



***OFFICE OF PUBLIC INSTRUCTION***

**AGENCY INFORMATION  
TECHNOLOGY PLAN**



**2018**



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## Mission, Goals, and Objectives

<b>Mission</b>	The Office of Public Instruction serves Montana’s students, parents, schools, and communities as we prepare each generation for success in careers and college.
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Superintendent Elsie Arntzen has established four initiatives to accomplish this mission:

### MONTANA HOPE

#### 1. Whole Child Approach to Education:

- Family and community engagement
- Student safety
- Mental health awareness
- Suicide prevention
- Anti-bullying
- School nutrition

### MONTANA TEACH

#### 2. Growing Teachers & Educational Leaders:

- Celebrating teacher excellence
- Expanding leadership opportunities through the Teacher Learning Hub
- Additional value placed on education and professional ethics
- Collaborating with teacher prep programs and OCHE
- Renewed attention on teacher recruitment and retention

### MONTANA LEARN

#### 3. Academic Achievement in Montana:

- Celebrating student achievement
- Closing achievement gaps among student groups through our ESSA plan
- Supporting school transitions for students
- Focus on early math proficiency, with emphasis on middle school
- Partnering with higher education to reduce remediation after high school

### MONTANA READY

#### 4. Community, College & Career Readiness:

- Early workforce development emphasis beginning in middle school
- Additional emphasis on STEM, CTE, and agriculture education
- Engaging students to continue on a path of achievement beyond diploma through two-year colleges, tribal colleges, certificate programs, apprenticeships, military, as well as a traditional university path
- Expanding partnerships with higher education, business, tribal, and community leaders

The OPI Information Technology Division supports Superintendent Arntzen’s initiatives and aligns with the State’s IT Strategic Plan by pursuing the following goals:

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1. **Develop Capable and Sustainable Systems** – Implement sustainable system management so applications are developed that are user-friendly and reliable for OPI customers and can easily be modified to meet legislative and technology changes.
2. **Support Staff and Build Strong Teams** - Build and support a team of technology professionals who are customer-focused, proficient with OPI technologies and work as a team to deliver quality services and solutions.
3. **Improve Communications and Awareness** - Design and maintain websites and provide tools for the OPI to effectively communicate to the education community and the general public and that facilitates awareness and supports their involvement and engagement.
4. **Protect and Secure Information** – Keep current with industry security standards on all OPI systems (confidential, integrity and availability) and provide cybersecurity and student records confidentiality training annually.
5. **Control Costs** – Maximize the value of technology investments and operate in a fiscally responsible and sustainable manner by following best practices and emphasizing solutions that are commensurate with the benefits provided.

		State Strategic Plan Goal/Objective Reference	Agency Goal/Objective Reference
<b>Goal One</b>	Protect and secure information by ensuring IT staff is trained in areas of software/application, network and database security best practices	Secure	4 Protect and Secure
<b>Objective One</b>	Implement and maintain an Information Systems Security Plan to ensure data is always secure, confidential, reliable and available	Secure	4 Protect and Secure
<b>Objective Two</b>	Provide annual student record confidentiality and cybersecurity training for OPI staff	Secure	4 Protect and Secure
<b>Objective Three</b>	Fully implement the Legislative Audit Division’s Data Collections Audit recommendations	Secure	4 Protect and Secure

		State Strategic Plan Goal/Objective Reference	Agency Goal/Objective Reference
<b>Goal Two</b>	Increase use of shared technologies and managed services	Shared	1 Develop Capable and Sustainable Systems 5 Control Costs

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<b>Objective One</b>	Implement Unified Desktop Workspace (UDW) to decrease environmental impact and improve security.	Shared	1 Develop Capable and Sustainable Systems 5 Control Costs
<b>Objective Two</b>	Improve collaboration with internal and external entities via technologies that allow reaching a larger population and is more efficient	Shared	1 Develop Capable and Sustainable Systems 3 Communicate and Inform 5 Control Costs
<b>Objective Three</b>	Identify and prioritize business functions where OPI can better leverage already provided services	Shared	1 Develop Capable and Sustainable Systems 5 Control Costs

