### MiGreatDataLake 12c-Consolidation Grant 2024-25 Annual Report



www.migreatdatalake.org

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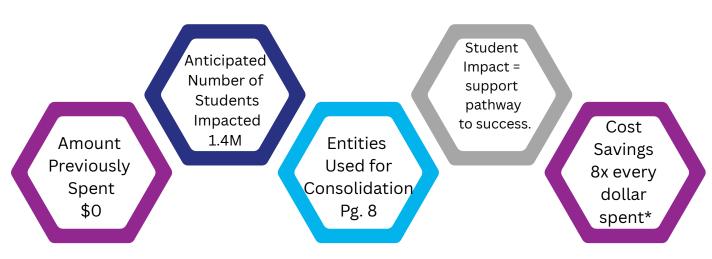
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# **Executive Summary**

Pursuant to Michigan Compiled Law (MCL) 388.1612c - Consolidation and infrastructure fund; grants for consolidation of services identified in a feasibility study under MCL 388.1611x; infrastructure emergencies, section 5 states "a report must be submitted to the Michigan Department of Education by not later than June 30, 2025 and include the following:

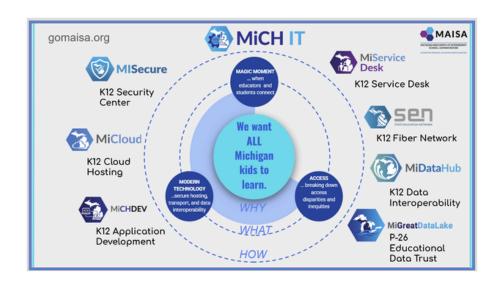
- The amount previously spent on each consolidation of service in the prior fiscal year.
- The number of students impacted by the consolidation or consolidation of services.
- The vendors, third-party entities, or other educational entities used for consolidation or consolidation of services.
- The impact on student learning attributable to money reallocated as a result of the consolidation or consolidation service or services.
- A total cost savings produced as a result of the consolidation or the consolidation of services."

This executive summary provides the highlight of each of these components. The full report provides additional detail and context describing the services, supports, and impact of the consolidation. This annual program and financial expenditure reports align the work of the consolidation grants to the anticipated findings from the 11x feasibility study. In order for the cost savings and return on investment to be fully realized, full implementation is necessary over the course of the next two years and beyond.



## Introduction

MiGreatDataLake (MGDL), as a service area of the MiCH IT system, supports the core purpose of ensuring all Michigan children learn. This is achieved by fostering "Magic Moments" where educators and students connect, utilizing modern technology for secure hosting, transport, and data interoperability, and improving access to high quality educational experiences by addressing disparities and inequities.



### WHY?

We believe that every student in Michigan deserves the best possible opportunity to succeed, and that powerful, accessible data is the key to unlocking that potential. The MiGDL team is driven by the conviction that an equitable and efficient educational system, empowered by unified data (structured and unstructured), can enable proactive decision-making, transform learning, personalize supports, and amplify operational efficiency.

### HOW?

We're building on Michigan's existing data infrastructure, the Michigan Data Hub, to create a comprehensive and secure statewide educational data trust. This innovative system will leverage modern technologies, including a data lake, to centralize both structured and unstructured data from various district, regional, and state systems onto a consolidated, scalable, and cloud-based platform.

Crucially, local ownership of data will be maintained. We'll develop advanced analytic capabilities and integrate an Artificial Intelligence (AI) layer to provide deeper insights. Robust data governance and security protocols will be established to ensure data integrity and privacy for everyone.

A key element of this initiative is empowering students and their families. Through intuitive, plain-language queries, students and families will be able to access and understand their own educational data, becoming true owners of their learning journey. This will allow them to interpret outputs and actively take charge of their own academic destiny. To ensure everyone can effectively utilize these powerful tools, our approach includes extensive professional development and training for students, teachers, and educators at all levels, fostering data-driven insights across the state.

## Introduction, cont.

### WHAT?

The MiGDL will deliver a unified, fully integrated data lake infrastructure, accessible by all Michigan ISDs and LEAs. This will provide real-time data access and advanced analytics for personalized learning and early intervention, coupled with user-friendly interfaces for streamlined reporting and decision-making. It will offer centralized, scalable data storage and management, secure and encrypt data sharing across districts, and a robust framework for professional development on data utilization.

- Personalized student insights for teachers and students.
- Centralized, scalable data storage and management.
- Advanced analytics capabilities for personalized learning and early intervention.
- Real-time data reporting to support decision-making at all levels (student, classroom, building, district, ISD, and State).
- · Secure, encrypted data sharing across districts and ISDs.
- Professional development and training for educators and administrators on data usage.

### CONSOLIDATION OF SERVICES

The MiGDL is a strategic effort to centralize and unify Michigan's educational data, from structured Student Information Systems (Ed-Fi and CEDS compliant) to unstructured data, such as student artifacts and observations. This initiative consolidates fragmented systems into a single, comprehensive, and scalable platform.

