

STATE OF NORTH CAROLINA Department of Public Instruction	REQUEST FOR PROPOSAL NO. 40-RttT-IIS1	
	Bids will be publicly opened: April 18, 2012 @ 3:00 PM EDT	
	Contract Type: Agency Specific	
Refer <u>ALL</u> Inquiries to: Mike Beaver Telephone No. 919-807-3683	Date Issued: February 27, 2012 Commodity: Instructional Improvement System	
E-Mail: Michael.beaver@dpi.nc.gov	Using Agency Name: NCDPI	
(See page 2 for delivery instructions)	Agency Requisition No. PR11397419	

OFFER AND ACCEPTANCE: This solicitation advertises the State's needs for the services and/or goods described herein. The State seeks proposals comprising competitive bids offering to sell the services and/or goods described in this solicitation. All proposals and responses received shall be treated as offers to contract. The State's acceptance of any proposal must be demonstrated by execution of the acceptance found below, and any subsequent Request for Best and Final Offer, if issued. Acceptance shall create a contract having an order of precedence among terms as follows: Special terms and conditions specific to this RFP, Specifications of the solicitation documents, except as amended, the State's General Terms and Conditions for Goods and Related Services, as may be amended by the Supplemental Terms annexed hereto, if any, Best and Final Offers, if any and the awarded Vendor's proposal.

EXECUTION: In compliance with this Request for Proposal, and subject to all the conditions herein, the undersigned offers and agrees to furnish any or all services or goods upon which prices are bid, at the price(s) offered herein, within the time specified herein. By executing this bid, I certify that this bid is submitted competitively and without collusion.

Failure to execute/sign bid prior to submittal shall render bid invalid. Late bids are not acceptable.

BIDDER:		
STREET ADDRESS:	P.O. BOX:	ZIP:
CITY & STATE & ZIP:	TELEPHONE NUMBER:	TOLL FREE TEL. NO
PRINT NAME & TITLE OF PERSON SIGNING:	FAX NUMBER:	
AUTHORIZED SIGNATURE:	DATE:	E-MAIL:

Offer valid for two hundred (200) days from date of bid opening unless otherwise stated here: _____ days

ACCEPTANCE OF BID: If any or all parts of this bid are accepted, an authorized representative of NCDPI shall affix their signature hereto and this document and the provisions of the special terms and conditions specific to this Request for Proposal, the specifications, and the State's General Terms and Conditions shall then constitute the written agreement between the parties. A copy of this acceptance will be forwarded to the successful Vendor(s).

<u>FOR NCDPI USE ONLY</u> Offer accepted and contract awarded this ____ day of _____, 2012, as indicated on attached certification, by _____ (Authorized representative of NCDPI).

ISSUING AGENCY: Department of Public Instruction
301 N. Wilmington Street
Raleigh, North Carolina 27601

USING AGENCY: Department of Public Instruction
301 N. Wilmington Street
Raleigh, North Carolina 27601

DELIVERY INSTRUCTIONS: Vendor must deliver two (2) **signed originals** and ten (10) **copies** of the Proposal to Issuing Agency in a sealed package with Company Name and RFP Number clearly marked on the front. Vendor must also submit twelve (12) **electronic copies** of its proposal on read-only CD/DVD(s). The files on the discs should not be password-protected and should be capable of being copied to other media.

Sealed bids, subject to the conditions made a part hereof, shall be delivered to the location address below no later than the date and time stated on the cover page of this document and Section II E, RFP Schedule, for furnishing and delivering the commodity as described herein. Proposals for this RFP must be submitted in a sealed package with the Execution of Proposal signed and dated by an official authorized to bind the Vendor's firm. Failure to return a signed execution of proposal shall result in disqualification. All proposals must comply with Section VI, Proposal Content and Organization. A proposal response is considered "delivered" only when it physically arrives in Room B04 at 301 N. Wilmington Street, Raleigh, North Carolina.

DELIVERED BY ANY OTHER MEANS
BID NUMBER: 40-RttT-IIS1 Attn: Mike Beaver, Contract Manager 301 North Wilmington St., Room B04 Raleigh, NC 27601

Proposals will not be accepted by electronic means. This RFP is available electronically at <http://www.ips.state.nc.us/ips/pubmain.asp>. All inquiries regarding the RFP requirements are to be addressed to the contact person listed on Page One.

Written questions concerning this RFP will be received until March 14, 2012 at 5:00 PM Eastern Standard Time. They must be sent via e-mail to: Michael.Beaver@dpi.nc.gov or faxed to (919) 807-3660. Please insert "Questions ITS-40-RttT-IIS1" as the subject for the email. The questions are to be submitted in the following format:

Citation	Vendor Question	The State's Response
Bid Section, Page Number		

The State will prepare responses to all written questions submitted, and post an addendum to the Interactive Purchasing System (IPS) <http://www.ips.state.nc.us/ips/pubmain.asp>. Oral answers are not binding on the State.

Vendor contact regarding this RFP with anyone other than Mike Beaver may be grounds for rejection of said Vendor's offer.

Addendum to RFP: If a pre-bid conference is held or written questions are received prior to the submission date, an addendum comprising questions submitted and responses to such questions, or any additional terms deemed necessary by the State will be posted to the Interactive Purchasing System (IPS), <http://www.ips.state.nc.us/ips/deptbids.asp>, and shall become an Addendum to this RFP. Vendors' questions posed orally at any pre-bid conference must be reduced to writing by the Vendor and provided to the Purchasing Officer as directed by said Officer.

Critical updated information may be included in these Addenda. It is important that all Vendors bidding on this proposal periodically check the State website for any and all Addenda that may be issued prior to the bid opening date.

Basis for Rejection. Pursuant to 9 NCAC 06B.0401, the State reserves the right to reject any and all offers, in whole or in part; by deeming the offer unsatisfactory as to quality or quantity, delivery, price or service offered; non-compliance with the requirements or intent of this solicitation; lack of competitiveness; error(s) in specifications or indications that revision would be advantageous to the State; cancellation or other changes in the intended project, or other determination that the proposed requirement is no longer needed; limitation or lack of available funds; circumstances that prevent determination of the best offer; or any other determination that rejection would be in the best interest of the State.

NOTICE TO VENDORS: The State objects to and will not be required to evaluate or consider any additional terms and conditions, or exceptions to terms and conditions as stated in this solicitation, submitted with a Bidder's response. This applies to any language appearing in or attached to the document as part of the Bidder's response. By execution and delivery of this Request for Proposal and response(s), the Bidder agrees that any additional terms and conditions, whether submitted purposely or inadvertently, shall have no force or effect.

Late Proposals. Regardless of cause, late proposals will not be accepted and will automatically be disqualified from further consideration. It shall be the Vendor's sole risk to ensure delivery at the designated office by the designated time. Late proposals will not be opened and may be returned to the Vendor at the expense of the Vendor or destroyed if requested.

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Section I. Introduction

A. Purpose and Business Specifications

The purpose of this RFP and any resulting contract award is to solicit proposals for an Instructional Improvement System (IIS). This request is for a close-ended contract between the awarded Vendor and the State to furnish a pre-determined quantity of a good or service during a specified period of time. In addition, the State reserves the right to make partial, progressive or multiple awards: where it is advantageous to award separately by items; or where more than one supplier is needed to provide the requirements as to quantity, quality, delivery, service, geographical areas; and where other factors are deemed to be necessary or proper to the purchase in question.

As a primary focus of this RFP, the North Carolina Department of Public Instruction (NCDPI) outlined a number of tools to address all of section C3 and portions of sections B3 and D5 of the Race to the Top (RttT) application which focuses on using data to improve instruction. Vendors may go to the link below to better understand North Carolina's RttT plan. This link includes detailed descriptions of each section of the NC RttT proposal (including C3, B3, and D5).

Link to NC RttT Plan: <http://dpi.state.nc.us/rttt/state/>

As a summary, the tools needed to support North Carolina's IIS vision include:

- Dashboards and analytics
- Links between standards, instructional content, and assessment items
- Student profiles and work samples
- Delivery of, and items for, summative, benchmark, diagnostic, and formative assessment
- Professional development content
- Professional development management tool
- Student, teacher, administrator, and parent portals
- Educator Evaluation functionality

To this end, NCDPI is seeking a comprehensive and integrated IIS solution that provides tools and resources to local school districts and teachers to manage the teaching and learning process, including on-line delivery of assessments with real-time analysis tools and reporting. The solution shall enable the flow of information regarding student achievement, student performance, teaching goals, and suggested instructional resources. The IIS shall adequately secure student and teacher data. NCDPI desires the IIS to be organized to support the following functional areas:

- Standards and Curriculum
- Instructional Design, Practice, and Resources
- Assessment and Growth
- Data Analysis and Reporting
- Educator Evaluation and Professional Development
- Learner Profile and Work Samples

The IIS solution shall also meet requirements in the following areas:

- Documentation, Training, and Support
- Data and Systems Integration
- IT Platform, Security, and Access

The proposed IIS solution will need to interface with other NCDPI and district systems that will share data with the IIS. NCDPI is seeking information on the Vendor's ability to interface with other state and local systems. Please see the Data Movement Architecture section under Section III E.6 of this RFP for more information.

While NCDPI is interested in the best toolset and application to support the IIS, the proposed solution will only be as good as the content contained therein. To that end, NCDPI is interested in the content (instructional, learning, professional development, assessment) each Vendor has available through existing partnerships or Vendor creation that has already been integrated with the proposed solution or which may be added to the proposed solution as an option.

NCDPI believes that there are many firms, large and small, throughout the nation that can provide high quality products and services for some or all of the requirements detailed in this RFP. NCDPI is seeking a single supplier for systems design, software, data integration, installation, content import, training, maintenance, and technical support for all the goods and services described in this RFP. The single supplier can accomplish this using existing resources or through partnerships/sub-contracts with other Vendors. However, NCDPI reserves the right to award to multiple Vendors if in the best interest of NCDPI. Vendors are encouraged to suggest any creative approach to meet the IIS requirements while keeping costs low and allowing for long term sustainability.

