**ILLINOIS STATE BOARD OF EDUCATION**
April 17, 2002

**Agenda Topic:** Preview of Data Warehouse

**Materials:** None

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**Purpose of Agenda Item**

To provide the State Board with a brief overview of what a data warehouse is and to show examples of what kinds of information would be available from the data warehouse for educational decision-making.

**Expected Outcome(s) of Agenda Item**

State Board members will gain a better understanding of data warehousing, enabling them to make more informed decisions concerning the development and implementation of such a system at ISBE.

**Background Information**

ISBE collects and maintains a huge amount of data in various operational data systems for student and school performance, federal and state programs, school district finances, teacher demographics and certification, individual student characteristics within special education and vocational education, school and school district demographics, etc. Some of this information is summarized and presented in web-based data warehouse-like systems such as ILSI, ILEARN, and the Illinois School Report Card. These current data warehouse systems are not integrated, and in the case of ILSI and the Illinois School Report Card, contain duplicative data. Moreover, these databases are not the type of robust query systems needed to support the ever growing demand for educational decision-making based on a wide spectrum of data resources.

Added to this situation are the new data requirements that emanate from the federal No Child Left Behind (NCLB) Act of 2001, which will necessitate the development and implementation of a state-level student information system capable of tracking the progress of students, via assessment scores, over a large range of demographic and programmatic breakouts (race/ethnicity, gender, poverty level, Title I, IDEA, etc.) New information and reporting about teachers will also be required.
Moreover, in Fiscal Year 2003, the U. S. Department of Education will begin the Performance-Based Data Management Initiative (PBDMI). The goal of this project is to develop a national data warehouse that can be used by program offices to respond to the reporting requirements of NCLB and, subsequently, the reauthorized IDEA and Carl Perkins legislation. The major source of data for this national data warehouse will come from state-level data warehouses. The ISBE Information Technology Center has notified the Office of the Chief Information Officer for the U. S. Department of Education of the Agency’s willingness to serve in a leadership role to define the data model for a national system.

Finally, and most relevant to the continuous improvement of agency operations, the transition to a data warehouse system will streamline processes, save money and provide for consistent, accurate and high-quality data for the wide array of end users—local, state and national. In an recent study by Deloitte and Touche, the firm identified the data warehouse as a key project to provide high returns for increasing agency efficiency and its value to constituents.

Based upon these factors, the Agency needs to design an information solution that integrates the data resources of ISBE, meets the reporting requirements of federal and state mandates, and utilizes a robust query mechanism that can retrieve data to answer important questions and consistently report progress.

**Analysis and Implications for Policy, Budget, Legislative Action and Communications**

**POLICY:** With the requirements of NCLB to follow the performance of students over time, the Board will need to, at some point, consider the implications of developing a state-level student information system.

**BUDGET:** For FY 03, the Agency will need to identify available financial resources to support the first phase of building a data warehouse. The financial cost for building the data warehouse will be determined by a feasibility study.

**LEGISLATIVE ACTION:** The Agency will need to conduct an extensive review of existing statutes to determine whether or not legislation would be required for the assignment of a specific student identifier to gather student demographic and achievement data for inclusion in the data warehouse. In addition, the data warehouse should allow the Agency to streamline its data collection and identify outdated and/or redundant data collection mandates that no longer serve their intended purposes.

**Pros and Cons of Various Actions**

This system will enable local and state policymakers and practitioners to make more informed decisions to ensure academic success for all students and eliminate the achievement gaps that confront specific groups of students. Failure to act now to
develop a data warehouse will serve to maintain an outmoded system with ever-increasing costs, and will impede the Agency’s ability to provide the data required for the U.S. Department of Education, and could jeopardize the state’s federal education funding.

**Superintendent’s Recommendation**

Endorse the design and development of a data warehouse and appropriate information technology systems linked to the warehouse. This effort should include the assistance of external experts throughout the process and the collaboration with other states in a consortium when feasible, to gain additional information or funding for the Agency’s data project.

**Next Steps**
The Information Technology Center will proceed with conducting a feasibility study and developing and disseminating an RFSP for the development of a data warehouse.