#### Consolidation efforts includes:

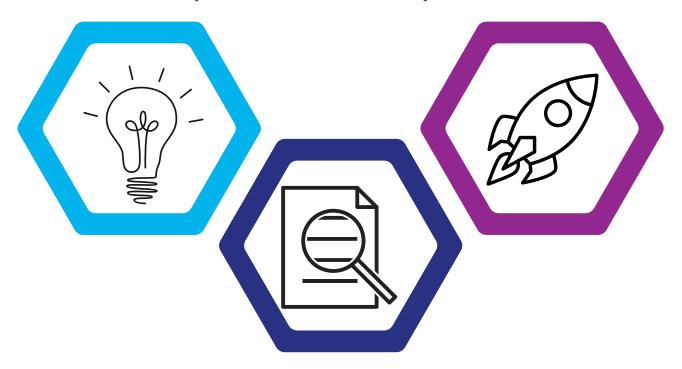
- Centralized Data Storage and Management: A secure, cloud-hosted data lake will ingest P-26 structured and unstructured statewide data for all ISDs and LEAs.
- Modern System Integration: New technologies will enable data ingestion and interoperability from all existing systems, providing ISDs and LEAs a unified view of their data
- **Unified Technology Infrastructure:** A secure, resilient cloud-hosted data lake will centralize architecture, Al applications, and management tools.
- Shared Expertise: We're collaborating with ISD engineering talent and hiring dedicated staff to manage and govern the system, upskilling current ISD and LEA technology staff.

These consolidations will establish a common source of truth for key metrics and security/user permissions, ensuring consistent data calculations and reducing security risks across multiple applications.

## **Impact**

It is anticipated that all **1,427,386 students** and **381,571 educators** will be impacted by the integration of advanced data tools, such as artificial intelligence and predictive analytics, which will help districts identify early warning signs and proactively address student needs, contributing to measurable improvements in performance and providing actionable insights for each student's pathway to success.

### THINK BIG, START SMALL, SCALE FAST



"Think Big, Start Small, Scale Fast" is about:

- Visionary thinking: Having a clear, ambitious idea of where you want to go.
- Pragmatic execution: Taking incremental, value-driven steps to get there.
- Agile iteration: Learning and adapting quickly to build and grow your data capabilities.

This Amazon Web Services Digital Transformation Team (AWS-D2T) approach will help the MiGDL team avoid "analysis paralysis" and instead fosters a culture of experimentation, rapid deployment, and continuous innovation to ensure that these consolidations will generate long-term impact by enhancing both instructional decision-making and resource allocation.

## **Impact**



#### **Student Impact**

MiGDL will directly impact students by utilizing AI and predictive analytics with natural language inquiry to identify student needs and proactively identifying strategies to best support every student's pathway to success.



- Improve the health, safety, and wellness of all learners through enhanced data security and robust data governance protocols.
- Expand secondary learning opportunities for all students by providing real-time data access and advanced analytics for personalized learning and early intervention, and equitable access to cutting-edge tools.
- Increase the percentage of all students who graduate from high school by enabling proactive decision-making and personalized supports through unified data.
- All students have access to high-quality instruction regardless of their gender, sexual orientation, ethnicity, race, economic status, native language, or physical, emotional, and cognitive abilities to close the student achievement and opportunity gaps that currently exist by empowering an equitable and efficient educational system with unified data.
- All educators are adequately compensated and respected for their professionalism, and have the resources, support, and training needed to educate students through extensive professional development and training for educators on data utilization.

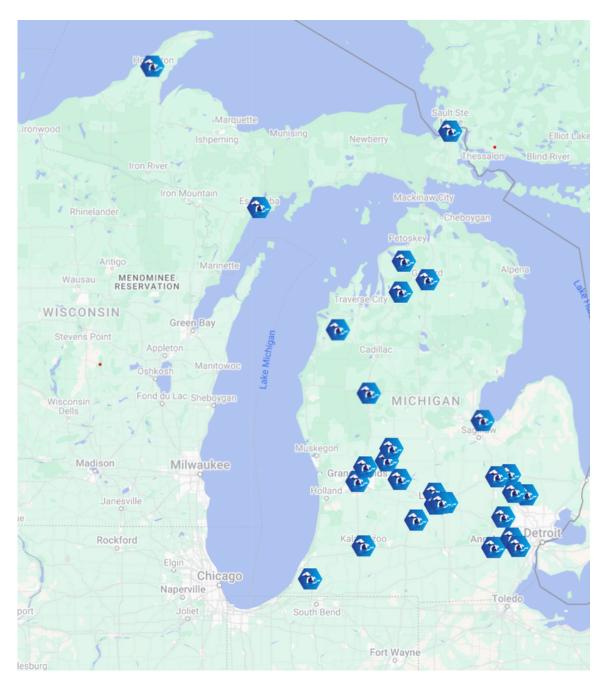
## Collaboration

The list of vendors, third-party entities, and other educational entities are working collaboratively to consolidate services for the successful implementation of the 12c-Consolidation MiGDL grant.

