

Business Operations  
Ofelia San Pedro, Deputy Superintendent

**SUBJECT: THAT THE SCHOOL BOARD OF MIAMI-DADE COUNTY, FLORIDA, AUTHORIZE THE PURCHASE OF INFORMATION TECHNOLOGY SOFTWARE PROGRAMS AND NECESSARY LABOR TO IMPLEMENT CRITICAL COMPONENTS OF AN ENTERPRISE DATA WAREHOUSE AT A COST NOT TO EXCEED \$700,000**

**COMMITTEE: INNOVATION, EFFICIENCY & GOVERNMENTAL RELATIONS**

### **BACKGROUND**

Authorization is requested from the School Board to purchase software programs and accompanying services to implement the critical components of an enterprise data warehouse solution. Our District is data rich and information poor. The school District's core business functions are run on legacy mainframe computer systems that do not communicate with each other. They have rigid reporting capability and are unable to address requirements of the District goals. Bearing in mind that the District expects to replace these legacy systems, this solution will provide immediate relief to the District's lack of ability to access data and provide analytical reports.

This is especially true in the area of student performance where demographic and administrative student information resides in legacy mainframe systems while instructional and assessment information resides in disparate systems. By collecting all this data into an enterprise data warehouse, integrating the information and delivering it to teachers and administrators, we can begin to achieve true performance management across the district. The goal of the enterprise-wide data warehouse is to move the District towards data driven decision-making aligning performance targets to performance plans with real-time information feedback. Some examples of potential benefits are:

- Improved student academic achievement through targeted instruction. This instruction would be based upon multi-dimensional analysis of standardized test scores by content and strand, assessment scores, classroom grades, attendance and performance on instructional software systems.
- Better staffing of schools by continuously matching open positions and critical need areas to existing employees certification and current subject area assignment as well as targeting recruitment of new teacher graduates based upon district need.
- Cost savings as a result of increased operational efficiency based upon improved forecasting, predictive analysis and performance monitoring. These improvements would be largest in operational areas where the district has large quantities and types of data that can be analyzed such as Finance, Purchasing and Facilities.

- Cost deferment by adding life to legacy computer systems that can continue to operate on a functional level while feeding the data warehouse for complex reporting and analysis. This provides the district more time to replace systems such as Budget-Finance-Purchasing, Payroll-Personnel and Student Information which will be defined in the IT Blueprint/Strategy.

**DATA WAREHOUSE PLAN**

This plan will enhance and expand data already collected and join key elements across applications such as Student, Finance and Human Resources. This three-month implementation will act as a measurement tool to demonstrate the effectiveness of data warehouse technology and this type of implementation plan. It will address identified needs in the areas of Student Performance, Finance and Human Resources that will include, but is not limited to the following:

- Expansion of the current Student Data Warehouse to include elements in support of Performance Improvement initiatives including real-time reporting
- Creation of a Financial Data Warehouse containing both current and four years of historical information from the Budget, Finance and Purchasing systems
- Monthly Year to Date Budget Expenditure Report
- Profit and loss by school reporting
- Creation of a Human Resources Data Warehouse organized by function and including historical data
- Position analysis report for schools and administrative departments.

These critical components will be delivered three months from the approval by the Board at a cost not to exceed \$ 700,000.

The cost breakdown is as follows:

- Direct cost for hardware upgrade to support the project..... \$ 65,000
- Direct cost for **Informatica** extract, transform and load software..... \$ 300,000
- Direct cost for contracted services (data modelers, developers, etc.)... \$ 314,520

**REQUESTED:**

An appropriation of \$700,000 be recorded in the Capital Outlay Fund and will be allocated according to the expense category.

Copies of the Scope document will be transmitted to Board Members under separate cover and will be placed on file in the Citizen Information Center and in the Office of the Board Recording Secretary.

**RECOMMENDED:**

That The School Board of Miami-Dade County, Florida, authorize the purchase of information technology software programs and necessary labor to implement critical components of an enterprise data warehouse at a cost not to exceed \$700,000.