The comprehensive IIS described in this document is intended to support NCDPI's vision of a fully integrated solution as conceptualized in Figure 1.

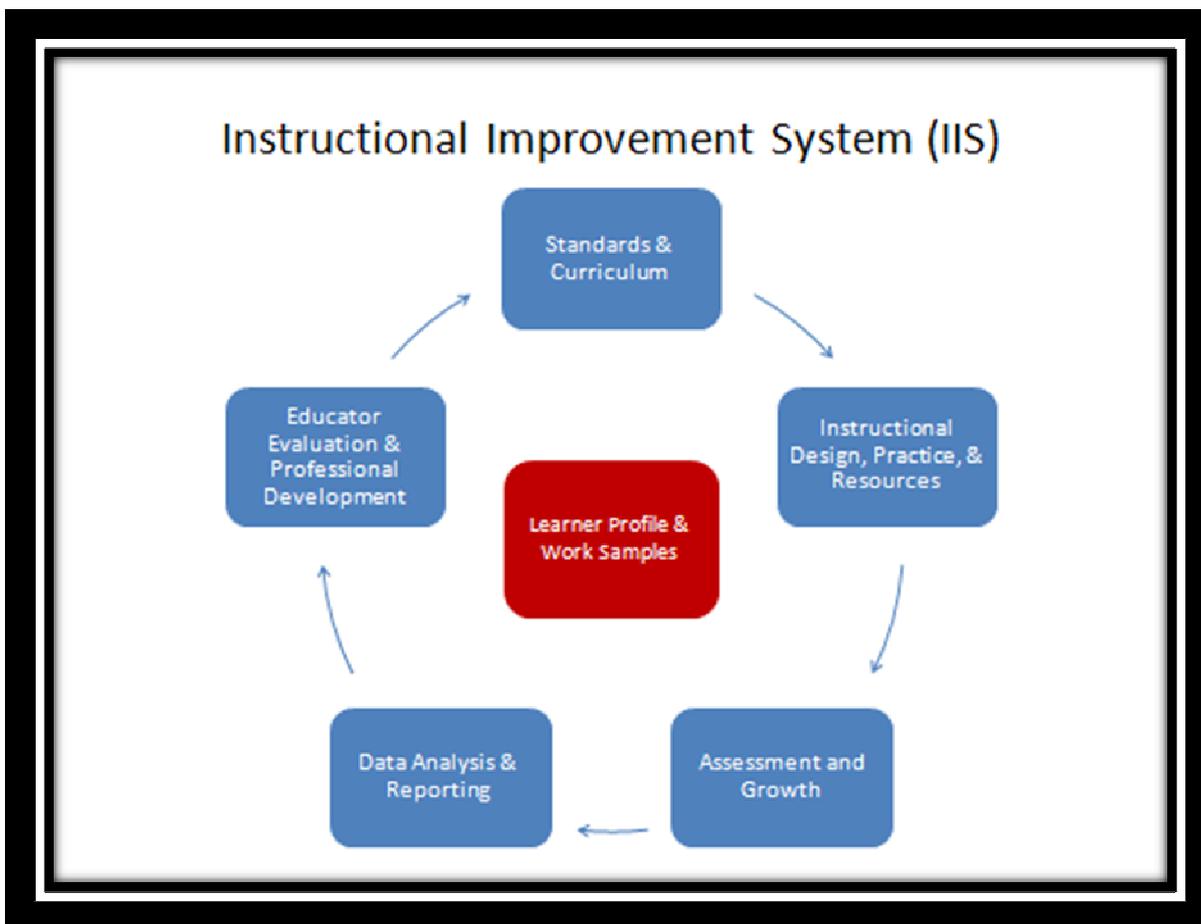


Figure 1 - Envisioned Components for Instructional Improvement System

The grouping of components (e.g., Standards and Curriculum) as shown in of Figure 1 and listed above is meant to illustrate the teaching and learning process that the IIS will help manage. NCDPI understands that the proposed IIS solution may be organized differently to meet the business specifications. Listed below are brief descriptions of the business specifications of each of the above components.

A.1. Standards and Curriculum

The Standards and Curriculum component focuses on the ability to manage multiple sets of standards (content, process skills, proficiencies, etc.) in a variety of hierarchies, terminology, and structure. NCDPI desires the alignment capability to be flexible to allow alignment between standards and curriculum (courses, units, activities, resources), and between standards and assessment items, and between standards and professional development activities. NCDPI desires that users are able to easily search and analyze relationships between all elements and alignments. The system shall provide tools for curriculum design, development, mapping, and documenting of best practices. The system shall be capable of identifying gaps and redundancies to ensure that standards are being addressed at appropriate grade and skill levels.

The development and management of curricular materials shall be designed with role-based security to allow for a workflow in which submitted materials are moved to a review process prior to adding to the “official” state, regional, or district curriculum. Once curriculum is authorized, it shall be available to any teacher for use in his/her instruction within the appropriate organization.

A.2. Instructional Design, Practice, and Resources

NCDPI desires that the IIS include the ability to search for and select instructional materials for use in lesson plans from an approved and North Carolina Standard Course of Study (NCSCS)-aligned database, the ability for teachers to add or modify the instruction for use with their students, and to provide a mechanism for both finding and assigning instructional interventions and extensions to students based on their assessed needs.

The system shall provide teachers the ability to plan differentiated instruction for their classes, groups, or individual students. The system shall allow teachers to search for lesson plans by grade, discipline, objective, theme, publisher, unit, etc. NCDPI desires that lesson planning is as simple as selecting available units, objectives, or activities and assigning them to a group of students for a particular timeframe. NCDPI desires that students be provided collaborative work areas to work with fellow students as well as submit questions and get feedback from teachers.

The system shall also make available to students and parents/guardians instructional materials and learning objects and shall provide a simple user interface that allows student and parents/guardians to find and use the resources for individual learning. Objects shall be searchable by grade, subject, NCSCS standard, and other search criteria supported by the Learning Resource Metadata Initiative (LRMI) tagging schema. (See details about LRMI under the Learning Object Repository in Section I.C.10 of this RFP). Objects shall be registered with the Learning Registry (See description in Section I.C.11 of this RFP).

The Instructional Design, Practice, and Resources component shall seamlessly interface with the Learning Object Repository (LOR) and the Assessment and Growth component. The system will allow end-users to search for and retrieve instructional resource from the external LOR and will support the tracking of activities and assessments directly linked to standards or objectives as part of the instructional process. The assessment system shall point back to recommended instructional material that either supports or enhances the skills identified on the assessment from the repository

of State learning objects. (See details about the LOR under the Learning Object Repository in Section I.C.10 of this RFP.)

A.3 Assessment and Growth

The Assessment and Growth component is an essential part of the instructional process. A responsive assessment system has the capacity to assist instructional staff to create, align, deliver, and manage various levels and types of assessment items and strategies ranging from daily classroom formative assessment, to facilitate delivery of district interim/benchmark testing, to delivery of statewide grades 3-8 and High School assessments.

It is essential that the assessment system not only serve as a repository for pre-constructed test items but that it shall display a robust set of tools that allows the user to create and build multiple levels of assessment aligned to the instructional objectives contained within the North Carolina Standard Course of Study (NCSCS).

In order to support a balanced approach to assessment, the system shall support a variety of formative assessment strategies for collecting evidence of learning on an ongoing basis (self-assessment checklists, reflections, questions), provide suggestions for descriptive feedback based on student responses, and suggestions for addressing student misconceptions. The emphasis is on providing frequent, descriptive, diagnostic feedback for a few questions or performance tasks used throughout a lesson, rather than providing a test consisting of many questions that result in a test score. For more information about NCDPI's approach to formative assessment go to the following links:

<http://www.ncpublicschools.org/accountability/educators/vision/formative>
<http://www.ncpublicschools.org/acre/falcon/>

The system shall also reflect a degree of flexibility and adaptability to allow for importing pre-constructed assessment items/tasks and formats (including rubrics) to augment locally developed items/tasks and add to the depth of items/tasks available for use at the classroom level. In short, the assessment system shall allow the user to interact seamlessly to create new items/tasks, alter existing items/tasks based on user role and the security of the items/tasks, and/or import items/tasks of various types and formats for potential use within the classroom or across the state.

The assessment system shall also have a well-developed reporting system that can rapidly provide results of various assessment types (ranging from documented observations used formatively to teacher scored performance items, to direct online assessments) to teachers and when appropriate to students and administrators for analysis and use in the improvement of instruction. The ability to provide timely assessment results in a variety of formats is an essential element of a successful assessment system. Assessments or assignments shall be able to be linked to the instruction with either manual scoring or on-line delivery and automatic scoring. The ability of the assessment system to effectively aggregate and disaggregate assessment results based on pre-set formats or user-defined constraints adds value to the overall effectiveness of the software.

The assessment system shall also be able to report student performance against the NCSCS and suggest learning objects or other tools to help students improve their performance against individual standards for which the student is underperforming. Additionally, the assessment system shall be able to assess class performance against the NCSCS and suggest to educators professional development to help the educator improve student performance against individual standards for which the class is underperforming.

A.4 Data Analysis and Reporting

The Data Analysis and Reporting function shall span the other IIS components to enable aggregation of data, student and teacher profiling, and measurement of student and teacher performance against the North Carolina Standard Course of Study objectives. The system's ultimate goal is to provide information so that teachers or their students can modify learning to meet each student's needs. Using data collected through the assessment system, the reporting tools shall provide a student-achievement profile that contains the student's current level of mastery on standards, benchmarks, objectives, or skills. The system shall provide teachers with a diagnostic analysis of recommended instructional materials that support and enhance the assessed skills and knowledge that students need to improve.

