

Nomination Category: IT Project and Portfolio Management
Project Title: North Carolina Department of Public Instruction NC WISE Wave 2

Executive Summary

The North Carolina Department of Public Instruction (NC DPI) initiated the Wave 2 deployment of its North Carolina Window of Student Education (NC WISE) in 2006. The NC WISE program is an electronic student information system that provides student and school information management capabilities through the Internet and constitutes a \$200+ Million investment in education technology by the State of North Carolina. NC WISE supports the data analysis and reporting requirements of education initiatives such as the North Carolina ABCs of Publics Education accountability program, the Uniform Education Reporting System (UERS), Closing the Achievement Gap and the various programs and requirements of the No Child Left Behind Act. NC WISE offers unprecedented opportunities for local educators to use technology to help them make better instructional and business decisions in their schools.

NC WISE is replacing a 20 year old Student Information Management System (SIMS) and is being deployed in multiple phases or waves. The roll-out of NC WISE began in October 2004 with Wave 1 and will conclude at the end of Wave 3. When complete, NC WISE will operate in all of North Carolina 115 school districts (2,298 schools) and 100 charter schools.

In early 2006 the contract with the prime deployment and integration contractor was terminated and the NC DPI program office needed to expand to lead its own deployment efforts. Legislation provided NC DPI with 20 additional positions and by the summer of 2006 intensive project planning, data migration tool construction, and procurement was underway to support the rollout of Wave 2 led by the NC WISE team rather than a contracted integrator.

The NC WISE program commenced with Wave 2I, a \$2.5 Million project, to bring the next group of schools onto the NC WISE platform. The project provided technical readiness assessments of Wave 2 schools to insure they were able to insure their networks supported the NC WISE system, and that data, security, and local workstation compatibility requirements were addressed. To support the elementary, middle, and high schools that will be joining NC WISE Getting Started Workshops were provided to each school. Additional training was provided to each school to support their NC WISE transformation to include pre-scheduling workshops, scheduling workshops, supplemental training, and Year End Transition (YET) training.

To convert SIMS data to NC WISE data pre-conversion workshops were conducted with school data managers to support their readiness to convert. A new Data Migration Utility (DMU) tool was developed and deployed to aid in the conversion and to identify data errors that needed correction prior to the final data load to NC WISE. Training activities started in October of 2006 and school data conversions commenced in January 2007. By March 2007, 133 public schools and 22 charter schools were converted to the NC WISE system supporting 92,507 new students. Follow-up support for new schools continues through June of 2007 to insure that schools are able to maintain school business functions and have a successful year end transition.

The Wave 2 effort provided a significant step forward to the NC DPI program in its ability to lead and conduct its own system deployment working with school, district, and state leadership to insure a successful deployment effort. The project proved that strong and effective program and project management was utilized to insure that the project was successful and the complex levels of constituencies were well served. The successful deployment required work across NC WISE Sections of User Expansion, Service Desk, Training, Data Management, Operations, Configuration Management, and Program Management. The Lessons Learned from Wave 2 provided the means necessary for NC DPI to plan and conduct the final rollout of Wave 3 scheduled to commence in the Fall of 2007.

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Business Problem and Solution:

The NC WISE program, through the North Carolina Department of Public Instruction, was enacted by the North Carolina General Assembly. The program is a 200+ Million investment in education by the State of North Carolina. The NC WISE program serves the state through the capture and reporting of individual student academic careers in public schools.

It also manages daily school data operations such as scheduling, attendance tracking, and grading. It supports individualized prescriptive instruction in the classroom with real-time information. NC WISE is needed to replace the more than 20 year-old Student Information Management System (SIMS) because SIMS operates in an MS-DOS environment, has no standardization of data, has become increasingly difficult to operate with new desktop and operating system technologies, and it does not meet all state and federal reporting requirements.

The roll-out of NC WISE began in October 2004 with Wave 1 and will conclude at the end of Wave 3. When complete, NC WISE will operate in all of North Carolina 115 school districts (2,298 schools) and 100 charter schools.

North Carolina is currently deploying software developed by Administrative Assistants Ltd. (aal) to all public and charter schools. The software, known as eSIS is the core Student Information System (SIS) component of the North Carolina Window on Student Education (NC WISE) program within the North Carolina Department of Public Instruction (NC DPI). Each significant group of schools deployed is termed a Wave. After Wave 1, approximately one-third of all North Carolina public schools were deployed but there had been problems with data conversion, school readiness, and training.

