



Montana

Office of Public Instruction

May 7, 2021

Data Systems Modernization Project Overview

Office of Public Instruction Staff

Location: Zoom Meeting



Welcome and Introductions

- Montana Superintendent of Public Instruction, Elsie Arntzen
- Michael Sweeney, OPI Chief Data Officer
- Tara Dempsey, OPI Project Manager



Today's Presentation

The purpose of today's presentation is to provide a brief overview of how the OPI expects to fulfill the expectations of recently passed legislation to modernize OPI's data systems.

Just a reminder, the presentation is being recorded and will be available afterwards. There will be time for question and answer at the end of the presentation.

Today's Presentation Continued



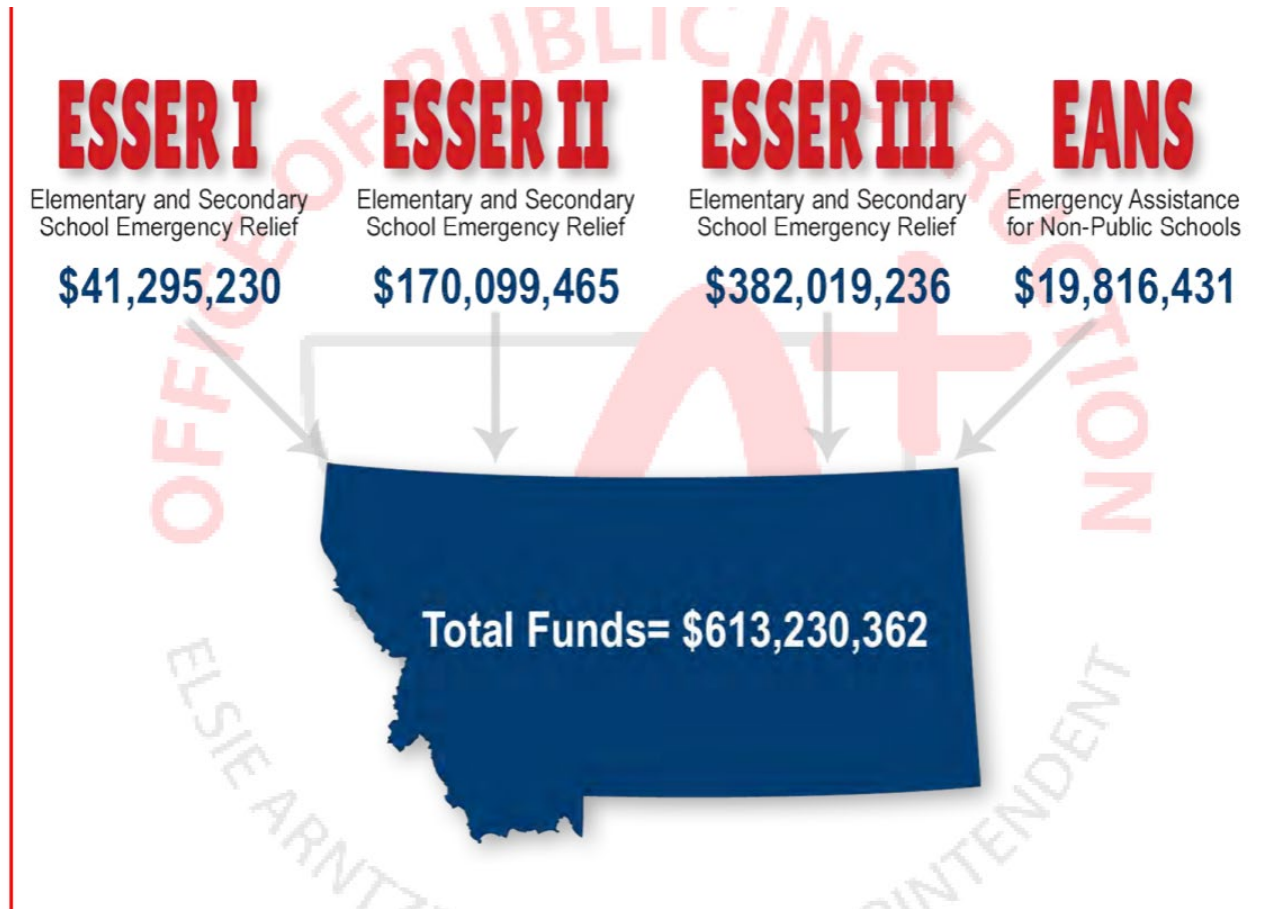


Superintendent's Remarks

Montana Superintendent
of Public Instruction,
Elsie Arntzen



ESSER Funding





ESSER Funding Overall

- 90% of the funds must be allocated directly to school districts.
- 0.50% of the grant amount can be used by the OPI for administration of the grant.
- The remaining 9.5% is assigned to the OPI to be used where it can do the most good in public schools to combat the pandemic.
- For ESSER I this determination was done by the agency, but for ESSER II and ESSER III, the general uses of the grant funds were addressed by the legislature.
- The OPI worked with MT PEC, the education advocates organizations in Montana, to arrive at a consensus recommendation to the legislature for these uses.
- The consensus recommendation was accepted by the Joint Education Subcommittee and included in HB 630 and HB 632.



ESSER Funding for Data

- Approximately \$13.5M of ESSER II and ESSER III funding has been appropriated to the OPI by the 2021 Montana legislature for the purposes of “database modernization”.
- House Bill 630 (ESSER II) - \$8,000,000
- House Bill 632 (ESSER III) - \$5,475,248



ESSER Funding for Data Continued

Total Appropriations - \$13,475,248.00

- The appropriations come with the condition that “OPI Database Modernization funds must be used by the office of public instruction to repair, improve, or replace existing data systems to respond to learning loss associated with the pandemic. Actions taken must be consistent with 20-7-104.”

20-7-104, MCA

- The very first sentence of “20-7-104, MCA Transparency and public availability of public school performance data -- reporting -- availability for timely use to improve instruction” reads:
- The office of public instruction's statewide data system must, at a minimum:
 - (a) include data entry and intuitive reporting options that school districts can use to make timely decisions that improve instruction and impact student performance while creating a collaborative environment for parents, teachers, and students to work together in improving student performance.



What is the Data Systems Modernization Project?

To put it simply:

This is a collaborative effort of the OPI and districts to reduce and eliminate “the friction” associated with collecting, reporting and using data.

4 Goals of the Project

- **SAVE TIME** - Reduce duplicate and unnecessary data entry and enable automation within and between systems
- **SECURE DATA** - Reduce the number of accounts and complexity of the systems
- **SUPPORT DATA USE** - Enable and foster the use of data to support programs and inform policy
- **SUSTAINABLE** - Systems must be sustainable and supportable beyond the initial implementations



Project Timeline

- The timeline of the project is being driven by the deadlines associated with the funding appropriations. Long-term the following deadlines apply:
- House Bill 630 (ESSER II) - \$8,000,000 – OPI Database Modernization – **Obligated by September 30, 2023 and fully expended by February 2024**
- House Bill 632 (ESSER III) - \$5,475,248 – OPI Database Modernization – **Obligated by September 30, 2024 and fully expended by February 2025**



Major Tasks Happening in May

2021

- Funding/Budgets from HB 630 & 632 appropriations setup and ready to spend
- Provide information needed to develop the **OPI's ARP-ESSER Plan (This is the OPI's overall plan for the ESSER II and III funding that is to be submitted and approved by USED)**
- Hire a **Project Partner** to assist with project initiation tasks, focus groups and putting together the materials and participating in Consulting Firm RFP.