The system shall provide immediate access to all types of integrated student information through system-generated reports, which enable teachers and administrators to quickly and efficiently determine students' academic performance for as long as they are enrolled in the North Carolina Public School System. School leaders shall be able to aggregate data across classrooms and compare those assessment findings with pre-determined standards of achievement. The system shall also provide operations so that educators can "drill-down" into the data and perform more detailed analysis of student performance patterns and trends.

In general, access to data from all areas of the system shall be role-based and highly secure. Students and parents shall have easy access to resources for learning that is specific to each student's needs.

A.5 Educator Evaluation and Professional Development

North Carolina desires an Educator Evaluation and Professional Development component that provides an online platform that allows for 1) the completion of the educator evaluation processes and 2) educators to meet their professional development needs which include registering and engaging in professional development, searching for professional development resources, and identifying professional development needs based on self or supervisor evaluations of their ability to meet the NC approved professional standards.

In the area of Educator Evaluation, NCDPI desires tools to manage employee evaluations like the teacher and principal/assistant principal evaluation processes as described in North Carolina State Board of Education policies [TCP-C-004](#), which addresses teachers, and [TCP-C-005](#), which addresses principals/assistant principals. (These are hotlinks to the SBE policies). The IIS shall pull in historical evaluation data and provide a web-based tool that implements the rubrics developed for the teacher and principal/assistant principal evaluations. NCDPI desires that the system auto-populate standards like Standard 6 for teachers and Standard 8 for principals/assistant principals using statewide student assessment data. For detailed information on Standards 6 and 8, follow the link below, navigate to the section titled, "The Eight Standards of Executive Leadership and Their Connection," and review, "Standard 6: External Development Leadership," and "Standard 8: Academic Achievement Leadership."

<http://sbepolicy.dpi.state.nc.us/policies/TCP-C-006.asp?pri=02&cat=C&pol=006&acr=TCP>

Reports will be generated at the local and state level using all the data gathered during the teacher and principal/assistant principal evaluation process. Security of all evaluations is essential.

It is imperative that the professional development area of this component allow for educators to search for professional development opportunities, register for professional development offerings, and search

for professional development content. In addition, the system shall allow for the educator to manage his/her learning by tracking his/her professional development activities including completions and proficiencies. In other words, the NCDPI desires that the IIS employ a proficiency-based approach to human resource management, assessment, accountability, and professional development. Data from the IIS will enable NCDPI to link and align staff development with curriculum, assessment, learner needs, instructional materials, and the supervision/evaluation process. Data from the other IIS components will enable NCDPI to link and align student information to resources that will allow teachers to modify instruction to meet the learner's needs. As with data analysis and reporting, NCDPI desires this component to provide immediate access to all types of information to inform both the individual educator's and the student's growth and development.

For the purposes of this RFP, this would mean connecting a variety of data sets and resources together to allow the user to access information to improve and/or master their job-related proficiencies. This includes the ability for a teacher or administrator to find professional development courses aligned with the NCSCS and courses aligned with the NC Teaching and/or Executive Standards. Staff proficiency within the specifications of the professional development module are defined as the degree to which the educator has gained the intended skills, knowledge or behavioral attributes targeted in the professional development course/activity. For example, the assessment component of the staff development module will not result in educators earning a "grade" but rather in attaining specific proficiencies.

For classroom teachers, NCDPI desires that the system display a list of professional development, assessment, and instructional resources that align with a desired proficiency or relative to the outcomes of the educator evaluation. NCDPI desires that administrators are able to choose from a catalog of resources that are tagged by pre-determined categories and/or proficiencies and assign targeted staff development to their teachers based on local initiatives or the results of the educator evaluation process. Overall, this component will allow a large number of people to contribute to and access shared data and content in a controlled setting based on the user's needs.

A.6 Learner Profile and Work Samples

The Learner Profile provides easy access to student demographic data, longitudinal assessment results, or other useful information when planning appropriate instruction for the student. These data will come from other systems such as a Student Information System, the Comprehensive Exceptional Children Accountability System (CECAS), and potentially other systems that characterize a learner. Learners of all kinds, including both students and teachers, will need an area to store work samples and other information (e.g., learning styles, career goals) longitudinally. NCDPI desires that the system offer a file directory to include various types of work samples along with other pertinent information about the learner. NCDPI desires that access to this and other IIS components are role-based, protecting the privacy of the individual.

B. Background

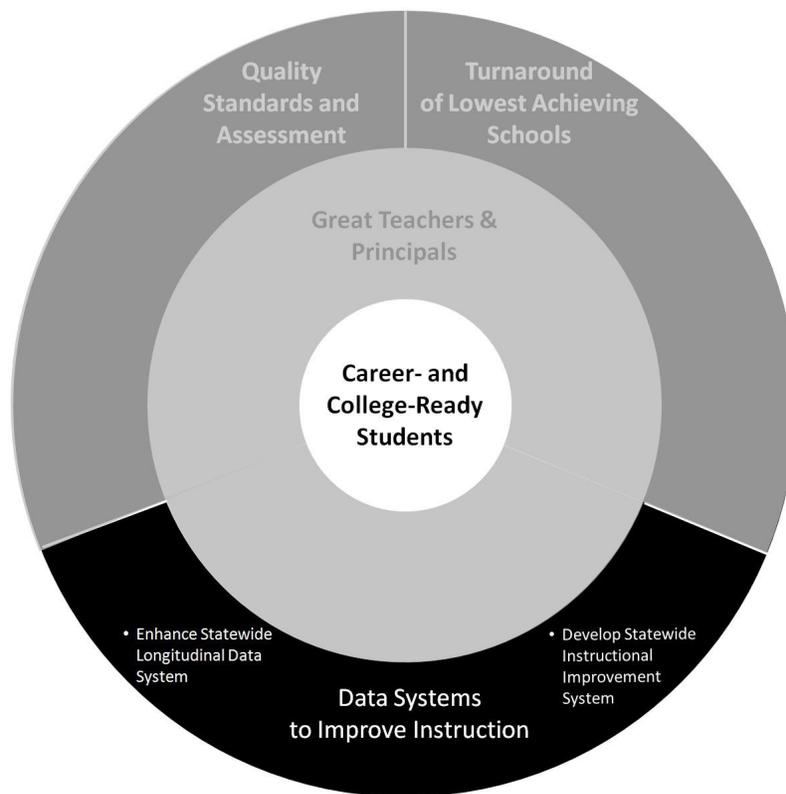
In 2010, the State Board of Education, UNC General Administration and the NC Community College System approved the Common Core State Standards in English language arts and mathematics, which clearly identify the skills and knowledge that all students need to master to be career and college ready. With that, the State Board of Education also continued work to revise the state's Standard Course of Study with new Essential Standards for every subject and grade, to develop a new comprehensive balanced assessment system that includes a focus on formative assessment, benchmark assessments, and new statewide summative assessments, and to create

a new school accountability model. This is the first time that North Carolina has changed all three elements (i.e., standards, assessment system, and accountability) simultaneously. Race to the Top funds will allow the state to have all three items in place by 2012-13.

North Carolina is one of 11 states and the District of Columbia who's federal Race to the Top (RttT) application was approved for funding by the US Department of Education. In its application, North Carolina's "Career & College: Ready, Set, Go!" initiative is meant to provide funding to build infrastructure and capacity to strengthen the public schools and support them in four key areas:

- Great teachers and principals
- Learning standards and assessments that align with 21st Century demands
- Technology systems to support strong schools
- Turnaround support for the lowest-achieving schools

Figure 2 - North Carolina's Race to the Top Proposal



See the complete RttT application at <http://www2.ed.gov/programs/racetothetop/phase2-applications/index.html> for further details.

To support this work, North Carolina has committed to implementation of an Instruction Improvement System by June 30, 2014. Table I below shows the number of districts, schools, students and personnel the IIS will impact when it is fully functional and available statewide.

Table 1: North Carolina school districts, schools, students and personnel counts

School Districts	
County Units	100
City Units	15
Total Administrative Units:	115
Public Schools	
Elementary (Grades PK-8)	1,835
Secondary (Grades 9-12)	417
Secondary (Grades 9-13 Early College)	64
Combined	109
Charter Schools	99
Total Schools (Public and Charter):	<u>2,524</u>
Students (ADM, FY 2010-2011)	
Grades K-8, Public	1,011,545
Grades K-8, Charter	34,512
Grades 9-12, Public	422,891
Grades 9-12, Charter	6,720
Total Students (Public and Charter):	<u>1,475,668</u>
Personnel (Full Time)	
State Funded	93,719
Federal Funded	13,453
Local Funded	9,142
Total Teacher, Administration, & Professional Personnel:	116,314

C. Architecture Overview

Following is a description/discussion of NCDPI technical architecture. This is offered as background information to the bidder to help establish an understanding of the existing and planned infrastructure within which the IIS shall work.

C.1. Internal Data Systems

DPI has a very diverse portfolio of business systems that have traditionally been aligned with state and federally-funded education programs. While systems were built over time using many application development technologies and a variety of database platforms that did not integrate, the most recent applications have been built using Oracle application development technologies, such as Oracle Application Express (APEX) development tools and Oracle 10g and 11g databases.

A list of the most important systems is itemized below in the table entitled, "Internal Data Systems."

Clearly, one of the most important source systems to be integrated to the IIS is the Student System. North Carolina's Student System is NC WISE.

C.1.1 An Overview of NC WISE

NC WISE is based on Pearson, eSIS 12.1 (a Vendor product), an Oracle forms based application fronting an Oracle 10g database.

The NC WISE system is made up of 20 Oracle eSIS databases, housed centrally at North Carolina Information Technology Services (ITS), serving all public schools in North Carolina. These are transactional, relational databases designed to support the eSIS application. Users (data managers, teachers, principals, etc.) access eSIS through a web interface and update the system through the eSIS application. School and student business processes are defined to manage the school schedule, student schedules, courses and curriculum, diploma requirements, special programs, teachers, assignment grades, discipline, attendance, report cards, progress reports, transcripts, and most school/student processes.

