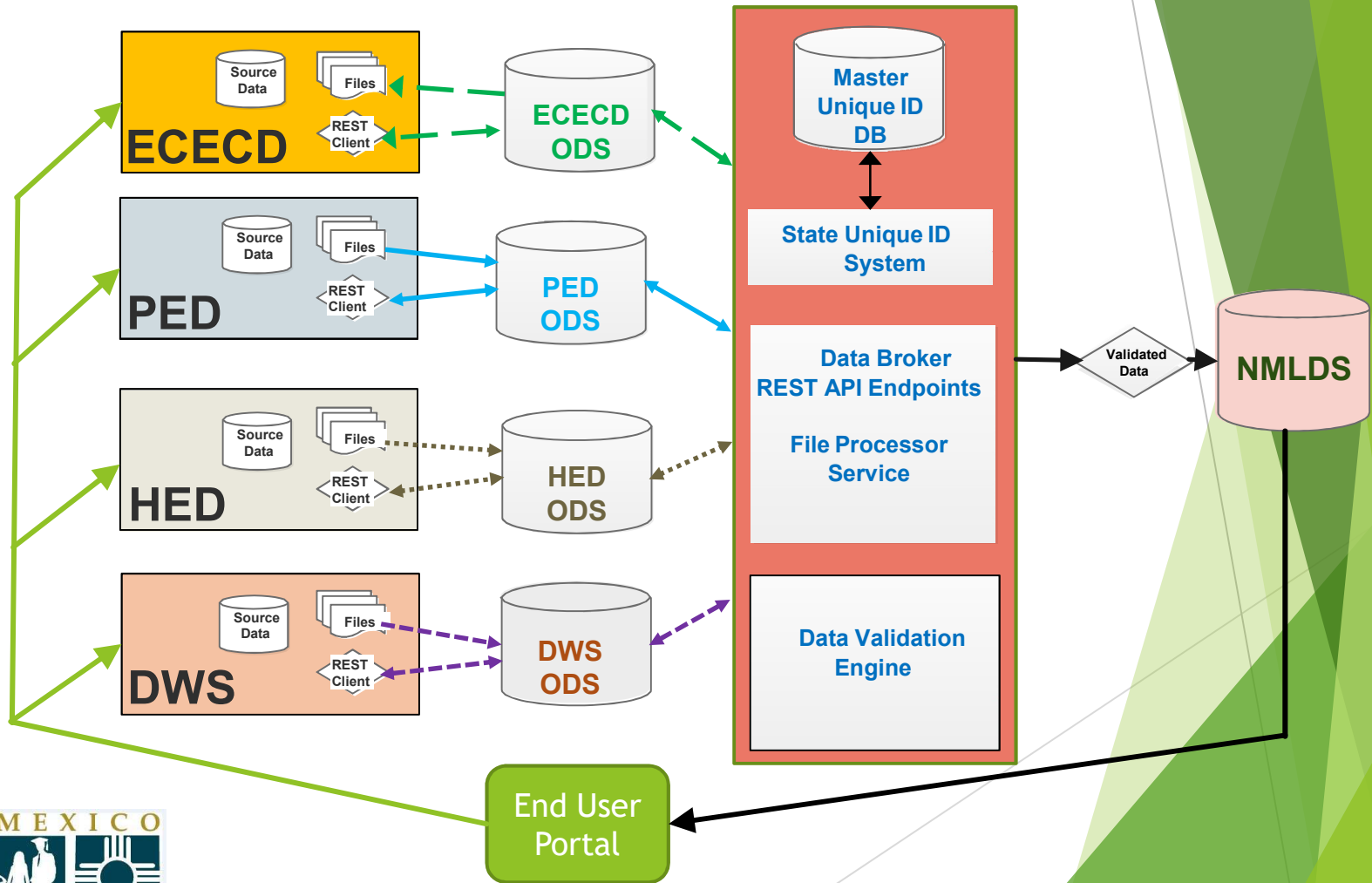
Project Abstract

▶ Link key Department of Workforce Solutions (DWS), Early Childhood Education and Care Department (ECECD), HED, Public Education Department (PED) data into a single federated data warehouse.

▶ This will be 4-year effort with the first year's focus on discovery activities to refine the project's scope, consider technical approach alternatives and define the expected outcomes.