Major Tasks Happening in May-June 2021

- Begin RFP for **Consulting Firm**. A **Consulting Firm** would be hired this Fall to perform detailed analysis and perform project tasks. They will provide technical and project services that we do not have the capacity to do in-house.
- **Convene Data Modernization Focus Groups and K-12 Data Task Force** to solicit feedback and validate the strategy and approach.
- **Hire a project manager to begin Educator Management projects**, like the Educator Licensure RFP.



Summer-Fall 2021

- Summer-Fall 2021 – Consulting Firm hired and focus groups/ K-12 Task Force continue to convene and finalize strategy and approach decisions. I expect this to take 3-6 month due to “we don’t know what we don’t know” and the time to get collective buy-in and approval.
- July – Restart Educator Management projects - MSEIS
- July – Consulting Firm RFP released
- July-October – Continue focus groups and K-12 Data Task Force meetings
- September – LFC Report
- October – Consulting Firm Selected and under contract



Timeline – Fall 2021 and Beyond

- Fall 2021-Winter 2022 – Initial procurement and analysis activities by **Consulting Firm** begin.
- Spring-Summer 2022 initial implementations and contract commitments begin, and we start executing on projects.

Data Systems Modernization Project Approach

10-minute overview

Current System/Data Landscape

- 50+ data systems at the OPI that need upgrading & maintenance!