The Pearson, eSIS product contains a teacher gradebook that interfaces directly with NC WISE to support teachers, their classroom activities, and reporting. The Pearson eSIS product also offers a parent portal user interface, which many of the LEAs have implemented. The information for this interface is populated directly from NC WISE.

Nineteen of these eSIS Oracle databases collectively house student and school data for all North Carolina public schools. Each database may support one to many LEAs. For example, instance #3 supports 30 LEAs. The remaining database is a central, shared repository of information. It contains a complete catalog of all North Carolina public school students. This catalog maintains a single unique ID number for all North Carolina public school students. The database is also used, along with custom software, to control state defined eSIS parameters for each of the public school systems.

Additional North Carolina custom software facilitates consistent diploma requirements and grading scales, electronic student transfer, school/LEA reporting, electronic transcripts, year-end transition, and state reporting.

C.1.2 Source Systems Feeding CEDARS

The systems listed in the table below are sources of data for the Common Education Data Analysis and Reporting System (CEDARS) longitudinal data system today. It is likely that data from some of these systems will be needed to support the initial data provisioning and ongoing data integration with the IIS. **Vendor will not need to integrate directly with these systems.** All of these systems currently use MFTS file transfer technology to export data to CEDARS in a defined flat file format. The means by which the IIS Vendor shall provision data and interface with NCDPI is defined below under sections I.C.13 Shared Learning Collaborative and Shared Learning Infrastructure (SLI) and section III.E.10 Integration Strategy.

IIS Vendors shall identify the data needed to provision the IIS components and the periodicity, and the IIS Vendor shall design SLI integration routines to pull the required data from the SLI via API calls. SLI APIs are in design. Draft specification documentation is available at the following link:

<http://SLCedu.org>

CEDARS input files have been developed for each of the source systems listed below in Table 2.

Table 2: Internal Data Systems feeding CEDARS

Application Name	Application Summary Description
1003 File	Contains the 1003(A) and 1003(G) funds received by a school, and the Title I State Reservation 1003(A) amount at the state level
Accountability Database (ADB)	The accountability database contains data collected and used by the accountability family of applications. Selected data from this database are provided to the CEDARS LDS along with other systems.
AMTR Media and Tech Survey	<p>Annual survey of computer equipment, connectivity, media collections and miscellaneous related information in the districts and schools throughout the state.</p> <p>The current AMTR is a web-based system that collects data at the school and district level. The current system has been online since 1998. Requests for data come from a variety of sources, and therefore the survey questions change from year to year depending on the needs of the requesting entities. Some of the entities affecting the AMTR are: NCWISE, NCLB EETT, BETA, eNC, State ITS and the NC Virtual School</p>
Principal's Monthly Report (PMR)	PMR includes output from calculation programs using data received via Principal's Monthly Report (PMR) to determine Average Daily Membership (ADM).
Career Technical Education Reporting and Analysis System	<p>New Application to consolidate all Voc Ed apps -</p> <p>Voc Ed - Civil Rights - Percent CTE students who are disabled, academically disadvantaged, economically disadvantaged, limited English proficient.</p> <p>Voc Ed - Civilian Labor/Youth Unemployment - Estimated youth (ages 16-19) employment/unemployment.</p> <p>Voc Ed - Employer Feedback/Follow-up - Survey of employers who hired CTE concentrator graduates.</p> <p>Voc Ed - Enrollment - Enrollments of students, grades 6-12, in CTE courses.</p> <p>Voc Ed - Performance Standards - Performance results for CTE students in seven categories: 1-ASSET scores; 2-vocational education post-assessments; 3-course of study; 4-satisfactory outcome (student follow-up); 5-nontraditional enrollment; 6-nontraditional graduates; 7-career development plan</p> <p>Voc Ed - Student Follow-up - Survey of CTE concentrators who graduated</p> <p>*****As of October 2008 these applications are being retired and will be considered components of this Career Technical Education Reporting and Analysis system. *****</p>
Unique Identifier for Student & Unique Identifier for	NC Student Identification System (built on eScholar UniqID for Student COTS product) is North Carolina's application that uniquely identifies each student in the NC PK-13 education system. The system interfaces with NC WISE, More at Four, CECAS, and Migrant

Application Name	Application Summary Description
Staff	<p>systems to assign unique identifiers to all students at any point of entry into the NC PK-13 education system.</p> <p>NC Staff Identification System (built on eScholar UniqID for Staff COTS product) is North Carolina's application that uniquely identifies each staff person who works in the NC PK-13 education system. The system interfaces with LEA payroll systems (COTS products from Sartox, ISIS, National Heritage, CMS, and Wake) via a process that is administered by each LEA to ensure that staff records are uploaded each month and that unique IDs are assigned.</p>
CFDC-Homeless (Title X, Homeless)	Collects data on homeless children and services received.
CFDC-ESSR (Title I, Eligible School Summary Report)	Collects school Title I eligibility and status for upcoming school year.
FDC-LEA Improvement (Title I, LEA Improvement)	Calculates sanction level for LEAs in Title I LEA Improvement.
CFDC-N&D (Title I Part D, Neglected and Delinquent)	Collects demographic and assessment data on children served with Title I part D funds.
CFDC-N&D Aggregate (Title I Part D, Neglected and Delinquent Aggregate)	Collects count of neglected and delinquent students served in state agencies broken down by demographic and academic indicators.
CFDC-RLIS (Title VI, Rural and Low-Income Schools)	Collects the purpose and use of RLIS funds.
CFDC-School Improvement (Title I, School Improvement)	Calculates the sanction level for schools in Title I School Improvement and allows LEAs to verify the sanction level.
CFDC-Schools Identified for Improvement (Title I, Schools Identified for Improvement)	Collects corrective and restructuring actions implemented by LEAs in schools in Title I Schools Improvement.
CFDC-SES/Choice (Title I, Supplemental Educational Services/Public School Choice)	Collects student's eligibility and services provided under Supplemental Education Services and Public School Choice provisions.
CFDC-Student Participation (Title I, Student Participation)	Collects the number of children served in Private Schools and those served in Neglected and or Delinquent facilities served with Title I part A funds.
CFDC-TAS	TAS (Targeted Assistance System) Collects student's eligibility and services provided in a TAS.
Comprehensive Exceptional Children Accountability System (CECAS)	Provide case management capabilities and federal Individuals with Disabilities in Education Act (IDEA) compliance monitoring for Pre-K through Grade 12 students. Also provides federal and state reporting of the Special Education student population. CECAS is the authoritative source system for pre-kindergarten exceptional children.
Dropout	This application supports the annual dropout data collection as required for state and federal dropout reporting.

Application Name	Application Summary Description
EDDIE - Education Directory and Demographical Information Exchange	<p>The Education Directory and Demographical Information Exchange (EDDIE) Application replaces the Legacy SNA lotus notes based application.</p> <p>It is used to:</p> <ul style="list-style-type: none"> - Collect data specific to the school - Collect data specific to the LEA - Allow for data exchange between other applications using the legacy system - Allow for data retrieval by other applications using the legacy system - Allow for a web based interface for requesting a new school number. - Allow for a web-based interface to approve or deny a new school number. - Generate report data via a web interface.
Immigrant	<p>In North Carolina, students previously identified as immigrant within an LEA/Charter School are entered into the Immigrant Consolidated Federal Data Collection system using student records from the LEP and Immigrant CFDC sites, in order to provide data for the Immigrant Headcount. The February 1 Immigrant Headcount of eligible immigrant students is combined with the October 1 LEP Headcount to determine distribution of Title III funds and LEA eligibility for Title III funding.</p>
Instructional Technology file	<p>Source system for the following data:</p> <ul style="list-style-type: none"> - 8th grade technology assessment counts - Integrated Technology Status at the District
LEP	<p>The LEP Consolidated Federal Data Collection matches student records with enrollment data collected from NC WISE. The ongoing process is updated as new enrollment data is obtained. The LEP CFDC is recognized as the NC authoritative source for identifying LEP students.</p>
Licensure Management System	<p>Licensure Management System houses all data regarding the licenses of teachers and other education professionals in NC.</p>
Masterfile	<p>Provides the State Agency contact information, CSSO, address and state level AYP and Improvement status.</p>
MFR/AFR	<p>Monthly Financial Report/Annual Financial Report - The LEAs and Charter Schools build a file of their General Ledger balances to send to DPI. DPI uses this info for reporting expenditures by school, posting Charter School data, calculating Per Pupil costs, Statistical Profile, School Report Card, etc..</p>
MIS 2000	<p>This is an application that tracks the migrant student information (in-state & out-of-state). It is provisioned by the Federal Government external to NCDPI.</p>
NCWISE	<p>Supports the management of student information from an enterprise to a local level. Supports school business and management of student data from the school, state and Federal levels.</p>
Payroll Data	<p>Includes the school level assignment code, funding sources, pay level, years of experience and full-time equivalent (FTE).</p>
REAP	<p>Indication if LEAs notified the State of their intent to use the alternative uses funding authority under Section 6211.</p>

Application Name	Application Summary Description
Safety/Incident (NC WISE)	Includes school safety and individual school incident information, including the offender, victim type, incident type, weapons information, offender infractions and disciplinary action. As of 2012, this data is sourced from NC WISE.
SES Funding spreadsheet	Per Pupil Expenditure: Maximum amount LEAs are allowed to spend per child on Supplemental Educational Services.

C.2. External Data Systems

These systems are managed outside of NCDPI or ITS controlled space by contracted support Vendors. They provide data to the CEDARS data warehouse via the MFTS and point-to-point means.

Table 3: External Data Systems

Application Name	Application Summary Description
Migrant	The MIS2000 system is provisioned by the USED. NCDPI uses the system for migrant population data capture, storage, and reporting.
Licensure	NCDPI contracts with an external Vendor to host and support the teacher licensure system.