**State Strategic Plan Goal/Objective Reference**

**Agency Goal/Objective Reference**

<b>Goal Three</b>	Deploy capable and sustainable systems	State-of-the-Art	1 Develop Capable and Sustainable Systems 5 Control Costs
<b>Objective One</b>	Deploy Unified Desktop Workspace to improve security, reduce support costs and environmental impact	State-of-the-Art	1 Develop Capable and Sustainable Systems 5 Control Costs
<b>Objective Two</b>	Improve methodologies of endpoint deployments and upgrades	State-of-the-Art	1 Develop Capable and Sustainable Systems 5 Control Costs
<b>Objective Three</b>	Use teleconferencing technologies to reach a larger population for information sharing and collaboration	State-of-the-Art	1 Develop Capable and Sustainable Systems 3 Improve Communications and Awareness 5 Control Costs

**State Strategic Plan Goal/Objective Reference**

**Agency Goal/Objective Reference**

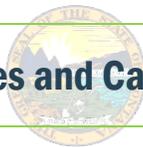
<b>Goal Four</b>	Build and support a strong IT team	Capacity	All
<b>Objective One</b>	Implement development standards and automated code review	Capacity	1 Develop Capable and Sustainable Systems 5 Control Costs
<b>Objective Two</b>	Career path and training for all employees	Capacity	All
<b>Objective Three</b>	Align staff/organization with projects and mission	Capacity	All

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		State Strategic Plan Goal/Objective Reference	Agency Goal/Objective Reference
<b>Goal Five</b>	Improve communications and awareness with parents, educators and other stakeholders in our schools and communities.	Capability	1 Develop Capable and Sustainable Systems 3 Improve Communications and Awareness
<b>Objective One</b>	Develop and implement ESSA report card data processes	Capability	3 Improve Communications and Awareness
<b>Objective Two</b>	Continue to develop employees' understanding and use of technology	Capability	2 Support Staff and Build Strong Teams
<b>Objective Three</b>	Develop plan to replace legacy systems with sustainable and supportable platforms	Capability	1 Develop Capable and Sustainable Systems 3 Improve Communications and Awareness 5 Control Costs

		State Strategic Plan Goal/Objective Reference	Agency Goal/Objective Reference
<b>Goal Six</b>	Control costs	Cost- Effectiveness	All
<b>Objective One</b>	Use SITSD services whenever possible and collaborate with other agencies on similar technical objectives where overall costs can be reduced by combining resources	Cost- Effectiveness	5 Control Costs
<b>Objective Two</b>	"Buy First, Build Second" development approach	Cost- Effectiveness	5 Control Costs
<b>Objective Three</b>	Strengthen IT procurement processes and oversight	Cost- Effectiveness	5 Control Costs

<b>Link to Agency Goals and Objectives</b>	<a href="http://opi.mt.gov/About-the-OPI">http://opi.mt.gov/About-the-OPI</a>
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## Resources and Capabilities

### Summary of information technology resources:

Bureau / Unit Name	Number of FTE	Primary Function / Mission
Network Services	8	Maintains the OPI's complex server network and desktop computing environment, including the support of mobile devices. The Network Services Bureau also performs all database and security-related functions for the Agency.
Software Development	13	Develops and supports more than 60+ OPI web-based applications used by the agency and school districts throughout the State. The Bureau is responsible for maintaining the OPI website, as well as the intranet and extranet Sharepoint sites. The SDB operates the "Jobs for Teachers" website, which notifies teachers and school administrators of job openings and provides for online teacher applications, and maintains the educator licensure system.