#### Key collaborators include:

- **Educators and Students:** Play crucial roles in the design and ongoing refinement of the MiGDL by providing input, feedback, and insights. Through this direct engagement, educators gain the insights needed to better support their students, while students are empowered to understand and take ownership of their own educational data.
- Michigan Association of Intermediate School Administrators (MAISA)-MiCH IT
  Service Areas: Elevate and expand upon the successful statewide connections
  established by the Michigan Data Hub (MiDH). Leverage the secure and reliable
  access provided by the State Education Network (MiSEN). Collaborate with
  MiCloud, focusing on cloud hosting solutions within the AWS environment.
  Utilize statewide cybersecurity protocols from MiSecure and implement system
  monitoring and encryption.
- Amazon Web Services Digital Transformation Team (AWS-D2T): Provide expertise, national networking, and resources for cloud hosting solutions, particularly within the AWS environment, to support the scalable and secure data lake infrastructure.
- Pariveda: Facilitate statewide change management framework and contribute to the strategic design and implementation of the data platform, focusing on turning data into actionable insights and supporting the digital transformation of educational services.
- **Cloudwick:** Deliver solutions for data and AI-driven insights, particularly in unifying data integration and modernizing legacy systems, crucial for bringing together disparate educational data. *Amorphic* provides streamlined management of all the modern architecture layers.
- **EduCraft:** Contribute expertise in eLearning development and design, contributing to the effective utilization of data-driven tools through professional development and training.
- **Technical Taskforce:** Provide essential technical guidance and expertise, ensuring the robust development and implementation of the data infrastructure and its various components, including data governance.
- **Advisory:** Deliver strategic oversight and guidance, helping to align the project with broader educational goals and ensure its long-term success.

## **Advisory Members**



#### Representation includes:

Michigan Department of Education (MDE)

Center for Education and Performance Information (CEPI)

Michigan Virtual (MV)

Michigan Association of Administrators of Special Education (MAASE)

Michigan School Business Officials (MSBO)

Amazon Web Services (AWS)

Michigan Association of School Administrators (MASA)

Michigan Association of Intermediate School Administrators (MAISA)

All Ten (10) MAISA Regions

All MAISA Networks (METL, GELN, SEILN, and ECAN)

# Cost Savings, Return on Investment, and Value Proposition

### **PRIOR YEAR FUNDING**

12c-Consolidation of Services grant funds were awarded to Copper Country ISD in November, 2024, while funding was not released until January of 2025. Therefore, \$0 were spent on the consolidation in the prior fiscal year.

With only six months of funding, efforts are underway to realize the cost savings, return on investment, and value proposition outlined in the <a href="https://example.com/11x-Feasibility Study">11x-Feasibility Study</a>, see page 20. The figures below represent some of the key data points related to the core consolidation of services: data storage and management, modernized technology, and shared expertise. **Total cost of savings will not be realized until full implementation is achieved.** 

8x

#### **Cost Savings**

For every dollar invested, MiGreatDataLake returns approximately 8 times its value in tangible savings and added revenue to Michigan's educational system.

830-843%

#### **Return on Investment**

With the combined impact results from streamlined data management tasks, avoided costs from manual data entry, and additional state funds accessed a net ROI ranging from 830% to 843% could be realized.

100%

#### **Value Proposition**

Equal access to a highquality data infrastructure, promoting educational equity across the state regardless of geographic location or financial resources.

### PROGRAM INCOME

In support of sustainability, Copper Country ISD accumulated interest of \$331,800 on the total award of \$13,500,000 that will be added to the grant award. Per state guidance, these dollars will be used for the purpose and under the conditions of the grant award.

### **Focus on the Future**

(Grant Activity Status)



Contract with software development companies and independent contractors to execute and partner in the work. - *In Progress* 

- AWS D2T Digital Transformation model
- AWS D2T System Architecture
- Cloudwick System Orchestration
- Pariveda Change Management and Implementation



Hire dedicated staff to manage the project and support data lake once operational. - *In Progress* 

- Project Director and Project Development Director hired.
- Posting for (2) Data System Engineer positions.



Communicate the availability of MiGDL resources to ISDs and LEAs. - In Progress

- Monthly meetings with MAISA ISD Networks
- Conference presentations and exhibitor booth



Develop secure, centralized data storage and management systems. Actively gathering scope of work and costs. - *In Progress* 



Establish protocols for data governance, secure data sharing, and collaboration. - *In Progress* 



Deliver an Annual Report on the impact of data consolidation and ROI for participating districts. - *In Progress* 

- Model ROI after MiDataHub ROI reports
- Gathering critical data points for measuring adoption rates



Build out data analytics and prepare training for ISD and LEA staff. - Pending



Engage new stakeholders to expand data-sharing partnerships across the state. - *In Progress* 

- P-26 Data Strategy Session Summer 2025
- MiGreatDataLake Learning Tour Fall 2025
- Proof of concept teacher data access tool to be developed and field tested - Fall 2025

# **Appendices**

- Feasibility Study
- Now, Next, Later
- <u>Video</u>
- <u>1 pager</u>
- Grape Layer Graphic
- Wireframes





#### For more information, contact:

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