

North Carolina

NORTH CAROLINA COMMON EDUCATION DATA ANALYSIS AND REPORTING SYSTEM (NC CEDARS)

Project Start Date: 8/1/2007

Project End Date: 7/31/2010

Amount Awarded: \$6,000,000

The North Carolina Department of Public Instruction (NCDPI) proposes to use the US Department of Education (USED) longitudinal data system (LDS) grant to accelerate its transition to a data-driven decision-making environment primarily to help improve student learning. This new environment, known as the NC Common Education Data Analysis and Reporting System (NC CEDARS), will extract data from many business line systems to produce a secure, quality controlled data repository that teachers, principals, researchers and other educators can analyze with easy to use intelligence tools to meet their needs. NCDPI is requesting \$6 million to fund this effort and will supplement this funding with \$6.1 million in State and other funds.

Problem: The large number of NCDPI applications, each with its own stand-alone point-to-point interface, results in perpetuating silos of redundant and inconsistent data. Databases frequently contain completely different database structures for storing the same type of information, as information technology (IT) staff, convention, and methods change over time. North Carolina education data is currently buried in a large number of disparate data silos which use various applications/proprietary data manipulation software, thus effectively precluding enterprise-wide data analysis. Data generated in one silo must be re-entered for inclusion in the programmed report of another.

Solution: Transparent and easy access to historical and current data from a variety of sources is critical for effective decision making. NCDPI data systems must be reconstituted to provide a single, enterprise-wide view, in accordance with the standards identified below. Significant IT cost savings (in the millions of dollars) are achievable when data-centric organizations, such as NCDPI, are relieved of the burden of costly in-house database programmers and developers who must perform manual queries, program reports, and develop the IT work-arounds required to accommodate data silos and system incompatibilities and redundancies.

The NC CEDARS LDS project will provide, for the first time, fully developed relational database integration coupled with metadata management, reporting, ad-hoc query, and user-friendly web-based functionality including state-of-the-art user-generated data

storage, querying and reporting capabilities. In addition, this all-in-one solution will incorporate embedded analytics as well as SAS analytic tools. Analytical capabilities will be enhanced via Microsoft Office integration, enhanced visual development (dashboards), along with real-time updates and write-back capabilities.

NC CEDARS will incorporate Extensible Markup Language (XML)-enablement and web services in support of next-generation Service Oriented Architecture (SOA) enterprise implementation. SOA reduces the complications of self-contained silo systems and data through extreme decoupling: no application depends on any other but serves as a component within a network of modularized, interconnected services. Key to the success of this emerging network architecture paradigm is data integration, which must look beyond developer-centric needs and include data-centric approaches.