### Information Technology Capabilities

#### Summary of Systems:

Name	Description	Purpose
Audit	The Audit application is used by the OPI Employees to track audit findings from audits performed on school systems.	School Finance
Cash Receipts	The Cash Receipts application tracks every check that comes into OPI by logging and categorizing the check to a deposit number that SABHRS has assigns. The information about where the check was deposited is also tracked.	Centralized Services
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.	Centralized Services
Contacts	The Contacts applications is 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.	Centralized Services
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	Health Enhancement and Safety

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	reporting, and enables the Sponsor's officials to perform manual matching and collaboration, and prepares the required Federal reporting.	
County	The County application is 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
Continuous School Improvement Plan (Formerly Five Year Plan)	The Continuous School Improvement Plan (CSIP) application is used by schools and districts to annually enter their continuous school improvement and Title I plans which are in turn scored by the OPI.	Accreditation
Distance Learning	The Distance Learning application tracks Distance Learning providers and the courses they offer.	Accreditation
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 & Adult Education
Revised Contract Tracking	The RCT application is used internally by the OPI to track vendors and all contract activity throughout the OPI.	Centralized Services
Travel	The Travel application is used by the OPI employees to enter trip information and travel claims to be processed by the OPI accounting.	Centralized Services
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 MAEFAIRS, 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
Montana Automated Education Financial and Information Reporting System (MAEFAIRS)	The MAEFAIRS application is used to collect student enrollment information for funding purposes and provides for the distribution and collection of financial information.	School Finance
Payment	The Payment application is web based for internal use with limited access of the School Finance Division personnel. The application is used to process entitlements and issue	School Finance

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	corresponding payments to school districts and counties to the County Treasurer with exceptions.	
Pupil Transportation	The Pupil Transportation program allows designated school personnel, contractors, and transportation directors to manage the financial portion of the transportation program independently.	School Finance
Special Education Applications Portal	The SPED Applications Portal is the central web application for special education – both internal and external users. It houses the applications for our Child Count Verification, Exiting Verification, Post School Outcome Survey. Those 3 are all used by school districts/coops to complete federally mandated reporting. It also houses our Monitoring application, used by our Compliance Monitors and Part-Time Employees to complete the review of special education files per our General Supervision responsibilities under IDEA.	Special Education
Special Education Reporting Internal	The SPED Reporting Internal application is used internally only. It houses or SPED Grant Award application, used in the calculation of district allocations of the federal IDEA Part B and Preschool allocations, as well as in the calculation of Maintenance of Effort. It also houses the procedures and reports needed to complete our State Performance Plan and Annual Performance Report.	Special Education
Montana Comprehensive Assessment System	The MontCAS application is used to record reasons student enrolled during the testing window did not take the tests. It also collects data about accommodations given to students both standard and nonstandard. Finally it collects data about any irregularities that happened during the testing.	Assessment
Montana High School Association	This MHSA application is a collaboration between OPI and MHSA. This system will collect the numbers of students participating in athletics, activities, and Career and Technical Organizations.	Collaboration between OPI and MHSA
School Discipline (Scheduled for Decommission 2 <sup>nd</sup> Quarter 2018)	The School Discipline application is used in districts to complete the federally mandated discipline reporting. All public schools (including publically funded schools) and the districts under which they are administered are required to collect and report discipline data for the entire school year for both	Special Education

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	regular and special education students. It is used both by the Special Education Division as well as the Health Enhancement and Safety Division to meet reporting requirements.	
Law Book Distribution	The Law Book Distribution application is used to track and ship law book orders.	Centralized Services
Montana State Educator Information System	The MSEIS application used to license educators and manage their information.	Educator Licensure; Measurement & Accountability
Nonpublic Schools	The Nonpublic School application collects private and home school registration, enrollment, and federal program participation data. Currently this is a single-user program but it's written to allow county superintendents and/or district authorized representatives direct access into the system should the OPI choose to allow this in the future.	Measurement & Accountability
OPI Calendars	The OPI Calendar application is used to update the Collections, Deadlines, Notices, and Data Verification Calendar published in GEMS.	Measurement & Accountability
OPI Common Login	The OPI Common Login application is used to maintain web application user security The OPI Common Login database is used in all internally developed web applications.	Information Technology Services
Opi Reporting Center	The OPI reporting center has information available to the public such as directory information and CRT data. Has secure information that is not tied to any other application that the user must log in to see.	Measurement & Accountability;#Information Technology Services
OPI Staff Directory (To be decommissioned 2018)	The OPI Staff Directory application contains information about the OPI Staff.	Centralized Services
Renewal Units	The Renewal Unit application assists providers registration, and event entry/reporting. Renewal Units are credits a teacher can get by further attending Renewal Unit Events. Teachers get credit for taking them, Provider of the workshop gets Credit for holding the event.	Educator Licensure
Montana Youth Risk Behavior Survey Data Retrieval System	The YRBS application allows the user to generate their school's survey information. If the user belongs to a District that serves more than one school, they can also generate their district's Multi-School District report that combines all high schools (including Alternative Schools) or all middle schools into one report.	Health Enhancement and Safety

