

Client Story

North Dakota Health & Human Services Sets New Standard for Data-Driven Decision-Making in Early Childhood Services



Background

North Dakota's Department of Health and Human Services (ND HHS) is a state government agency that provides a range of stabilizing resources to North Dakotans of all ages. Its Early Childhood efforts aim to provide quality early childhood experiences, support workforce needs through improved childcare access, and strategically align resources with critical needs.

However, managing early childhood data with crucial information spread across multiple agencies and data sources is

challenging, frequently requiring multiple spreadsheets and extra steps to make good, comprehensive data visible to the public. This data fragmentation makes it difficult to track services and outcomes effectively, hindering the state's ability to provide comprehensive support for children and their families.

Using state and federal grant funding, ND HHS turned to LearningMate's data solutions team to help implement an Early Childhood Integrated Data Set (ECIDS) to aid in data-driven policy decision-making.



JESSICA THOMASSON, EXECUTIVE DIRECTOR | Human Services Division
North Dakota Health and Human Services

"The ECIDS dashboards address our most fundamental and frequently asked questions about early childhood data across the state. We rely on the convergence of valid data from multiple source systems to leverage these dashboards as an ongoing, meaningful resource and 'source of truth.' Making these dashboards publicly available is an important step that demonstrates our progress and partnership."

The Solution

LearningMate's data solutions practice has led the way in education data solutions, transforming complex data into actionable insights for over two decades. Leveraging extensive experience in data collection, processing, and storage, combined with our knowledge of Common Education Data Standards (CEDS), we created a unifying thread using data from multiple sources. Our approach included:

DEVELOPING A TECHNICAL STRATEGY

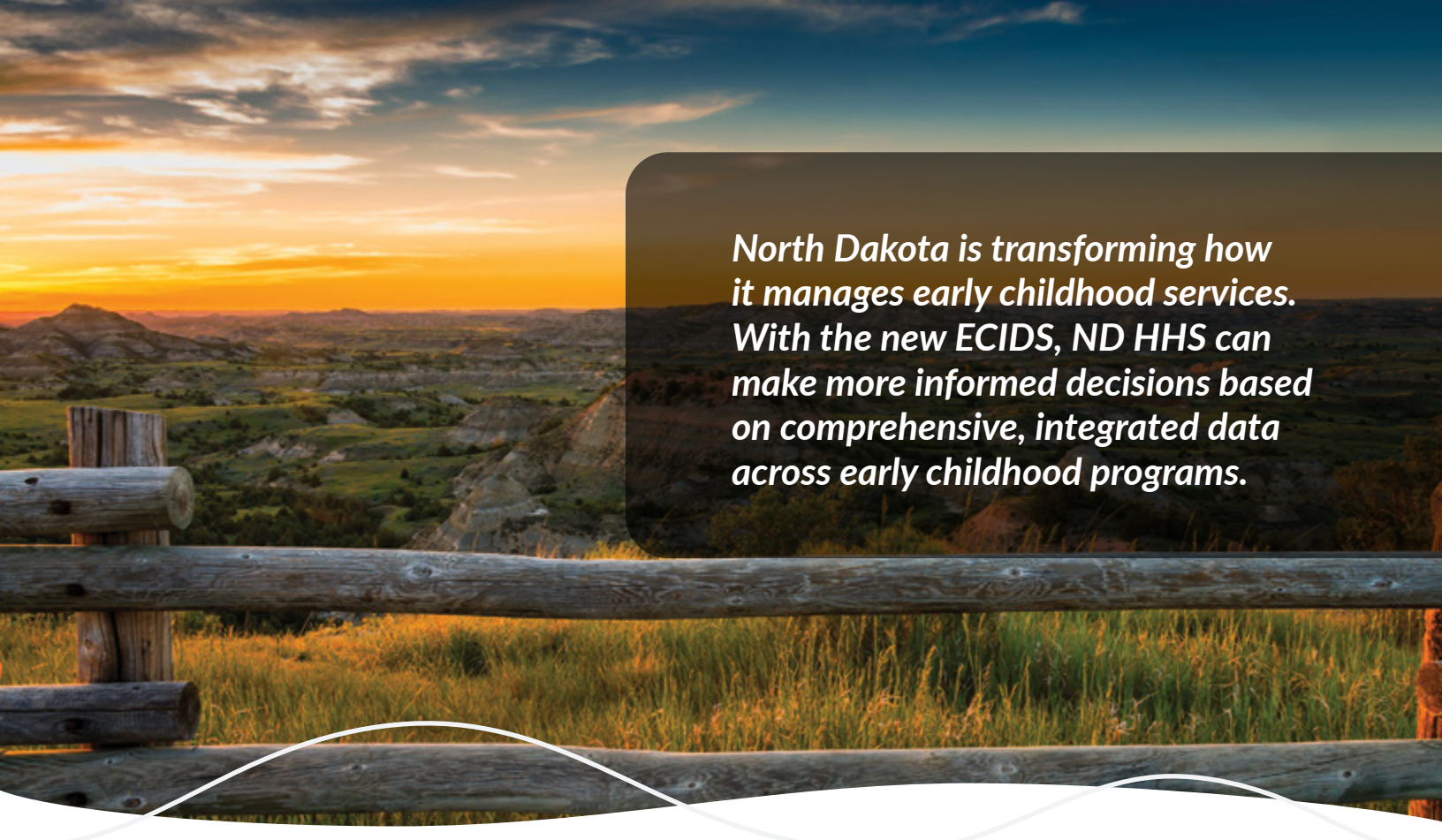
We created a comprehensive project strategy plan outlining the overall approach for ECIDS development, including data needs, governance, and management. The solution leverages cloud technologies, data lake and lakehouse frameworks, and medallion architecture.