As a result of issues with Wave 1, the contract with the prime deployment and integrator contractor was cancelled and Wave 2 was postponed a year. DPI chose to become its own system integrator and deployment manager. This nomination addresses the issues of project management required to restart the deployment process across the state to insure that the NC WISE program can be successfully completed. Wave 2 consisted of 155 schools (Public and Charter Schools) supporting 92,507 new students bringing the deployment of NC WISE to 50% of the North Carolina student population.

In March 2006, the Wave 2 project was initiated. The NCWISE Project goals were:

1. Ensure all Wave 2 candidate Local Education Agency (LEA, e.g. District) and Charter schools have met readiness standards to convert to NC WISE. Areas of readiness include data, staffing, workstations, network, and security. (Completed)
2. Convert approximately 155 Wave 2 schools from the 20 year old SIMS system to NC WISE by Spring of 2007. (Completed)
3. Provide training on NC WISE for each LEA/Charter school on the NC WISE eSIS solution and on the new conversion tool so LEA/Charter schools can cleanse their data prior to their conversion date. (Completed)
4. Provide post-conversion support for data issues and also post-conversion NC WISE data acceptance sign-off. (On-going)
5. Develop internal NC WISE Deployment Team capability to do conversions. (Completed)
6. Complete RFP with new vendor to provide training and conversion activities. (Completed)

To realize these goals with DPI taking the lead on project management would require additional staff and a reorganization of the project. The North Carolina General Assembly approved 20 new state positions to be added to the NC WISE program. The NC WISE organization was

reorganized and key sections were staffed with new and/or existing positions. The NC WISE Sections consist of:

- Program Management Office (PMO)
 - User Expansion and Deployment
 - Configuration Management
 - Project Management
 - Operations
- Business Services
 - Data and Software Management
 - Training and Requirements
 - Service Desk

A total compliment of 70 on-site personnel was engaged to support the existing system, serve the needs of users, and to start bringing new schools onto the NC WISE platform.

The NC WISE program also entered into two significant contract arrangements to support an effective Wave 2 deployment. These contracts were managed by DPI, and not by an outside system integrator. Both contracts were with aal, the developer of the eSIS software. In July, 2006, a \$275,000 contract was initiated with aal to deliver a Data Migration Utility (DMU) to convert SIMS data to eSIS data for delivery by September 2006. In October, 2006, a training fixed price contract was approved for \$1.6 Million to allow aal to provide eSIS training.

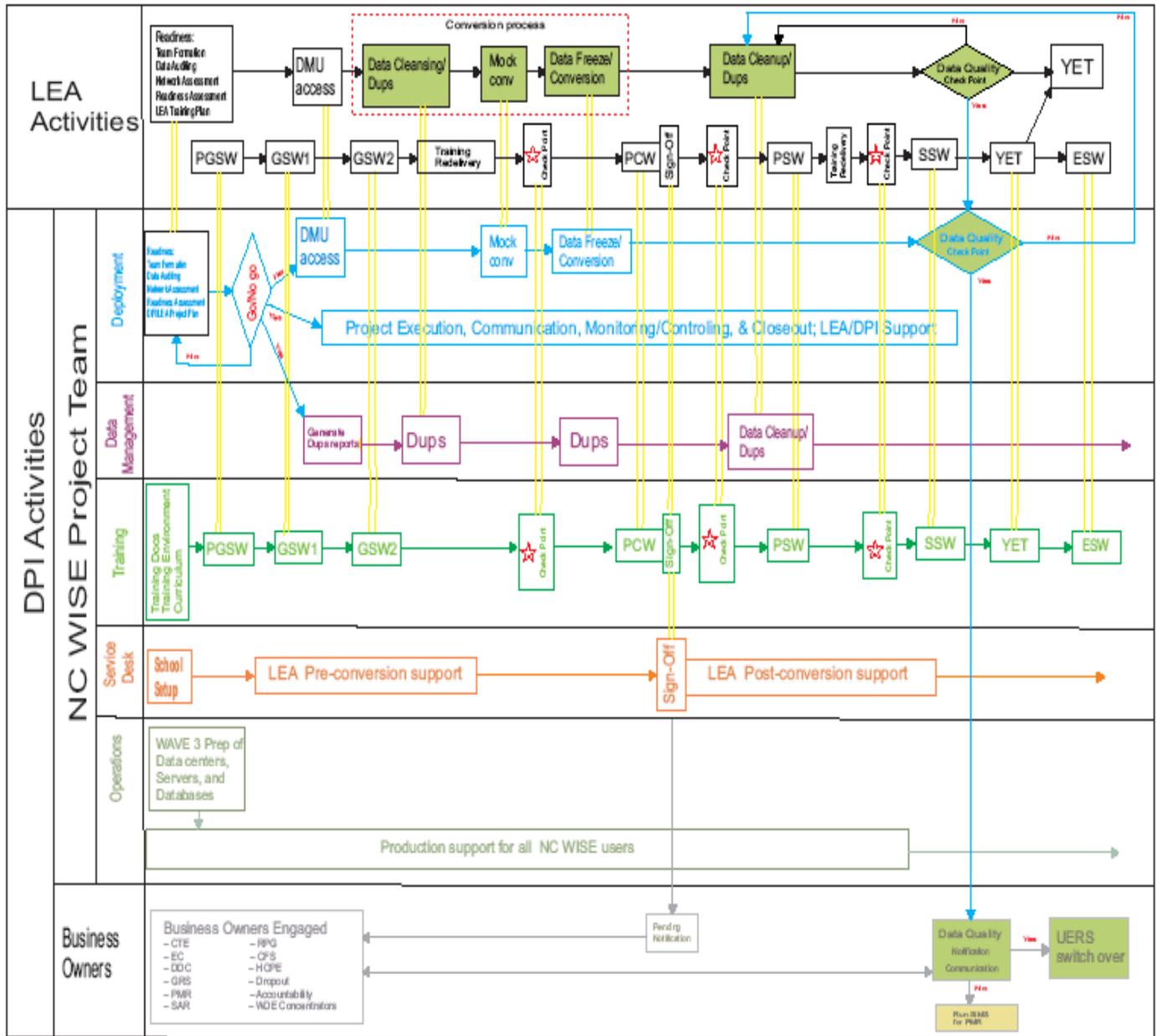
Training activities consisted of a blend of NC WISE and aal personnel. A “Train the Trainer” approach was taken with trainers working through each LEA providing training down to the school level for elementary, middle, and high schools. The key readiness, conversion, and training activities included for each LEA, in order were:

- Pre-Getting Started Workshop (PGSW) Readiness Sessions
- 4 day Getting Started Workshops (GSW)
- Data Conversion Readiness
- Data Conversion Training with DMU
- Data Conversion
- Data Conversion Support
- Post Conversion Workshops (PCW)
- Pre-scheduling Workshops
- Scheduling Workshops
- Supplemental Training
- Year End Transition (YET) Training

In addition to the training and workshops conducted on site at the LEA, considerable Service Desk involvement was required to provide data conversion support. All of the above activities required multiple team coordination, interaction and continual assessment in order to deliver on schedule and in a quality manner as per the project plan and schedule. The required execution of program and project activities is best illustrated in Chart 1. Chart 1 is designed to illustrate the level of complexity of the work successfully executed for Wave 2 between the months of October, 2006 through June 2007.

Chart 1: Wave Deployment Activities

NC WISE Deployment Activities



A key problem encountered in the execution of Wave 2 was a late delivery of the DMU tool significantly impacting data conversion activities and the training schedule. Originally scheduled for completion in September, 2006 this delivery was moved to October. October testing discovered many problems and issues relating to the ability of the tool to do a quality data conversion. Mock conversions were yielding poor results and a large number of fixes were needed to go into the DMU tool. Without a working conversion tool the entire Wave 2 effort was in jeopardy. By demonstrating flexibility to the project activities early workshops were rescheduled working around multiple important school business cycles (e.g. report cards, state reporting, etc.) to allow conversion activities to continue. In addition, the project team held regular status calls with LEAs and worked closely with the vendor to insure that identified

problems were being resolved. By December 2006 the DMU was in a state where it could be deployed and conversion activities began in earnest in January 2007.

Rescheduling and some fast tracking to project activities allowed conversions to be completed by March 2007 which maintained the project schedule, quality, and deadlines created at the start of the project. With the completion of conversions the team continued to support the schools with various post conversion cleanup activities. The Wave 2 schools that were now transitioned to NC WISE received follow-up support and additional training to allow them to operate on the new NC WISE platform transitioning from their older SIMS system during the school year. By June 2007 Wave 2 moved towards its conclusion successfully converting all designated Wave 2 SIMS schools and training LEAs at a total cost of \$2.5 Million.