C.3. Data Integration

Historically, data sharing between systems has been a point-to-point affair using everything from files delivered via physical media to automated file transfers between systems. Over time, some of these methods evolved to shared databases or point-to-point database connections. During the last three years while working on the CEDARS project, NCDPI has focused attention on application integration or data sharing by developing a Managed File Transfer Service (MFTS) that employs a publish/subscribe data integration model, allowing applications to publish their authoritative data via flat files so that subscriber applications may consume the data in to the subscribed systems. The MFTS uses a file brokering approach that separates data file publication from responsibility for delivery to subscriber systems. The MFTS runs atop Oracle Service Oriented Architecture (SOA) platform. In the future, NCDPI will use Oracle Data Integrator and Golden Gate technologies to continue to extend the role of brokered data integration services. DPI will also be storing the data pertinent to the IIS to the Shared Learning Infrastructure (SLI) data store which will offer an API interface to provide a means of efficient two-way data integration to the IIS.

The table below summarizes the products and techniques found in this architectural group. Note that DPI owns licenses for Oracle Data Integrator and Golden Gate but has not yet used these tools extensively for data movement and integration.

Table 4: Products and Techniques

Product/Technique Name	Description
Managed File Transfer Service	A BPEL application operated within the Oracle SOA environment that manages the pickup, routing, replication, delivery, archiving, error handling, and reporting activities associated with data files moving between MFTS endpoint

	systems.
Oracle Data Integrator	<p>Oracle Data Integrator (ODI) provides high-performance data movement and transformation among enterprise platforms using an integrated architecture. ODI combines built-in connectivity to all major databases, data warehouses, service oriented architectures, and business intelligence engines with an easy-to-use interface and extensible framework that helps improve productivity and lower development costs. Key features are listed below:</p> <p>KEY FEATURES</p> <ul style="list-style-type: none"> Out-of-box integration with databases, ERPs, CRMs, B2B systems, flat files, XML data, LDAP, JDBC, ODBC Knowledge module framework for extensibility In-database transformations and data integrity controls in ETL on all databases Richest ETL for Oracle databases including with complex dimension and cube loading support Integrates to Oracle GoldenGate for real-time data warehousing Metadata-driven data lineage and impact analysis In-database and standalone data profiling, data quality and data governance options
Oracle Golden Gate	<p>Oracle GoldenGate is a comprehensive software package for enabling the replication of data in heterogeneous data environments. The product set enables high availability solutions, real-time data integration, transactional change data capture, data replication, transformations, and verification between operational and analytical enterprise systems. Key features are listed below.</p> <p>KEY FEATURES</p> <ul style="list-style-type: none"> High-performance data replication Heterogeneous sources and targets Conflict detection and resolution Real-time and deferred apply Event marker infrastructure Flexible topology support Data encryption ETL and JMS integration Routing and compression Automated memory management Initial load capability Ensure transactional integrity across heterogeneous source and target systems
Point to Point Database Connections	<p>A point-to-point database connection exists when two distinct databases share data via the data input/output mechanisms native to them. This is usually a SQL interface in DPI databases. These connections have a high data transfer rate and are reasonably inexpensive to create. They are fragile, however, because they depend on explicit data locations and relationships. If these change, the interfaces become broken.</p>

	This type of interface is usually limited to interactions between databases that are controlled by the same organizational unit so changes can be more carefully introduced.
Point to Point File Exchanges	Point to point file exchanges are the most basic form of data integration. Essentially, a source system produces a data file that is transferred to a target system where it is processed. Basically, this approach reduces coupling between the two systems to an agreement about what the file contains and how it shall be formatted. This is a lowest common denominator approach to data integration that nearly any information system can participate in.

C.4. OBIEE

The Business Intelligence Engine is an Oracle Business Intelligence Enterprise Edition (OBIEE or OBI) software implementation that delivers a full range of capabilities—including interactive dashboards, ad hoc queries, notifications and alerts, enterprise and financial reporting, scorecard and strategy management, business process invocation, search and collaboration, mobile and disconnected analytics, integrated systems management and more. OBIEE 11g is based on a proven web-based service-oriented architecture. OBIEE is the user interface to the CEDARS longitudinal data warehouse and is also used in some DPI business units to analyze financial data.

C.5. Metadata Repository

NCDPI Metadata Repository (MDR) is an Oracle Apex application built on top of an Oracle database. It is essentially a data dictionary with additional features. It contains information about the systems operated or interacted with by NCDPI systems including:

- Data they contain
 - How it is organized into tables or files
 - Data element names
 - Data element definitions
 - Physical attributes of data elements
 - Example or explicit sets of acceptable data values
- Data exchanges with other systems
 - Exchange descriptions
 - Data element contents
 - Exchange timing

The MDR was constructed as part of the work of the CEDARS project. In addition to information about the explicit data that systems contain and how they interact, the MDR provides a mechanism to associate data elements with an abstract data element known as an Enterprise Data Master (EDM) element. EDM elements are never actually implemented by systems directly. Rather, they exist as a means of understanding that a specific element within a system (for instance, Pupil_Number inside the NCWISE Student Information System) is actually an implementation of the more general data concept Student_Identifier, which is an EDM element. This allows us to define something like Student_Identifier independent of a particular application so we can understand how specific deviations vary from the abstract data concept, definition, representation, etc.

C.6. NCDPI Enterprise Licenses

NCDPI has a substantial investment in Oracle products, as listed below in section III.C. IIS Vendors are encouraged to leverage these products to decrease NCDPI's overall total cost of ownership for the IIS.

C.7. Identity and Access Management Services - IAM

The NC Education Cloud Identity and Access Management System (IAM) shall provide every K-12 student, teacher, staff member, parent/guardian, and school community member in North Carolina an account, with a single username and password that will enable access to cloud-based learning resources. The IAM system will have three major components: a centralized data repository with all user information, a central directory service that provides a master authentication and authorization resource, and federation software that enables Single Sign-On functionality for users.

The data repository will be a centralized collection of all relevant user information from disparate data sources. The centralization of these data creates an opportunity for better reporting capabilities, data analytics generation, and access control management. The central directory service will also bring new options to local school district personnel by providing an automated mechanism for synchronizing global user information from the centralized directory service to local directory services.

Finally, the federation software will give the end users a new experience of Single Sign-On. That is, a single username and password that grants access to all his or her relevant cloud services. Overall, the IAM system can bring new options and opportunities to the local school districts. It has the potential to reduce support costs through more effective account life-cycle management and create a better, more productive user experience.

C.8. Data Governance Services

C.8.1. Data Management Group

The Data Management Group (DMG) is NCDPI data governance policy organization. This group consists of technical and business representatives from all major areas of the Department and is growing to include representation from the LEAs and charter schools as well. Some of the areas the DMG routinely deals with include:

- Assignment of authoritative systems responsibility for data elements
- Approval of data exchange specifications
- Resolving data related conflicts between organizational units
- Publication of data policies

The DMG does not have any direct technical controls of data or data flow. These are managed by source and target system owners as well as the staff that operate intermediate systems such as the MFTS, shared databases, and the various point-to-point integrations that exist today.

C.8.2. Master Data Management

NCDPI currently has an active data governance process. This includes a data management group, identified data stewards for all data categories, a data dictionary and authoritative source systems of record for all data elements. The IIS shall conform to and support the basic concepts of master data management. This includes:

1. The IIS will draw data for its transactional data structures from the Shared Learning Infrastructure, which in turn draws the data from the NCDPI authoritative source systems. For example, student demographic data will be populated in the IIS from the SLI through and API, and the SLI gets the data from NC WISE, the authoritative source system for this information, through the data movement layer.
2. The IIS cannot allow updates to data for which it is not the authoritative data source. Rather, it shall rely on the authoritative source to update the data and return it to the IIS.
3. The IIS itself will be designated the authoritative data source for certain types of data. For example, the IIS may be the authoritative source for formative and diagnostic assessment results. As such, the IIS shall send the data for which it is the authoritative source to the Shared Learning Infrastructure through an API, and the SLI will make the data available to other DPI systems requesting these data.

C.9. NC Education Cloud

The North Carolina Educational Cloud initiative is part of the state's Race to the Top plan. The plan for this initiative is to transition LEA infrastructure to a cloud-centric service model. This service is optional to districts. More information can be found at: <http://cloud.fi.ncsu.edu/>

C.10. Learning Object Repository

The Learning Object Repository (LOR) is a system being developed to tag and store learning objects using a standard storage medium and metadata tags. NCDPI intends to store (or link) current content that was created by NCDPI, LEAs, or NCDPI partners in the LOR so that it is accessible to IIS end-users. All future NCDPI learning objects developed or purchased by the NCDPI shall reside within or be mapped to the LOR. This includes assessment items (secure and non-secure items), professional development content and/or modules, and learning and instructional resources. The proposed IIS solution shall support permissions for all objects and collections of objects based on user role. The proposed IIS solution shall seamlessly interface with the LOR, enabling end-users to search for content in the LOR and have the IIS deliver the content from the LOR just as if the content were stored in the IIS.

NCDPI intends to tag all LOR content using the Learning Resource Metadata Initiative (LRMI) tagging schema. The LRMI tagging schema is currently under development and is being derived from the Schema.org (Google, Microsoft, and Yahoo) specification. LRMI is a joint effort of the Association of Educational Publishers (AEP) and Creative Commons (CC). It is co-sponsored by the Bill and Melinda Gates Foundation and the William and Flora Hewlett Foundation. A key differentiator of the LRMI tagging schema from past efforts is the separation of learning resource metadata from the learning objectives or maps. Additional specifications for this tagging schema are forthcoming and will be provided to the Vendors prior to final contract negotiation. A draft framework of the schema was made available by LRMI in December 2011. Final delivery of the specification is scheduled for March 2012.

Additional overview and integration information about the LRMI can be found at the following web links:

LRMI Information:

<http://www.lrmi.net>

<http://creativecommons.org/tag/learning-resource-metadata-initiative>

LRMI v 0.5 Specifications:

<http://creativecommons.org/weblog/entry/30463>

In addition to the LOR, the proposed IIS solution shall offer a built-in object repository that supports all file formats and links to other external content stores (like the LOR). It shall also support user definable metadata schemas and user definable workflows for publishing and content review. The system shall be able to support the tagging and retrieval of content using the LRMI tagging schema once it is published.