OPI Information Reporting System Inventory.xlsx

A	B	C	D	E	F	G
Title	Application Public Name	Application Description	Owner	Test: URL	Production: URL	Availability
AS21	AS21	Collect and report required data for 21st Century grant - WILL BE IN PRODUCTION JULY 2021	School Support Services	TBD	TBD	External
Achievement in Montana (AIM)	Achievement in Montana (AIM)	The AIM (Achievement in Montana) system is used to collect student information for enrollment counts provided for school funding, special education data, and a collection of data items for federal program reporting.	Data & Technology	http://opi.mt.gov/Reports&Data/AIM/	http://opi.mt.gov/Reports&Data/AIM/	External
Advanced Driver Education	Advanced Driver Education	The Advanced Driver Education application registers people into the advanced driving courses provided in Lewistown, MT.	School Support Services	https://appsinternalst.opi.mt.gov/AdvanceDriverEducation/fmLogin.aspx	https://appsinternal.opi.mt.gov/AdvanceDriverEducation/fmLogin.aspx	External
Audit	Audit	The Audit application is used to track audit findings from audits performed on school systems. LEGACY SYSTEM (replaced by LACIS): The CASIS system was used by adult basic and literacy education sites to track student progress and by the OPI to produce the necessary federal reports. DISCOMMISSION IN FALL 2021 after final reports from this system.	School Finance	https://appsinternalst.opi.mt.gov/Audit/fmLogin.aspx	https://appsinternal.opi.mt.gov/Audit/fmLogin.aspx	Internal
CASES	CASES		Career, Technical Education	https://appstest.opi.mt.gov/Cases/fmLogin.aspx	https://apps.opi.mt.gov/cases/fmLogin.aspx	External
Central	Central	The Central application contains information used by all of the OPI applications that need information about Counties, School Systems, Educational Organizations, Districts and Schools.	Operations - Centralized Services	https://appstest.opi.mt.gov/Central/fmLogin.aspx	https://apps.opi.mt.gov/Central/fmLogin.aspx	Internal
Contacts	Contacts	The Contacts applications are used by schools and districts to manage and keep current their staff contact information for the OPI. The contact information from this application is used in the school directory. It is also used internally for staff pull contact information and full lists of school staff.	Centralized Services	https://appstest.opi.mt.gov/Contacts/fmLogin.aspx	https://apps.opi.mt.gov/Contacts/fmLogin.aspx	External
Contacts (AIM)	Contacts (AIM)	This portion of the Contacts system is used by AIM support staff for tracking contacts for schools and districts	Data & Technology	https://appstest.opi.mt.gov/Contacts/fmLogin.aspx	https://apps.opi.mt.gov/Contacts/fmLogin.aspx	External
County	County	The County application is a web based for internal and external use of registered users to collect data, process County Equalization pursuant to MCA 20-9-335, and issue corresponding reports for public use.	School Finance	https://appstest.opi.mt.gov/County/fmLogin.aspx	https://apps.opi.mt.gov/County/fmLogin.aspx	External
CSIP	CSIP	Continuous School Improvement Plan	ESSA & School Improvement	https://appstest.opi.mt.gov/CSIP	https://apps.opi.mt.gov/CSIP	External
Direct Certification	Direct Certification	The Direct Certification system is used to perform the direct certification of Montana's enrolled students, in participating NSLP Sponsored Schools, that qualify for free school lunches. The system imports student enrollments and eligibility information and matches them through a rules engine for reporting, and enables the Sponsor's officials to perform manual matching and collaboration, and prepares the required federal reporting.	School Support Services	https://directcertst.opitest.mt.gov/DCA/main.aspx	https://directcert.opi.mt.gov/DCA/main.aspx	External
Distance Learning	Distance Learning	The Distance Learning application tracks Distance Learning providers and the courses they offer.	Accreditation and Educator Preparation	https://appstest.opi.mt.gov/DistanceLearning/fmLogin.aspx	https://apps.opi.mt.gov/DistanceLearning/fmLogin.aspx	External
