

## Education Insight – Data Administration Recommendations

### Introduction

The quality of DOE decisions are no better than the quality of the data on which those decisions are based. Data Administration is concerned with the planning, collection, processing and management of data as a valuable resource.

The data administration policies and procedures of the Delaware Department of Education have developed over time to address a variety of information resource management needs as they were identified. Current documents governing data administration include:

- Data Classification Policy (INF-001), related to the security classification of data maintained by the department.
- Database Access and Creation Policy (INF-002), related to the establishment of new electronic data sets within the department.
- Data Sharing Policy (INF-003), related to the exchange of information between DOE and external organizations.
- Data Declassification Policy (ISG-004), related to the declassification of data for distribution of data outside of DOE.

In addition, there are a number of informal policies and communications concerned with data management as it relates to data acquisition and federal reporting, and systems such as the Integrated Student Update System (ISDU) designed to maintain the quality of DOE data sets.

### Future Plans

The four-year plan for DOE data systems as outlined in Race to the Top will result in a significant expansion in the amount of data available for use within the Department and for sharing with outside organizations. This expansion has implications for how data quality and data access will be managed in the future, and how DOE needs to be organized to meet this demand:

- The Insight Warehouse project will integrate existing longitudinal data sets and provide user-friendly tools for reporting and analysis, increasing the demand for technical support services and increasing questions into the origin and derivation of warehouse data.
- The Insight Dashboard project will present integrated views of student data to a much more accessible interface, increasing usage of the data and demand for additional data in the future.
- Increased reporting through reporting and the dashboards will increase exposure of DOE data to policy makers, researches and the general public, increasing the need to ensure that this data is timely, accurate and consistent.
- Expansion of the warehouse to subject areas such as early childhood, higher education, workforce and social services will increase the need for more formal management of the data interchange process and increasing the demand for sharing of this data with owner organizations.

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### Gaps

Historically, data administration has been the job of each individual having data stewardship responsibilities. Technical staff are required to be aware of applicable policies and procedures and to apply them correctly in their day-to-day activities, while oversight of the policies is just one of many responsibilities of the TRDD director.

To meet expected future demand, a more formal data administration structure is needed, along with operational management of the data administration function. Existing policies need to be reviewed to ensure that they are sufficiently robust to meeting the needs of the data warehouse environment, and new policies need to be developed in the areas of data definition, data architecture and models, data acquisition and reporting, and data integrity.

### Data Administration

The purpose of data administration is to provide oversight and control over the business practices used to collect, validate, store and disseminate data important to the DOE mission. The data administration organization is charged with the following responsibilities.

- Ensure investment and priorities in data systems are aligned with K12 goals and objectives.
- Maintain an overall data system design and architecture that promotes data consistency, reliability and quality.
- Provide strong data stewardship and governance to promote effective sharing of data within the constraints of security and privacy.
- Manage multiple, concurrent data warehouse projects.
- Maintain a balance between developing new systems (adding new data sources or new user groups) and maintaining existing systems.
- Monitor and manage performance of all activities (including operations, development, and strategy).

All this must be done in partnership with DOE, District and Charter School functional and technical staff.

### Data Administration Organization

Based on the Data Quality Campaign recommendations for intra-agency data governance, and the data governance framework published by the Data Governance institute, it is recommended that the TRDD take the following steps to formalize DOE's data administration practices:

- Establish the role of Data Administrator within DOE, responsible for development and management of data administration policies, developing and managing a data administration plan, establishing Data Administration project priorities, and coordinating the work of the Data Administration

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Team and Committee. This will be a senior management position within TRDD.

- Establish a Data Administration Team within TRDD that will be responsible for implementing data administration policies within the Department of Education and managing individual projects that fall under the data administration umbrella. This will be comprised of existing data stewards and support staff within TRDD.
- Establish a Data Administration Committee comprised of technical and functional staff from DOE, Districts and Charter Schools to provide advice to the data administration team and serve as liaisons responsible for implementing data administration policies at the local level. Representatives on this committee will come from the data owners, process owners, data stewards and subject matter experts within DOE and the LEAs.

### Implementation

Following is a recommend task list and schedule for establishing the Data Administration organization within TRDD.

ID	Task	Target
1	Assign Data Administrator responsibilities	Q1 2011
2	Establish the Data Administration Team	Q1 2011
3	Develop the Data Administration Charter	Q1 2011
4	Develop High-level Data Administration Project Plan	Q2 2011
5	Integrate Data Administration into Data Warehouse Project Plan	Q2 2011
6	Establish Data Administration Committee	Q2 2011

### Data Administration Projects

A number of current and planned projects are candidates for inclusion in the Data Administration Project Plan. These should either be reassigned to the Data Administration Team or restructured to include data administration representation.

- Policy – Review and update of existing policies and development of new policies to further data administration objectives and effective use of the data warehouse.
- Data Warehouse – Ownership of the data warehouse project and long-term management of warehouse development.
- Data Dictionary – Ownership of the data dictionary tasks within the warehouse and dashboard projects
- Data Standardization – Ownership of the common course code project and development of new projects to establish standards for both the coding and presentation of data.
- Data Sharing – Ownership of the data sharing process (INF-003), and management of the process to develop memoranda of understanding for the warehouse and dashboard projects.

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- Quality Control – Management of current ISDU processes and development of new ones to monitor and resolve data quality issues.