C.11. Learning Registry

The Learning Registry is a new approach to capturing, sharing, and analyzing learning resource data to broaden the usefulness of digital content to benefit educators and learners.

It is not a website or repository, not a search engine, and not a replacement for the excellent sources of online learning content that already exist. The Learning Registry is an open source technical system designed to facilitate the exchange of data behind the scenes, and an open community of resource creators, publishers, curators, and consumers who are collaborating to broadly share resources, as well as information about how those resources are used by educators in diverse learning environments across the Web.

Use the Learning Registry to share...

- metadata that describe learning resources
- ratings, reviews, comments, and other annotation data
- alignments to educational standards
- usage information such as favoriting, foldering, remixing, embedding, and other social metadata / paradata
- resource updates, relationships between resources, and other assertions

The IIS Vendor shall register learning resources that are created within the IIS to the Learning Registry. See more information about the Learning Registry at:

<http://www.learningregistry.org>

C.12. Shared Learning Collaborative & Shared Learning Infrastructure

The Shared Learning Collaborative is a consortium that is co-sponsored by the Carnegie Corporation and the Bill & Melinda Gates Foundation to build the Shared Learning Infrastructure (SLI). SLI is a data repository and data integration framework offering Application Program Interfaces for application integration and data exchange. The SLI project will also build out a few applications that provide IIS-type features, like a Learning Maps application, and possibly a proof-of-concept Recommendation Engine application. NCDPI is one of five (5) phase I pilot states participating in SLI. NC has chosen to integrate the SLI framework into the IIS solution design. Under a separate RFP, NCDPI will hire a Vendor to move NCDPI data related to the IIS into the SLI data store. This approach allows the IIS Vendor to access NCDPI data through and

API rather than having to source the IIS with point-to-point integration solutions with NCDPI source systems. NCDPI believes that this approach will result in more reliable and consistent DPI data between the SLI and IIS.

The SLI will:

- Provide a shared infrastructure that will include data ingestion and validation, a secure web services API, authentication and authorization, a core data store, a custom data store, and a common core standards reference store.
- Develop customizable reporting dashboards, Common Core Learning Maps, and other apps based on teacher input.
- Facilitate collaboration across adopting SEAs and LEAs to identify opportunities to co-develop SLI-aligned applications on top of the shared infrastructure.
- Work through the SLI's market ecosystem to develop new Common Core and SLI-aligned learning applications by third parties and the open source community.

NCDPI will make the SLI available to the districts and schools in the state. The initial SLI alpha release will be available to the Phase I pilot states and districts (one district per state) in June 2012, and release 1 of the SLI will be available to Phase I pilot states and districts in December of 2012, with the focus being the shared infrastructure and initial dashboards. This means the following for the IIS Vendor:

- The IIS Vendor will use the SLI APIs to provision the initial IIS data and will integrate with the SLI to keep data synchronized between the SLI and the IIS.
- The IIS will be the authoritative source system of record for much of the data that will be needed by the SLI, including but not limited to assessment (summative and benchmark) data. The IIS shall be able to send these data to the SLI using the APIs developed for this purpose. SLI API documentation is available at the following web link:

<http://SLCedu.org>

Additional specifications for these are forthcoming and will be provided to the Vendors prior to final contract negotiation.

The SLI may also provide data from classroom assessments from apps built upon the shared infrastructure. The IIS shall be able to import these data using the SLI APIs and use it for diagnostic services.

- The SLI is planning to utilize a tagging schema developed by the Learning Resource Metadata Initiative (LRMI) and will search the Learning Registry for learning resources. Any content developed within the IIS which includes assessments and assessment items, lesson plans, teacher-created content, etc. shall be tagged with LRMI-aligned metadata.
- NCDPI assumes there will be content in the IIS, either created by Vendors or users that will be aligned to the Common Core State Standards. The Vendor shall use the Common Core taxonomy that will be published on corestandards.org to describe CCSS alignment and CCSS-aligned assessment results.
- Respondents may opt to customize, integrate, and deploy open-source applications built by the SLC as part of their IIS solution. These applications are currently in early stages of design. More information will be posted on the following link:

<http://SLCedu.org>

C.13. Smarter Balanced Assessment Consortium (SBAC)

North Carolina is a member of the SMARTER Balanced Assessment Consortium (SBAC) that includes a number of states that are focused on implementing innovations in online assessment such as the use of computer adaptive testing and performance tasks. SBAC is an emerging data system, and it is yet to be determined how IIS shall interface with SBAC. At a minimum, NCDPI would like to exchange data between the SBAC and the IIS. NCDPI prefers to administer the SBAC assessments through the IIS. However, the SBAC architectural landscape at the time of this writing makes it unclear how NCDPI will accomplish this goal. The Vendor shall propose methods to ensure that at a minimum NCDPI will be able to exchange data between SBAC and the IIS. For more information about SBAC go to the following site: <http://www.k12.wa.us/smarter/>

Section II. Bidding Information

A. Instructions to Vendors

Additional acronyms, definitions and abbreviations may be included in the text of the RFP.

- 1) Proposals submitted electronically, or via facsimile (FAX) machine will not be accepted.
- 2) **EXECUTION**: Failure to sign under EXECUTION section will render proposal invalid.
- 3) **TIME FOR CONSIDERATION**: Unless otherwise indicated on the first page of this document, Vendor's offer must be valid for 90 days from the date of proposal opening
- 4) **FAILURE TO MEET PROPOSAL REQUIREMENTS**: While it is not anticipated that the awarded Vendor will fail to meet the proposal requirements, if such should occur, the right is reserved to further evaluate the responses to this RFP and then to recommend an award to the next Vendor response that represents the best interest of the State.
- 5) **PROMPT PAYMENT DISCOUNTS**: Vendors are urged to compute all discounts into the price offered. If a prompt payment discount is offered, it will not be considered in the award of the contract except as a factor to aid in resolving cases of identical prices.
- 6) **MISCELLANEOUS**: Masculine pronouns shall be read to include feminine pronouns and the singular of any word or phrase shall be read to include the plural and vice versa.
- 7) **VENDOR REGISTRATION AND SOLICITATION NOTIFICATION SYSTEM**: Vendor Link NC allows Vendors to electronically register with the State to receive electronic notification of current procurement opportunities for goods and services available on the Interactive Purchasing System at the following web site: <https://www.ips.state.nc.us/IPS/Vendor/Vndrmess.asp>
- 8) **ORGANIZATION**: Vendors are directed to carefully review Section VI herein and fully comply with the content and organizational requirements therein.
- 9) **E-PROCUREMENT**: **This is an e-procurement solicitation.** See paragraphs #47 and 48 of the attached Information Technology Terms and Conditions for Goods and Related Services. The Terms and Conditions made part of this solicitation contain language necessary for the implementation of North Carolina's statewide e-procurement initiative. It is the Vendor's responsibility to read these terms and conditions carefully and to consider them in preparing the offer. By signature, the Vendor acknowledges acceptance of all terms and conditions including those related to e-procurement.
 - a. General information on the e-procurement service can be found at <http://eprocurement.nc.gov/>
 - b. Within two days after notification of award of a contract, Vendor must register in NC E-Procurement @ Your Service at the following web site: <http://eprocurement.nc.gov/Vendor.html>
 - c. As of the RFP submittal date, the Vendor must be current on all e-Procurement fees. If the Vendor is not current on all e-Procurement fees, the State may disqualify the Vendor from participation in this RFP.

B. General Conditions for Proposals

- 1) **Definitions, Acronyms and Abbreviations**. Generally, see 9 NCAC 06A.0102 for definitions. The following are additional defined terms:
 - a) **The State**: Is the State of North Carolina, and its Agencies.

- b) **ITS:** Office of Information Technology Services.
- c) **Goods:** Includes intangibles such as computer software; provided, however that this definition does not modify the definition of “goods” in the context of N.C.G.S. §25-2-105 (UCC definition of goods).
- d) **Vendor:** Company, firm, corporation, partnership, individual, etc., submitting a response to a solicitation.
- e) **Open Market Contract:** A contract for the purchase of goods or services not covered by a term, technical, or convenience contract.
- f) **24x7:** A statement of availability of systems, communications, and/or supporting resources every hour (24) of each day (7 days weekly) throughout every year for periods specified herein. Where reasonable downtime is accepted, it will be stated herein. Otherwise, 24x7 implies NO loss of availability of systems, communications, and/or supporting resources.
- g) **Reasonable, Necessary or Proper:** as used herein shall be interpreted solely by the State of North Carolina.
- h) **RFP:** Request for Proposal
- i) Additional terms, acronyms or abbreviations are listed in Appendix C, Glossary of Terms; and Appendix D, List of Acronyms

2) **Read and Review.** It shall be the Vendor’s responsibility to read this entire document, review all enclosures and attachments, and comply with all requirements and the State’s intent as specified herein. If a Vendor discovers an inconsistency, error or omission in this solicitation, the Vendor should request a clarification from the State’s contact person listed on the front page of the solicitation. Questions and clarifications must be submitted in writing and may be submitted by personal delivery, letter, fax or e-mail within the time period identified hereinabove.

3) **Vendor Responsibility.** The Vendor(s) will be responsible for investigating and recommending the most effective and efficient technical configuration. Consideration shall be given to the stability of the proposed configuration and the future direction of technology, confirming to the best of their ability that the recommended approach is not short lived. Several approaches may exist for hardware configurations, other products and any software. The Vendor(s) must provide a justification for their proposed hardware, product and software solution(s) along with costs thereof. Vendors are encouraged to present explanations of benefits and merits of their proposed solutions together with any accompanying services, maintenance, warranties, value added services or other criteria identified herein.

