

# Case Study – Delaware Insight Dashboards

---

## Case Study – Delaware Insight Dashboards

Implementation and customization of a state-wide Student Dashboard system as part of Race to the Top initiatives to improve student performance.

### Challenge

The [Delaware Department of Education \(DDOE\)](#) wanted to enable statewide academic dashboards so that all educators would have access to actionable educational data for their students and schools.

Some of the goals of the project were to:

- Ensure that performance data is used to inform decision-making and instruction, so as to improve student performance.
- Link student, teacher, school, and LEA data and present in one easy-to-use web-based source.
- Be accessible by all stakeholders.
- Be flexibly designed to support new data collection requirements, reflect real-time data, and respond to data requests from researchers and stakeholders, all while ensuring compliance with the Family Educational Rights and Privacy Act (FERPA).
- Accelerate and fortify DDOE plans to use data to support all aspects of performance improvement.

### Approach

Double Line, working with Wireless Generation, was hired to customize and implement the Ed-Fi-powered student dashboards within the DDOE infrastructure. A parallel project (which Double Line was also a part of) implemented a Data Warehouse system, from which the Dashboards would pull most of their data.

Using the design documentation from the Ed-Fi solution as a starting point and framework, the project team engaged in several stages of design and implementation.

### Stakeholder Engagement

DDOE and Double Line encouraged a healthy dialogue of stakeholder engagement to identify user needs and foster buy-in to the dashboards. As part of this process, Double Line planned and executed three focus group sessions in the three geographic sections of the state. 175 educators participated in these sessions, wherein they were able to understand the DDOE vision, review progress to date, express feedback, and provide input into the design of the Dashboards.

DDOE and Double Line also involved subject matter experts in the various academic areas represented by the dashboards, including attendance, discipline, grades, credits, and assessments. The combination of broad stakeholder involvement and subject matter expertise provided the team the guidance to make the dashboards reflect the language, data, and desires of the Delaware educational community.

## Dashboard Design and Customization

Double Line worked with DDOE to translate the findings from the stakeholder engagement process into development requirements for the dashboard customization. The team developed definitions, requirements, and mockups for new metrics, and revised documentation for existing core metrics that are included in the Ed-Fi solution. This documentation provided the development team the necessary information to drive their implementation efforts.

## Data Mapping

Core to driving visual representations of education metrics is both having the data and knowing how to bring the data in to the system. Double Line mapped the data from its new home in the Data Warehouse to the Operational Data Store (ODS), which is based on the data schema referenced in the Ed-Fi solution. The mapping process enables the connection and use of stored data, and is comprised of 65 source tables, 14 domains, and 95 ETL jobs.

## Dashboard Implementation

DDOE wanted to build and maintain a team of expertise that could sustain and extend the Insight Dashboards into the future. As such, they provided their own team of developers to do most of the implementation and customization work – both infrastructure and code development.

Double Line provided expertise to guide and support the dashboard implementation, including:

- Helping to design the overall architecture for implementation.
- Helping to define and implement the security requirements and tie them into DDOE's Single Sign On system.
- Providing knowledge and training of the Ed-Fi solution system design and code structure.
- Providing peer programming and joint review sessions with the DDOE development team.
- Providing development resources to supplement and amplify the DDOE development team.

## Knowledge Transfer

Because DDOE did the majority of the heavy lifting and wanted to develop the capabilities to maintain and extend the Insight Dashboards moving forward, Double Line provided a consistent focus on training and transferring system knowledge to the DDOE team. This included training and document artifacts relevant to the specific tools utilized (e.g., the Metrics Database), peer programming and Joint Application Development sessions, and weekly calls to jointly address issues. The DDOE team was able to quickly come up to speed and developed mastery of the dashboard system architecture and code base.

## **Maintenance & Support**

Subsequent to the initial release of the Insight Dashboard, Double Line has continued to support the DDOE team with ongoing troubleshooting, issue resolution, and insight into continuing to leverage and extend the dashboards.

## **Impact**

The [Insight Dashboard](#) is now available to all K-12 educators in Delaware with SSO rights to DDOE's systems. It is the first state-wide implementation of the Ed-Fi-powered dashboard solution, and took less than 1 year from design to pilot implementation. Data is available on 135,000 unique currently enrolled students and is refreshed on a nightly basis, enabling teachers and administrators the ability to track student progress, identify problem issues, and discern opportunities for improving educational approaches.