

Building Data Interoperability: New Hampshire Department of Education's new SLDS

Learn how NHED modernized its data system, achieving streamlined federal reporting and transformative data interoperability for New Hampshire schools and students.

Background

The New Hampshire Department of Education (NHED) is recognized for its commitment to data-driven decision-making and strategic innovation at every level of K-12 education. Anticipating the evolving demands of modern education and a desire to strengthen its federal reporting processes, NHED prioritized modernizing and standardizing its data. They recognized that high-quality, accessible data is essential for empowering students, educators, and statewide leadership.

Supported by a State Longitudinal Data System infrastructure (SLDS) priority grant, NHED launched a series of initiatives, including the adoption of the Common Education Data Standards (CEDS) model, to transform its SLDS into a robust, next-generation platform focused on greater accessibility and usability of information. By proactively aligning student data with national standards, NHED has positioned New Hampshire as a leader in data interoperability and educational innovation, ensuring more consistent, efficient, and impactful federal reporting for all its stakeholders.



"Double Line has helped the New Hampshire Department of Education implement a CEDS-aligned data warehouse and has been instrumental in mapping and integrating our existing, siloed data to the new CEDS data warehouse."

NATHAN VALENCE, TECHNICAL SUPPORT SPECIALIST
Division of Education Statistics, New Hampshire Department of Education

The Solution

To address NHED's data system modernization goals, they strategically partnered with Double Line, recognizing their extensive expertise in open-source education data standards and proven track record of successful CEDS implementations across the country. Double Line's active engagement with the CEDS Open Source Community and deep understanding of state education agency challenges made them the ideal partner for this complex transformation.

PHASE ONE: DISCOVERY AND STRATEGIC PIVOT

Double Line conducted a comprehensive discovery of NHED's data infrastructure and vision, then recommended shifting from a one-time migration to an incremental data pipeline that would support ongoing updates. This future-proofed approach enabled the migration of legacy data while establishing continuous, automated integration, ultimately strengthening NHED's trust and partnership. To bring this vision to life, Double Line mapped NHED's data to the CEDS standard, realigned the data dictionary, and developed the CEDS data warehouse with sophisticated ETL (Extract/Transform/Load) pipelines that processed updates, deletes, and merges to ensure accurate, up-to-date information.

"Double Line not only proved that they have an excellent understanding of the CEDS data structures but were also flexible with us to make changes when our previous data systems didn't align neatly with the CEDS data warehouse. They were able to learn our previous data and business rules very quickly, which led to a quick and efficient mapping and ETL process."

NATHAN VALENCE, TECHNICAL SUPPORT SPECIALIST
Division of Education Statistics, New Hampshire Department of Education



“A standardized CEDS data warehouse gives us a single source of truth and enables us to build incredibly useful applications on top of it. For example, our Generate and EdFacts applications will immediately improve our efficiency and quality of reporting while also helping us provide rapid and accurate responses to state legislative requests.”

Nathan Valence | Technical Support Specialist
Division of Education Statistics, NHED

PHASE TWO: EXPANSION AND OPTIMIZATION

In the second phase, Double Line expanded the CEDS implementation by mapping additional data elements, building new incremental ETL pipelines, and validating the data in close collaboration with NHED. With a fully populated warehouse in place, they designed and deployed specialized data marts to surface critical insights across selected domains. Existing reporting views were enhanced to align with the new structure, providing simpler, more consistent data access and consumption.

TECHNICAL INFRASTRUCTURE & COLLABORATION FRAMEWORK

To ensure sustainable collaboration, Double Line implemented a state-of-the-art tracking system that organized project questions, monitored mapping progress, and flagged items requiring deeper analysis, a framework that demonstrated their adaptability and commitment to transparent communication throughout the engagement. The final solution centered on a CEDS-aligned data warehouse that centralized information from

NHED’s legacy SLDS, utilizing automated pipelines to standardize and structure data for both historical tracking and real-time analysis. Meanwhile, specialized data marts powered federal reporting and statewide analytics through curated datasets optimized for speed, accuracy, and trust.

The Impact

The modernization effort has delivered transformative results for NHED's data infrastructure and operational capabilities. The new CEDS-aligned system provides 100% interoperability with state and federal reporting requirements, eliminating substantial costs associated with manual reporting processes. By implementing the CEDS medallion architecture, which was absent from their legacy system, Double Line enhanced data quality while significantly reducing future development costs for data warehouse expansion.

NHED now benefits from the integration of data across multiple systems and organizations, resulting in a reduced need for custom data transformations and point-to-point integrations. This standardized approach enables NHED to leverage out-of-the-box templates built to comply with federal standards, allowing them to pivot quickly when federal requirements change and develop new reports based on strategic state needs.

Looking forward, the modernized infrastructure positions NHED for continued growth and enhanced capabilities. As they proceed with incorporating additional data domains into the data marts, NHED will continue leveraging the scalable structure for improved longitudinal analysis, data-informed policy decisions, and enhanced data transparency and governance. The foundation established through this partnership ensures NHED can meet current needs while growing sustainably over time.

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