Significance to Government:

The NC WISE program, through the North Carolina Department of Public Instruction, was enacted by the North Carolina General Assembly. The program, as previously noted, is a 200+ Million investment in education by the State of North Carolina. The General Assembly Mandate enforced by the North Carolina State Board of Education requires that all schools will be on the NC WISE Student Information System (ref: <http://sbepolicy.dpi.state.nc.us>). The NC WISE program serves the state through the capture and reporting of student academic careers in public schools. NC WISE manages daily school data operations such as scheduling, attendance tracking, and grading. It supports individualized prescriptive instruction in the classroom with real-time information.

A fully deployed NC WISE will support 115 LEAs consisting of 2,298 elementary, middle, and high schools and 100 Charter Schools. The system will be used by 85,000 teachers plus additional administrators, counselors, and support personnel serving a total of 1.4 million North Carolina public school students. (NOTE: In NC, the state is responsible for many educational functions performed by local governments in other states. NC provides the salaries for teachers and administrators, statewide systems, textbooks, and school buses and their operating funds. Facilities and furniture, including computers, are the responsibility of the LEAs.)

The significance of the NC WISE Wave 2 project is that the project demonstrated a strong commitment to recover from a program that had been plagued with system stability, cost and quality issues from the initial pilot and up through the Wave 1 deployment. System stabilization and reorganization allowed the Department of Public Instruction to refocus from a vendor dominated implementation to an agency dominated implementation. Wave 2 therefore provided a path that will ensure Wave 3 will be successful through documented and repeatable project activities and realizing the State Board of Education mandate.

The Wave 2 effort demonstrated strong program and project management that brought appropriate funding to the project and kept the completion of the project within budget and on schedule. Project management methodology was used extensively for this effort, support from other state organizations such as Information Technology Services and the Office of Management and Budget also worked to help move the Wave 2 project forward. Additional program and project integration was required to insure that School Districts (e.g. LEAs) from Superintendents, Principals, and other administrators on down to data managers were involved and supported their conversion efforts. Therefore state, county and local education government entities were all impacted by Wave 2.

Public Value:

The public value of Wave 2 is significant across the implementation to LEAs and individual local schools impacting government in the education domain from the state level to county and local education institutions. The continuance of the NC WISE deployment allowed schools to effectively remove their dependence on the obsolete and high maintenance SIMS platform, running on DOS and diskettes, and move to the standardized state level NC WISE system. Chart 1 below demonstrates the annual per school savings of moving to NC WISE.

Chart 1: Wave 2 Annual Savings By School

| | | |
|--|-----|--------------------|
| Savings per data manager = 4 hours/day at 240 days/year | | \$12,480 |
| No integration program (license savings and no diskettes) | | |
| Diskettes/teacher = 45 | | \$45 |
| License (maintenance only) | | \$100 |
| Total | | \$145 |
| Manual calculation | | |
| Time needed for manual calculations for such things as Athletic Eligibility 5 hours per month | | |
| Total | | \$780 |
| Average data manager labor rate = | | \$13/hr. |
| Projected number of schools to deploy in 2006-07 = (35/week * 15 weeks) | 525 | 155 |
| Total savings per year at school = total costs * # schools converting | | \$14,155 |
| Total for Wave 2 deployment | | \$2,194,025 |

The LEA Central Office Wave 2 savings is shown in Chart 2.

Chart 2: Wave 2 Annual Savings By LEA

| | | |
|--|----------|-----------------|
| LEA Cost avoidances by transitioning from SIMS to NC WISE | | |
| SIMS Central Office System (COS) - do not use with NC WISE | | |
| Manual Data Transfer and time savings per transfer = 8 hours per data build | | |
| Data build (PMR = 9, SAR = 5, EC = 2, Dropout = 5, VEIS = 5, Hope Scholarship = 1, Others = 3) | | |
| Total builds = 30 | | |
| 30 * 8 * \$15.00 | | \$3,600 |
| On-line reports (printing not required) | | |
| Savings per paper and ribbons | | |
| Case of paper = \$25.00 * 12/month | | \$300 |
| Ribbon = \$25.00 * 12/month | | \$300 |
| Total | | \$600 |
| Total LEAs = | 8 | |
| Total cost savings | | \$38,400 |

The annual savings per year across the Wave 2 school systems is therefore **\$2,232,425** per year realizing **\$11,162,125** in savings over 5 years. These savings will be realized by the school after their 1st year of operation from being removed from the SIMS system beginning in the 2007-2008 School Year. The savings will continue to grow as Wave 2 has demonstrated that a full deployment is feasible for NC DPI realizing continued public value as deployment grows and reaches out to the remaining 65 LEAs, 1,114 schools, and 47 Charter Schools.