▶ The procurement approach for scope implementation will be via RFP, the result being an agencies-selected, vendor-provided COTS solution.

▶ Years 2-4 will focus on project planning and implementation activities of the solution.

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6

Appropriation & Certification History

Appropriation History Include All Funding Sources, e.g. Federal, State, County, Municipal Laws or Grants.		
Fiscal Year	**Funding Source**	**Amount**
FY2021	Laws 2020, Chapter 83, Section 7(48)	$274,000
	Total Appropriation:	$274,000
	Total Appropriation Minus Total Certified Funds (include this request):	$0

Certification History			
Date	**Certification Phase**	**Amount**	**Funding Source** Use specific citations matching preceding table.
8/27/2020 (this request)	Initiation	$274,000	Laws 2020, Chapter 83, Section 7(48)
	Total Certified:	$274,000	

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7

Project Deliverables: Initiation Phase

Deliverable	Due Date	Project Phase
Execute PM and Business Analyst contracts	10/1/20	Initiation
Finalize and sign project charter	11/1/20	Initiation
Sign all inter-agency MoUs (DWS, ECECD, HED, PED)	12/1/20	Initiation
Issue an RFP for the Longitudinal Data System solution	1/15/21	Initiation
Establish and convene Project Steering Committee	2/15/21	Initiation
Complete analysis of CEDS and agencies data & systems	4/15/21	Initiation
Approve Communication Management Plan	5/15/21	Initiation
Review top 2-4 vendor bids	6/10/21	Initiation
Select the winning bid	6/25/21	Initiation

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8

Initiation Phase: Additional Details

The following activities will also be performed during the
Initiation Phase:

- Identify and engage stakeholders
- Establish project governance structure
- Draft and sign inter-agency Memoranda of Understanding (MoUs)
- Assess Common Education Data Standards (CEDS) viability as a data architecture solution
- Purchase Microsoft 365 Government Community Cloud (GCC) E1, Exchange Online Plan 2, and Azure AD P1 licenses
- Implement data-driven decision-making processes
- Perform market/vendor research
- Finalize a solution acquisition strategy
- Draft a project management plan

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9

Estimated Project Budget
(in thousands of dollars)

	Estimated Project Budget					
Comments: FY21 figures are for already-allocated funds. FY22-24 are projections only.						
	Description	**FY21**	**FY22**	**FY23**	**FY24**	**Total**
Project Management Services	In FY21 only: Part-time PM; Oct'20 – Jun'21 (780 hours)	$94.0	$260.0	$260.0	$90.0	$704.0
IT Business Analysis Services	In FY21 only: Sr. level, full-time; Oct'21 – Jun'21 (1,400 hours)	$134.0	$240.0	$240.0	$95.0	$709.0
Implementation Services		$0	$218.0	$98.0	$32.0	$348.0
Other Services	Infrastructure costs	$0	$344.0	$10.0	$28.0	$382.0
IV&V		$0	$65.0	$65.0	$65.0	$195.0
Hardware		$0	$80.0	$8.0	$0	$88.0
Software	In FY21 only: MS 365 GCC, Exchange & AzureAD licenses	$11.0	$777.0	$81.0	$81.0	$950.0
Internal Staff (hours charged to project)	In FY21 only: DWS, ECECD, HED, & PED Business, Data & IT SMEs; Nov'20 – Jun'21 (700 hours)	$35.0	$74.0	$39.0	$21.0	$169.0
Total:		$274.0	$2,058.0	$801.0	$412.0	$3,545.0

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10

RFPs and Contracts
For FY2021 only

RFP or Contract #	Status	Vendor	Description	Total Value
TBD	In Development	TBD	Part-time Project Manager *Oct'20 – Jun'21 (780 hours)*	$94,000
TBD	In Development	TBD	Senior level, full-time IT Business Analyst *Oct'20 – Jun'21 (1,520 hours)*	$134,000
TBD	Planned	n/a	RFP for a federated Longitudinal Data System solution	n/a
			Total Value:	$228,000

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11

Initiation Certification Request

The Higher Education Department requests $274,000.00 to begin the Initiation Phase of the New Mexico Longitudinal Data System project.

12