E-Grants	Electronic Grants Management System	E-Grants is a web-enabled system for K-12 education and supports the grant application process from allocation of funds and application for funding through payment accountability, reporting to the grantor and grant closeout for both state and federal grants. E-Grants is accessible to all Local Education Agencies (LEAs) and other sub grantees via the Internet.	Centralized Services	https://testegrants.opi.mt.gov/opigsweb/fogon.aspx	https://agrants.opi.mt.gov/opigsweb/fogon.aspx	External
EDFacts	ED Facts	The Performance Based Data Management Initiative (PBDMI) Database used to stage reports submitted to the U.S. Department of Education via the EDEN Submission System.	Data & Technology	https://appsinternalst.opi.mt.gov/EDFacts/fmLogin.aspx	https://appsinternal.opi.mt.gov/EDFacts/fmLogin.aspx	Internal
Education Donations Portal	Education Donations Portal	Public portal to allow donations to the Innovative Educational Program or Register a Donation to a Student Scholarship Organization	School Finance	https://svr.mt.gov/dor/educationdonations/Secure/MainMenu.aspx	https://svr.mt.gov/dor/educationdonations/Secure/MainMenu.aspx	External
GEMS	Montana's Statewide Longitudinal Education Data System	The GEMS data reporting system provides access to multiple years of data and interactive reports on student achievement, graduation rates, enrollment, program and course offerings, district and school profiles, the National Assessment of Education Progress (NAEP), and financial information reported by school districts. Additionally, GEMS provides users the ability to compare Montana schools side-by-side.	Data & Technology	http://content.opi.mt.gov/	http://gems.opi.mt.gov/	External
Generate	Generate	Generate automates IDEA Part B 618 and 616 federal reporting and provides reports for informing policy and practice. It was developed by the Center for integration of IDEA Data (CID) and is based on Common Education Data Standards (CEDS).	Data & Technology	https://generatst.opi.mt.gov	https://generate.opi.mt.gov	Internal
govDelivery	OPI Mass Emails	govDelivery is the platform for sending emails to communicate important information with the education community.	Data & Technology	https://admin.govdelivery.com/session/new	https://admin.govdelivery.com/session/new	External
Help Desk	Help Desk	IT help desk system.	Data & Technology	https://opiservicesdesk.opi.mt.gov/help/servicesdesk/customer/portal/	https://opiservicesdesk.opi.mt.gov/help/servicesdesk/customer/portal/	Internal
HSEquivalency	High School Equivalency Diplomas and Transcripts	The HSEquivalency application is used internally by OPI to manage and print transcripts and diplomas for adult basic education students.	Career, Technical Education	https://appsinternalst.opi.mt.gov/hsequivalency/fmLogin.aspx	https://appsinternal.opi.mt.gov/hsequivalency/fmLogin.aspx	External
Impact Aid	Impact Aid	The Impact Aid application is used by the OPI to track Impact Aid application data and payments made to schools. The Impact Aid application uses the application and payment data, along with other data reported in MAIFAIRS, to generate reports for the Department of Education (DOE) necessary to calculate the actual payment made to schools and to provide data sheets for schools to use in the completion of the application process.	School Finance	https://appsinternalst.opi.mt.gov/impactAid/fmLogin.aspx	https://appsinternal.opi.mt.gov/impactAid/fmLogin.aspx	Internal
Jobs For Teachers	Montana Jobs for Teachers	The Montana Jobs for Teachers Service connects qualified teachers with job opportunities in Montana.	Data & Technology	https://appstest.opi.mt.gov/MJobsForTeachers/	http://jobsforteachers.mt.gov/	External
K20 Data Transport	K20 Data Transport	The K20 data transport system facilitates the collection and exchange of student information required for MAIFAIRS transcripts. DECOMMISSIONING IN JULY 2021	Data & Technology	https://datatransportst.opitest.mt.gov/	https://datatransport.opi.mt.gov/	External
LACIS	LACIS	Legacy System for Literacy	Career, Technical Education	https://lites.literacypro.com/faces	https://lites.literacypro.com/faces	External