4) **Oral Explanations.** The State will not be bound by oral explanations or instructions given at any time during the bidding process or after award. Vendor contact regarding this RFP with anyone other than the Agency contact or procurement officer named on Page 2 above may be grounds for rejection of said Vendor’s offer. Agency contact regarding this RFP with any Vendor may be grounds for cancellation of this RFP.

5) **Insufficiency of References to Other Data.** *Only information that is received in response to this RFP will be evaluated.* Reference to information previously submitted or Internet Website Addresses (URLs) will not suffice as a response to this solicitation.

6) **Conflict of Interest.** Applicable standards may include: N.C.G.S. §§ 147-33.100, 14-234, 133-32. The Vendor shall not knowingly employ, during the period of this contract, nor in the preparation of any response to this solicitation, any personnel who are, or have been, employed by a Vendor also in the employ of the State and who are providing services involving, or similar to, the scope and nature of this solicitation or the resulting contract.

7) **Contract Term.** A contract awarded pursuant to this RFP shall have an effective date as provided in the Notice of Award. The contract term shall end June 30th 2014, unless terminated earlier. The State retains the option to extend this contract for **two** (2) additional **one** (1) year periods at its sole discretion.

8) **Effective Date.** This solicitation, including any Exhibits, or any resulting contract or amendment shall not become effective nor bind the State until the appropriate State purchasing authority/official or Agency official has signed the document(s), contract or amendment; the effective award date has been completed on the document(s), by the State purchasing official, and that date has arrived or passed. The State shall not be responsible for reimbursing Vendor for goods provided nor services rendered prior to the appropriate signatures and the arrival of the effective date of the Contract. No contract shall be binding on the State until an encumbrance of funds has been made for payment of the sums due under the contract.

9) **Recycling and Source Reduction.** It is the policy of this State to encourage and promote the purchase of products with recycled content to the extent economically practicable, and to purchase items, which are reusable, refillable, repairable, more durable, and less toxic to the extent that the purchase or use is practicable and cost-effective. We also encourage and promote using minimal packaging and the use of recycled/recyclable products in the packaging of goods purchased. However, no sacrifice in quality of packaging will be acceptable. The Vendor remains responsible for providing packaging that will protect the commodity and contain it for its intended use. Vendors are strongly urged to bring to the attention of the purchasers at the Statewide IT Procurement Office those products or packaging they offer which have recycled content and that are recyclable.

10) **Historically Underutilized Businesses.** Pursuant to General Statute 143-48, 143-128.4 and Executive Order #13, the State invites and encourages participation in this procurement process by businesses owned by minorities, women, disabled, disabled business enterprises and non-profit work centers for the blind and severely disabled. Additional information may be found at: <http://www.doa.nc.gov/hub/>

11) **Clarifications/Interpretations.** Any and all amendments or revisions to this document shall be made by written addendum from the IT Procurement Office. Vendors may call the purchasing agent listed on the first page of this document to obtain a verbal status of contract award. If either a unit price or extended price is obviously in error and the other is obviously correct, the incorrect price will be disregarded.

12) **Rights Reserved.** While the State has every intention to award a contract as a result of this RFP, issuance of the RFP in no way constitutes a commitment by the State of North Carolina, or the procuring Agency, to award a contract. Upon determining that any of the following would be in its best interests, the State may:

- a) waive any formality;
- b) amend the solicitation;
- c) cancel or terminate this RFP;
- d) reject any or all proposals received in response to this document;
- e) waive any undesirable, inconsequential, or inconsistent provisions of this document, which would not have significant impact on any proposal;
- f) if the response to this solicitation demonstrate a lack of competition, negotiate directly with one or more Vendors;
- g) not award, or if awarded, terminate any contract if the State determines adequate State funds are not available; or
- h) If all responses are deficient, determine whether Waiver of Competition criteria may be satisfied, and if so, negotiate with one or more Vendors.

13) **Alternate Bids.** Vendor may submit alternate bids for various levels of service(s) or products meeting specifications. Alternate bids must specifically identify the RFP requirements and advantage(s) addressed by the alternate bid. Any alternate proposals must be clearly marked with the legend as shown herein. Each proposal must be for a specific set of services or products and bid at specific pricing. If a Vendor chooses to respond with various service or product offerings, each must be bid with a different price and a separate proposal response. Vendors may also provide multiple proposals for software or systems coupled with support and maintenance options, provided, however, all proposals must satisfy the specifications.

Alternate bids must be clearly marked
“Alternate Bid for ‘name of Vendor’”

and numbered sequentially with the first bid if separate proposals are submitted.

This legend must be in bold type of not less than 14-point type on the face of the bid, and on the text of the alternative proposal.

14) **Co-Vendors**. Vendors may submit offers as partnerships or other business entities. Such partners or other “co-Vendors”, if any, shall disclose their relationship fully to the State. The State shall not be obligated to contract with more than one Vendor. Any requirements for references, financial statements or similar reference materials shall mean **all** such partners or co-Vendors.

15) **Submitting a Proposal**. Each Vendor submitting a proposal warrants and represents that:

- a) The proposal is based upon an understanding of the specifications and requirements described in this RFP.
- b) Costs for developing and delivering responses to this RFP and any subsequent presentations of the proposal as requested by the State are entirely the responsibility of the Vendor. The State is not liable for any expense incurred by the Vendors in the preparation and presentation of their proposals.

16) All materials submitted in response to this RFP become the property of the State and are to be appended to any formal documentation, which would further define or expand any contractual relationship between the State and Vendor resulting from this RFP process.

17) A proposal may not be unilaterally modified by the Vendor for a two hundred (200) day period following the delivery of the proposal, or of any best and final offer.

C. Evaluation Process

1) "Best Value" procurement methods are authorized by N.C.G.S. §143-135.9. The award decision is made based on multiple factors, including: total cost of ownership, meaning the cost of acquiring, operating, maintaining, and supporting a product or service over its projected lifetime; the evaluated technical merit of the Vendor's proposal; the Vendor's past performance; and the evaluated probability of performing the requirements stated in the solicitation on time, with high quality, and in a manner that accomplishes the stated business objectives and maintains industry standards compliance. The intent of "Best Value" Information Technology procurement is to enable Vendors to offer and the Agency to select the most appropriate solution to meet the business objectives defined in the solicitation and to keep all parties focused on the desired outcome of a procurement.

2) **Source selection**. A trade-off/ranking method of source selection will be utilized in this procurement to allow the State to award the contract to the Vendor providing the Best Value, and recognizing that Best Value may result in award other than the lowest price or highest technically qualified offer. By using this method, the overall ranking may be adjusted up or down based on a Vendor's strengths and weaknesses through adjective evaluation methods, or traded-off against other non-price factors.

- i. The evaluation committee may request clarifications, an interview with or presentation from any or all Vendors as allowed by 9 NCAC 06B.0307. However, the State may refuse to accept, in full or partially, the response to a clarification request given by any Vendor. Vendors are cautioned that the evaluators are not required to request clarifications; therefore, all offers shall be complete and reflect the most favorable

terms. Vendors shall be prepared to send qualified personnel to Raleigh, North Carolina, to discuss technical and contractual aspects of the proposal.

ii. Evaluation Process Explanation. State Agency employees will evaluate the proposals. All proposals will be initially classified as being responsive or non-responsive. If a proposal is found non-responsive, it will not be considered further. Responsive proposals will be evaluated by DPI on their strengths and weaknesses. Vendors with proposals that most closely match the DPI requirements for the stated evaluation criteria will be invited to demonstrate their solutions to the DPI evaluation team. Any references in an answer to another location in the RFP materials or Proposal shall have specific page numbers and sections stated in the reference.

iii. Vendors are advised that the State is not obligated to ask for, or accept after the closing date for receipt of proposal, data that is essential for a complete and thorough evaluation of the proposal.

3) Best and Final Offers (BAFO). If negotiations or subsequent offers are solicited, the Vendors shall provide BAFOs in response. Failure to deliver a BAFO when requested shall disqualify the non-responsive Vendor from further consideration. The State may establish a competitive range based upon evaluations of proposals, and request BAFOs from the Vendors within this range; e.g. "Finalist Vendors". The State will evaluate BAFOs and add any additional weight to the Vendors' respective proposal. Additional weight awarded from oral presentations and product demonstrations during negotiations, if any, will be added to the previously assigned weights to attain their final ranking.

4) Vendor may be disqualified from any evaluation or award if Vendor or any key personnel proposed, has previously failed to perform satisfactorily during the performance of any contract with the State, or violated rules or statutes applicable to public bidding in the State.

5) NCDPI is looking for the Vendor proposal and demonstrated software solution that will deliver the highest quality system that most closely meets the goals and future direction of NCDPI while delivering the best value and price with all factors being considered.

6) NCDPI reserves the right to add terms and conditions during contract negotiations. These terms and conditions will be within the scope of the RFP and will not affect the proposal evaluations

D. Evaluation Criteria

Vendor proposals and qualifications substantially affect the evaluation process, and will be evaluated based on the following ranked in order of importance:

Components for Evaluation
1. Vendor RFP Proposal (Includes both, the Vendor's narrative response to this RFP and the response to system specifications – Appendix A)
2. Vendor Demonstrations
3. Vendor Cost Proposal – Appendix B
4. Vendor Financial Stability
5. Vendor Experience and Reference Checks

E. RFP Schedule

The Procurement Manager will make every effort to adhere to the following schedule:

Action	Responsibility	Date
Issue of RFP	Office of Information Technology Services	02/27/12
Vendors submit questions.	Vendors	03/14/12
Response to Written Questions/RFP Amendments	Department of Public Instruction	03/28/12
Submission of Proposal	Vendors	04/18/12 @ 3:00 PM EDT
Proposal Evaluation	Evaluation Committee	04/19/12 to 05/21/12
Selection of Finalists	Evaluation Committee	05/21/12
Vendor Reference Checks	Evaluation Committee	05/22/12 to 06/01/12
Vendor Product Demonstrations	Vendor and Evaluation Committee	06/04/12 to 06/15/12
Negotiations with final Vendors	Evaluation Committee designees and selected Vendor	06/18/12 to 07/20/12
Contract Award	State Purchasing Agent	08/06/12
Protest Deadline	Vendors	15 days after award

Award Of Contract. Qualified proposals will be evaluated and acceptance may be made in accordance with Best Value procurement practices as defined by GS §143-135.9 and applicable administrative rules. The responsible Vendor whose proposal is most advantageous to the State, taking into consideration the evaluation factors herein, will be recommended for contract award. Unless otherwise specified by the State or the Vendor, the State reserves the right to accept any item or group of items on a multi-item proposal.

