Elsie Arntzen, Superintendent

PO Box 202501
Helena, MT 59620-2501
406-444-3680
www.opi.mt.gov

OFFICE OF PUBLIC INSTRUCTION
STATE OF MONTANA

Putting Montana Students First A

Milestone Schedule

Last Updated: April 22, 2024

Milestone #	Milestone Name	Delivery Date	Completed
1	AWS (Amazon Web Services) Data Assessment, Environment Maturity Assessment & Recommended Approach Draft Delivery	Sep 2023	✓
2	OPI Iterative Feedback	Sep 2023	✓
3	Final Delivery of AWS Assessment and Recommended Approach	Sep 2023	✓
4	Organizational Change Management planning	Nov-Dec 2023	✓
4	Data Connection work for Infinite Campus	Nov-Dec 2023	✓
4a	Infinite Campus Connector to Data Lake	Jan-Mar 2024	✓
4a	PowerSchool Connector to Data Lake	Mar 2024	✓
4a	Connected Intelligence Deployment	Mar 2024	✓
5	Unified Insights Deployment	Mar 2025	

Elsie Arntzen, Superintendent

PO Box 202501
Helena, MT 59620-2501
406-444-3680
www.opi.mt.gov

OFFICE OF PUBLIC INSTRUCTION
STATE OF MONTANA

Putting Montana Students First

6	Post Deployment & Analysis	Jun 2025	
7	Formal Signoff & Acceptance of Deployment Solution by Montana	Jul 2025	

OPI Data Modernization Milestones

Milestone 1:

- Onsite and/or remote workshops (as determined by OPI) with relevant stakeholders for the identified data sources and applications to identify requirements for data ingestion, interfaces, security, governance, downstream integrations, integrated BI tools, etc.
- Draft delivery of assessment output deliverables, to include:
  - Documented agile epics for each identified system and corresponding high-level stories, e.g., data sources and ingestion frequency, data size and volume, HA/DR requirements, chargeback requirements, pertinent regulatory requirements, agility/reusability requirements, data dependencies, orchestration, logging, and monitoring requirements, and data protection requirements including access controls, encryption, and row/column level security.
  - Recommendation for future state disposition of all systems in assessment scope, including:
    - Rehosting: "lift-and-shift"
    - Re-platforming: "lift-tinker-and-shift"

Elsie Arntzen, Superintendent

PO Box 202501
Helena, MT 59620-2501
406-444-3680
www.opi.mt.gov

OFFICE OF PUBLIC INSTRUCTION
STATE OF MONTANA

Putting Montana Students First A

- Relocate
- Repurchasing: moving to a different product
- Refactoring / Re-architecting
- Retire
- Retain (usually this means "revisit" or do nothing for now)
  - Migration strategy:
    - Wave-based approach for migration
    - Roadmap
    - Hybrid Architecture
    - Future Architecture
  - High-level solution build/development estimates for the future state of each system, noting that while many systems may be candidates for migration to the Connected Intelligence data lake, many legacy systems may require other modernization strategies due to integrated application logic, deprecated software components, outdated functionality, or other reasons.
  - Data security requirements to include encryption, access control requirements, data masking, tokenization or de-identification requirements, audit, logging, and compliance needs

Milestone 2:

Iterative feedback based on Montana review of draft deliverables.

Milestone 3:

Deliverable updates and final approval from Montana, to include approvals to migrate selected data sources to the Connected Intelligence data lake.

Elsie Arntzen, Superintendent
PO Box 202501
Helena, MT 59620-2501
406-444-3680
www.opi.mt.gov

OFFICE OF PUBLIC INSTRUCTION
STATE OF MONTANA

Putting Montana Students First

Milestone 4:

Connected Intelligence Deployment

- ***Milestone 4a***: Deployment of Connected Intelligence platform, tools, and data lake, with replication enabled from initial data sources. Initial connected data sources to include:
    - Infinite Campus AIM State Edition
    - All Montana district instances of PowerSchool SIS
        - Using the 50 technical training hours included for Connected Intelligence, PowerSchool will demonstrate and assist Montana in writing extracts to export PowerSchool SIS data from Connected Intelligence so MT OPI can load data into Infinite Campus AIM State Edition for data validation and certification

    - ***Milestone 4b***: Replication of up to 6 additional Montana data sources into Connected Intelligence. Target data sources may be identified as part of the System Assessment, or by other means by Montana. Services to perform integration of these additional 6 data sources will be available for up to 2 years, and it is expected that this sub-milestone may extend beyond other subsequent milestones.

Milestone 5:

Unified Insights Deployment

- ***Milestone 5a***: Base deployment of Unified Insights modules. Sequencing of module implementation is recommended as follows:
    - Unified Insights – Essentials: Deployment of Unified Insights Platform and Essentials module for state-wide implementation and delivery of student-data dashboards and analytics. Two Unified Insights SIS connectors will be implemented to transform and move SIS data from

Elsie Arntzen, Superintendent
PO Box 202501
Helena, MT 59620-2501
406-444-3680
www.opi.mt.gov

OFFICE OF PUBLIC INSTRUCTION
STATE OF MONTANA

Putting Montana Students First A

the Connected Intelligence data lake to the structured Unified Insights data warehouse on a nightly basis:

- o Infinite Campus SIS connector for AIM State Edition data (as described in detail in the "Essentials SIS Connected" Section of SOW)
- o PowerSchool SIS connector for consolidated PS SIS district data (as described in detail in the "Essentials PS SIS" Section of SOW)
- o Unified Insights – Risk Analysis: Deployment and configuration of Risk Analysis module for state-wide implementation, which runs on top of the data from Essentials.
- o Unified Insights – Student Readiness: Deployment and configuration of Student Readiness module for state-wide implementation, which runs on top of the data from Essentials and can incorporate National Student Clearinghouse data from Montana districts if they have a subscription are able to provide files. Courses and credits data is also included and is sourced from the Student Information System.
- o Unified Insights – Community Engagement: Deployment and configuration of separate externally-facing Unified Insights platform instance with Community Engagement module, which incorporates data from Essentials plus other file-base data provided by Montana for community consumption.
    - Note: Sequencing of Community Engagement deployment may be moved forward if desired by Montana and can be deployed in advance of or in parallel to other Unified Insights modules listed above.

- o **Milestone 5b**: Unified Insights Customizations. KTO hours have been included in Montana's purchase to allow for customizations to the base Unified Insights data and content, as defined and prioritized by Montana. KTO ("Keys To Ownership") hours are pre-paid service hours that can be

Elsie Arntzen, Superintendent

PO Box 202501
Helena, MT 59620-2501
406-444-3680
www.opi.mt.gov

OFFICE OF PUBLIC INSTRUCTION
STATE OF MONTANA

Putting Montana Students First

used flexibly for customizations, additional consulting, or other Services that Montana requires over the course of the contract for either Unified Insights or Connected Intelligence. KTO hours will be available for up to 2 years, and it is expected that this sub-milestone may extend beyond other subsequent milestones.

Milestone 6:

Post Deployment Analysis and Assessment. Expected to last approximately 5 months after the base Connected Intelligence and Unified Insights deployments are completed. Montana to operate and assess the solution and identify any areas of concern or opportunities for improvement. Additional customization requirements may be uncovered during this phase which can be addressed using available KTO hours.

Milestone 7:

Formal signoff and acceptance of deployed solution by Montana.