Current System/Data Landscape Continued

- **3 major authentication/authorizations, and at least 6 others** that are typically one-off for various systems
- **Constantly changing laws and regulations** that change what and when data needs to be reported.
- **Business processes and systems built around reporting requirements and timelines. We to restructure systems and processes to better enable “real-time” access and use of data** and eliminate the delays and lagtime currently preventing timely use of the data.



Current System/Data Landscape Sustainability

- **Unsustainable Systems** – Many of our systems are custom built and/or were purchased with one time only funds. We have always managed to “keep the lights on” but a lack of resources and sustainable approaches have inhibited our ability and contributed to the friction of collecting, reporting and using data.

The choreography of just keeping it all working together and functioning consumes a lot of resources here at the OPI and districts - it's a wonder sometimes we've kept it going over the years and testament to the people here at the OPI and in the districts who have been working so hard to keep it all going!

4 Main Areas

The Data Systems Modernization Project will revolve around 4 main areas and “collapsing” the number of systems and business processes we have:

- Student Management
- Educator Management
- Fiscal Management
- Digital Infrastructure



STUDENT MANAGEMENT

- We expect to **continue to invest in the AIM statewide student information system** provided by Infinite Campus.
- A goal of this effort would be to **effectively eliminate the entire middle-layer (AIM Montana Edition)** if LEAs all used the **district edition and/or we had an API (Application Programming Interface)** model for those that don't.
- We expect to **move as much student and class data that is collected into AIM as the single system collection point.** The API model is probably only viable for the larger districts.



KEY STUDENT MANAGEMENT PROJECTS

- **Accelerate the implementation of validation and certification processes and automation in AIM.** Certification and validation will increase data integrity, improve reporting efficiency, and reduce the districts workload for state reporting.
- **Implement analytics** for all students.
- Migrate OPI's custom-built SPED reporting and portal into AIM.
- Migrate most of OPI's custom-built TEAMS application into AIM.
- **Automate collection and submission of required CRDC data.**



KEY STUDENT MANAGEMENT PROJECTS CONTINUED

- **Automate collection of assessments within AIM.** Facilitate the collection of district-selected assessments to be automated into AIM, so long as they meet certain standardization requirements, which then would allow upload to the state.
- **Implement a statewide survey/climate tool.** A statewide survey tool that allows for consistent, valid collections and the return of data back to schools quickly. Enable schools to initiate and share surveys and collections with each other independent of the OPI or choose to share and aggregate them at different levels.
- **Statewide Transcripts Tool.** The OPI's statewide transcript service is being turned off at the end of the 2020-2021 school year. Revisit with stakeholders if this is something they want to do. This could provide an important data linkage to higher education and department of labor.