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Terms of Employment Accreditation and Master Schedule (TEAMS)	The Teams application used to collection information about terms of employment, accreditation, and master schedules. Also used to determine schools accreditation status.	Accreditation
Advanced Driver Education	The Advanced Driver Education application registers people into the advanced driving courses provided in Lewistown, MT.	Health Enhancement and Safety
Montana's Statewide Longitudinal Education Data System (GEMS)	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.	Measurement & Accountability
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
Directory of Montana Schools	This is the find a school function on the OPI Web page.	Centralized Services
SABHRS Reporting - External OPI Reports	The SABHRS application pulls information from DOA SABHRS for the accountants to use to perform financial duties.	Centralized Services
Traffic Education Data and Reporting System	This Traffic Education application is used by school districts to input their annual district application, report their year-end results and create a student list containing all students who took Driver's Education.	Health Enhancement and Safety
Single Sign On	The SSO application is used to authenticate users to MSEIS and TEAMS.	Information Technology Services
Accountability Tracking	The Accountability Tracking application calculates Adequate Yearly Progress determinations.	Measurement & Accountability

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Montana's NCLB Report Card (No Child Left Behind Report Card) (To be decommissioned in 2018 and replaced with ESSA Report Card via GEMS)	The Report Card web page provides users with information on student academic performance for math and reading tests; the "adequate yearly progress" status of schools and districts; classes taught by highly qualified teachers; attendance, graduation and enrollment; emergency authorization of employment; and improvement status of schools. All these education indicators are required by the federal education law.	Accreditation
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.	Measurement & Accountability
opi.mt.gov and other OPI managed domains	opi.mt.gov and other OPI managed domains.	Information Technology Services
K20 Data Transport	The K20 data transport system facilitates the collection and exchange of student information required for district transcripts.	Measurement & Accountability
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.	Centralized Services
Tax Credits for Education Donations	Senate Bill 410 (2015 Legislature) provided tax credits for individuals and corporations for charitable donations to an educational improvement account for the purpose of funding innovative educational programs and technology deficiencies in public schools. Donations made to the educational improvement account will be distributed to public schools by the Office of Public Instruction via this system.	School Finance
Workflow: E-Grants	E-Grants Workflow	Centralized Services
Help Desk (Spiceworks)	Help Desk system used by IT	Information Technology Services
Bulk Email	Bulk Email System	Information Technology Services
Montana Jobs for Teachers	The Montana Jobs for Teachers Service connects qualified teachers with job opportunities in Montana.  System uses OCL for job poster authentication and authorization and ePass for job seeker authentication	Information Technology Services
Key Survey	Data collection and survey tool, cloud-based	Information Technology Services
CASES	The CASES system is used by adult basic and literacy education sites to track student	Career Technical & Adult Education

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	progress and by the OPI to produce the necessary federal reports.	
Developer Tools	This application is the code library for .NET application	Information Technology Services
Montana Agreement and Payment System	The Montana Agreement and Payment System (MAPS) supports Montana's schools participating in the USDA's National School Lunch Program (NSLP) by enabling on-line applications, claims, and other data necessary for State and Federal reporting and payments.	Health Enhancement and Safety
Sifter	Application Development Issue Tracking Tool	Information Technology Services
Generate	EdFacts Reporting Tool	Measurement & Accountability

Summary of Hardware:

Total Number of Appliances	Zero (0)
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Physical Servers: Include physical servers that are used for virtualization. Do not include servers hosted by SITSD.