COMPREHENSIVE & OPTIMIZED SYSTEM ROADMAP

A detailed roadmap was constructed for databases, dashboards, testing, documentation, training, and implementation. The system architecture was designed for compatibility across multiple project phases, ensuring scalability and long-term viability. Starting modern and with an eye toward expanding functionalities and future

growth in scale, the infrastructure platform facilitates the introduction of additional sources and new outputs.





North Dakota is transforming how it manages early childhood services. With the new ECIDS, ND HHS can make more informed decisions based on comprehensive, integrated data across early childhood programs.

DATA INTEGRATION & LINKING STRATEGY


We built pipelines to ingest, transform, and deliver data from multiple sources to the ECIDS via files and direct database connections. The flexible nature of the data lake infrastructure allows for these approaches, as well as future plans to integrate via API functionalities. Matching algorithms integrate data from disparate systems, linking child, program, provider, and worker records across multiple data sets, creating a unified view of early childhood services.

DASHBOARDS & REPORTS

Relevant data points from multiple sources were compiled into a topical semantic layer of data marts to produce dynamic business intelligence dashboards and high-value informational reports.

KNOWLEDGE TRANSFER & DATA STEWARDSHIP SUPPORT

We guided data stewards through requirements and analysis exercises to assemble dictionaries, mappings, and data modeling. This leads to stronger systems ownership and the formation of subject matter expertise.



Impact & Outcomes

Implementing the ECIDS will help transform ND HHS's ability to manage early childhood data and services. The system successfully merges data from multiple state agencies and vendors, providing the opportunity for a comprehensive view of early childhood services while promoting greater collaboration and alignment among different agencies involved in early childhood services. The integrated system will improve efficiencies and maximize state resources, leading to more data-informed allocation of funds and services.

With the new ECIDS, ND HHS can make more informed decisions based on comprehensive, integrated data across early childhood programs. This successful implementation has significantly enhanced ND HHS's capabilities in managing early childhood services, setting a new standard for data-driven decision-making.

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