EDUCATOR MANAGEMENT

Replace MSEIS with a comprehensive educator licensing system that modernizes how educators interact with the OPI to apply, maintain and renew their licenses. The new system will be mobile friendly/app and facilitate easy professional development updates by licensees and providers to participate. We will also provide a better system Jobs for Teachers system that actually helps facilitate recruitment and retention and provides resources to LEAs to better compete for talent and provide data to inform EPP and Professional Development. It would also facilitate the collection of data for efforts by the legislature to fund and incentivize educators in underserved areas.

- **Educator Licensing (MSIES)**
- **Professional Development (Renewal Units and Learning Hub)**
- **Recruitment & Retention/Jobs for Teacher (Jobs for Teachers)**



FISCAL MANAGEMENT

Hire traditional consulting firm to review/recommend business processes and likely produce an RFP. No commercial-off-the-shelf (COTS) solutions are likely available so we would likely be building custom and would ideally utilize an API for data collection from County and District finance systems. RFP for new system starting in 2022 with work complete in 2024.

Scope would include MAEFAIRS (COUNTY, TRANSPORTATION, AUDIT, PAYMENT) and E-Grants Systems

Also expect to see better integration with AIM, especially around enrollment activities.



DIGITAL INFRASTRUCTURE

This is a mix of “behind the scenes” systems and processes and those that our customers directly interact with regularly.

- **Single-Sign on and security:** RFP to hire consultant in 2021 to flesh out requirements. Previous estimates at consolidating OPI’s security footprint have been at \$1M+, however if we are consolidating systems and procuring new ones, that cost and effort can be allocated into those systems instead of “bolted-on” as previously envisioned.
- **Customer Relationship Management/Help Desk:** Single point of interaction for our customers to the OPI. Such as system by design would facilitate the collection and maintenance of demographic and contact information and help improve both security and communications as people in the field change roles. Systems changed:
- **Contacts, Central & Directory of Montana Schools**



DIGITAL INFRASTRUCTURE CONTINUED

- **Workflow Management:** This would help with the internal automation of day-to-day business of the OPI, including contracts, travel and other internal functions. Again, efficiencies and automation in these areas enable staff to focus on more important and valuable activities serving our customers.
- **New Website & Intranet:** All systems should integrate with our website –website is where everything starts with our customers and intranet internally.
- **Data Management:** Initially internal to OPI. We need automation to help us better organize and catalogue data so that we know what it is, where it comes from, who can and should have access to it, and apply policies and procedures for data collection, management, and use. This automation would enable us to understand and create reports on data that is appropriate for that data analyst's business need. For example, the inquires around enrollment would be much easier to facilitate and publish. GEMS would be our end product - a place where users can run reports and analysis that would include some dashboards and some ad hoc reporting, for a wider variety of users and use cases.



Next Steps

- Next week we will send out a follow-up message with a link to the recording of this presentation, the presentation itself and links to a [Data Systems Modernization Project webpage](#).
- On the project webpage you'll have access to all of the above information and new information as the project progresses. You'll also be able to subscribe to a mailing list to stay connected and up to date with the project



Questions? Comments? Concerns?

Now it's time to hear from our most important partner - you, the schools.

- Any questions in the chat box or directly from the audience? Please remember to stay muted unless you are speaking, thank you.
- If you have a question, please tell us your name and who you're with in case we need to follow-up with you after this presentation.
- What feedback do you have on this initial plan? This can be anything that's on your mind related to improving how we collect data. This is your initial chance to share your thoughts - there will be a lot more.
- What do you want us to be thinking about as we refine this plan and the steps?

Thank you!

For questions or additional
information please contact:

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