Total Number of Physical Servers	Zero (0)
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Virtualized Servers: Do not include servers hosted by SITSD.

Total Number of Virtualized Servers	Zero (0)
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Storage: SANs and NASs. Do not include storage hosted by SITSD.

Total Usable Storage Space	Zero (0)
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Devices: Currently in service including, but not limited to desktops, laptops, mobile devices, printers, cameras, etc.

Device Type	Quantity	Estimated Replacement Value
Desktops	167	\$83,500
Laptops	154	\$92,400
Mobile Devices (tablets, phones, etc.)	63	\$25,200
Printers	36	\$18,000
Conference Room Cameras	7	\$6,000
Projectors	2	\$2,000

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Agency information technology projects ([2-17-524\(1\)\(e\)\(f\)\(2\), MCA](#)).

Educator Licensure System		
Superintendent's Office - Educator Licensure Section		
Project / Program purpose and objectives	Replatform legacy technology and provide improved licensing services to educators and schools.	
IT Goal and Objective Reference	Capability	
Estimated start date	12/1/2017	
Estimated delivery date	12/31/2022	
Estimated cost	To be determined	
HB 10 Request	No	
Funding source one	Funding Source	Amount Allocated
Funding source two	Funding Source	Amount Allocated
Funding source three	Funding Source	Amount Allocated
Annual costs upon completion	To be determined	
Status of the project as of <b>March 31, 2018</b> . Indicate % completed and status of funds expended.	0% Project is in preliminary planning and resourcing phase. RFI released March 2018 to gather information from vendors	

Technology Improvement Grant (TIG)		
Health Enhancement and Safety – Child Nutrition Programs		
Project / Program purpose and objectives	<ul style="list-style-type: none"> <li>Enhances broadband connectivity in remote locations to fully utilize the OPI's cloud based child nutrition software</li> <li>Integrates the USDA's Free/Reduced application into the Child Nutrition Program</li> <li>Expands Menu Planning functionality to allow more sponsor collaboration</li> <li>Streamlines responses to Data Requests made by many and various partners, auditors, and government bodies</li> <li>Streamlines data and simplifies the OPI's reporting to the USDA</li> <li>Upgrades and integrates Montana's Direct Certification Application (DCA), which will reach end of life by 2021</li> <li>Deploys a mobile application for the Summer Food Service Program (SFSP)</li> <li>Helps provide the necessary technology for the SFSP Electronic Benefits Transfer (EBT) demonstration</li> </ul>	
IT Goal and Objective Reference	Capacity	
Estimated start date	10/1/2017	
Estimated delivery date	9/30/2020	
Estimated cost	\$1,742,656.00	

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HB 10 Request	No	
Funding source one	Federal Grant	\$1,730,656.00
Funding source two	General Fund	\$12,000.00
Funding source three	Funding Source	Amount Allocated
Annual costs upon completion	\$175,000.00	
Status of the project as of <b>March 31, 2018</b> . Indicate % completed and status of funds expended.	8% of funds expended. Project is in executing phase. Staff augmentation contracts expected complete by April 1, 2018. Service contracts expected to begin May/June 2018.	

Generate		
Measurement & Accountability		
Project / Program purpose and objectives	Pilot project to streamline federal reporting and potentially provide a new technology infrastructure and platform for the OPI's reporting systems. Through the US Department of Education funding, the Center for Integration of IDEA Data (CIID) is providing technical assistance, software, and implementation services to the OPI at no cost.	
IT Goal and Objective Reference	Shared, Capacity, Capability	
Estimated start date	1/1/2018	
Estimated delivery date	6/30/2019	
Estimated cost	\$0	
HB 10 Request	No	
Funding source one	Funding Source	Amount Allocated
Funding source two	Funding Source	Amount Allocated
Funding source three	Funding Source	Amount Allocated
Annual costs upon completion	\$0	
Status of the project as of <b>March 31, 2018</b> . Indicate % completed and status of funds expended.	Project is in initiation phase.	



## Contact Information

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