The State has implemented links to the Interactive Purchasing System (IPS) that allow the public to retrieve proposal award information electronically from our Internet web site: <http://www.ips.state.nc.us/ips/pubmain.asp>. Click on the IPS BIDS icon, click on Search for BID, enter the Agency prefix-proposal number 40-RttT-IIS1, and then search. This information may not be available for several weeks dependent upon the complexity of the acquisition and the length of time to complete the evaluation process.

Protest Procedures: Protests of awards exceeding \$25,000 in value must be submitted to the issuing Agency at the address given on the first page of this document. Protests must be received in this office within fifteen (15) calendar days from the date of the contract award and provide specific reasons and any supporting documentation for the protest. **All protests will be governed by Title 9, Office of Information Technology Services, Subchapter 06B Sections .1102 - .1121.**

Section III. Technical Specifications

Following are the technical specifications to which the IIS Vendor shall adhere and respond in their proposal. At a minimum, Vendor proposals shall include verbiage that specifically address each of the sections below in the "Proposed Technical Environment" section of the Vendor proposal.

A. IIS Design and Architecture

NCDPI desires that the IIS components are presented as an integrated, seamless, comprehensive system built around predefined, but customizable, processes and work streams for teaching and learning in the same manner that an Enterprise Resource Planning (ERP) system is delivered with predefined business processes that can be customized for an individual organization. As such, the same foundational componentized design and architecture concepts that can be found in an ERP are desired from the IIS; however, NCDPI desires that the IIS is designed in a more service oriented architecture (SOA) style of loosely coupled services to provide the various levels of system functionality. These include:

- Workflow processes are provided by the Vendor and defined and embedded in the system design, documentation and training. Process documentation adheres to a standard, such as Business Process Modeling Notation (BPMN), XML Process Definition Language (XPDL), or other well-defined industry standards.
- The IIS components are built around a common data model.
- The IIS components share data internally and externally adhering to master data management best practices. See, e.g., Master Data Management and Data Governance, 2nd Edition, by Alex Berson and Larry Dubov (McGraw-Hill, 2010)
- Data movement to and from the IIS accommodates various periodicities including, at least, monthly, weekly, daily, and real-time.
- The IIS provides a single sign-on across all of its components and supports interfaces to external authentication as described in Appendix E.
- Each user accesses the IIS through a portal that is designed to help that user navigate easily through the components that the user is authorized to use based on the user's role(s).
- A consistent look and feel is provided such that controls for similar functions across components are located, accessed, and operated the same within each component. User views follow existing conventions where these make sense.

B. Enterprise Architecture Standards

The North Carolina Statewide Technical Architecture is located at the following website: (<http://www.ncsta.gov>). This provides a series of domain documents describing objectives, principles and best practices for the development, implementation, and integration of business systems. Agencies and Vendors shall refer to these Architecture documents when implementing enterprise applications and/or infrastructure. Agencies are required to follow the NCSTA when designing, purchasing, implementing, upgrading, or enhancing information technology. Agencies wishing to deviate from the NCSTA may seek a waiver. The DPI technical architecture preferences are located at the following web link:

<http://www.ncpublicschools.org/techarchitecture/information/architecture/>

Vendors shall refer to both the NC Statewide Technical Architecture and the DPI Technical Architecture preferences when proposing enterprise applications and/or infrastructure.

C. Enterprise Licensing

In offering the best value to the State, Vendors are encouraged to leverage the State's existing resources and license agreements. The agreements may be viewed at:

<http://www.its.nc.gov/ServiceCatalog/LicenseAgreements.aspx>

Also, NCDPI has Oracle licenses available for use by all LEAs in the state for any RttT related project. This includes the IIS and NC Education Cloud initiatives. The Oracle license agreement includes the following:

Unlimited Products.

- Database EE
- RAC
- Partitioning
- Advanced Security
- Active Data Guard
- Advanced Compression
- Diagnostics Pack
- Tuning Pack
- WebLogic Suite
 - WebLogic Server EE
 - Oracle Application Server EE
 - WebLogic Real Time
 - Coherence EE
 - Diagnostics Pack for Oracle MW
- WebLogic Standard Edition
- SOA **Suite** for Oracle Middleware
 - Business Activity Monitor
 - Web Services Manager
 - BPEL Process Manager
 - Enterprise Service Bus
 - AquaLogic Service Bus
 - Complex Event Processing
- Golden Gate
- Access & Identity Mgmt. Suite
 - Access Manager
 - Identity Manager
 - Identity Federation
 - Single Sign On
 - Internet Directory
 - Virtual Directory

Additionally, NCDPI currently licenses the Oracle Business Intelligence Enterprise Edition (OBIEE) 11g product for business intelligence and dashboard reporting.

IIS Vendors are encouraged to leverage these Oracle products if doing so reduces NCDPI total cost of ownership for the IIS. If the Vendor solution includes Oracle products that are already licensed by NCDPI, the Vendor shall use NCDPI licenses and shall not charge NCDPI for the licenses for these Oracle products.

D. IIS Operating Environment and Hosting

NCDPI is considering multiple hosting options for the IIS. These are as follows:

- Software as a Service (SaaS) provided by the IIS Vendor.
- Hosting the IIS at the state's ITS facility.
- Hosting the IIS with a third-party service.
- Alternate Vendor proposed solution.

Vendors need only complete the cost sheets for the hosting options they offer. If a Vendor proposes an alternate solution, the Vendor shall create their own cost sheet and clearly define all costs associated with the solution, including 5 year sustainment costs. Proposals shall include the pricing and description of all services that will be provided in the SaaS option. Also, any SaaS solution shall include a service level agreement (SLA) with specific availability and penalties for interrupted service or impacted service quality. In addition, the Vendor shall include details of their data integration strategy between the components that comprise the IIS and shall also explain how the IIS will interface with the Shared Learning Infrastructure through the SLI API layer.

The proposals shall also identify the pricing (licensing, maintenance, support services) that apply to the IIS being hosted at a 3rd party or at the ITS facility.

The proposal shall identify the network infrastructure, system infrastructure, software and client architecture specifications required to provide the availability, reliability, scalability and performance described below for a fully deployed statewide IIS, for each of the hosting options and for the IIS development, test, training, and production environments.

D.1. Network Infrastructure

The proposal shall provide a diagram and a description of its proposed network infrastructure that is required to obtain acceptable availability and performance levels with the proposed IIS, as described below. The proposed solution shall be capable of operating in NCDPI's Intranet network environments and Internet environment.

If proposing a SaaS service, provide the specific details on how the proposed IIS application affects the network infrastructure and integration with the state and LEA applications. Specifically, include impacts on Internet Access, security and authentication.

D.2. System Infrastructure

The proposal shall describe the required hardware and operating system platform and software components that shall be included in the IIS environment. Please address the following areas:

- Hardware platform
- Operating system
- Database
- Web application development
- Report writers
- Data modeling tools
- Other

Please discuss any concerns the Vendor has in regard to the IIS application response times summarized in the System Scalability and Performance Characteristics section below in Section III.D7.

D.3. Database

Within the proposal, please describe the proposed database management system (DBMS) and high-level database structure to be utilized in the proposed IIS environment.

D.4. Software

NCDPI desires a single user interface to access the IIS. Please describe the proposed software components that will be included in the IIS solution, including software language, software modules, open source software (if any), commercial off-the-shelf (COTS) software product(s) (as applicable), and standard ad hoc reporting software. For each software product, please identify the Vendor, version, and key features of the product.

The IIS Vendor shall use industry best-practice processes for applying OS security & patches.

D.5. Client Architecture

The IIS shall deliver all functionalities on the current releases of major HTML5-compatible web browsers and require no additional browser helpers or plugins for full accessibility and functionality. Vendors shall identify all supported browsers. DPI desires that the IIS be fully functional on the past two releases of all currently supported browsers. Browsers in current use include but are not be limited to the following: Internet Explorer 8, Firefox 8, Safari 5.1.2, and Chrome 8. In addition, the IIS shall run well on a wide variety of mainstream hardware platforms that use the aforementioned browser technologies. These hardware platforms shall include but not be limited to Microsoft Windows and Mac OS desktops laptops and netbooks, Apple iOS devices, Android devices, as well as other tablets, smart phones, and eReaders.

Vendor solutions shall comply with the World Wide Web Consortium web development specifications ("W3C Recommendations") and shall comply with Section 508 of the US Rehabilitation Act (29 USC 794D).

D.6. Availability and Reliability

The IIS shall provide online summative assessment capabilities for all of the schools in the state. As such, the IIS shall be constructed on a highly available technology architecture to ensure that there is no disruption or delays during the summative assessment testing windows. There shall be no disruption or delay in the testing process for any student, at any time, for any summative assessment. The IIS system up time shall be 99.9%, excluding approved maintenance windows, which shall always be in the late evenings (e.g., after midnight) when system usage is at a minimum.

D.7. System Scalability and Performance Characteristics

A concern for NCDPI is the system's capacity to handle peak load for a fully deployed system with heavy amounts of transactions occurring in a short duration of time due to patterns of business activity. These patterns include, for example, the submission of attendance, standardized summative testing periods, grade reporting, semester registration, etc. The Vendor shall provide NCDPI with the specific details and assurances that their solution is scalable and will meet peak full load provided that the specific hardware and software upgrades that will be necessary to meet this fully loaded environment are obtained. DPI prefers that the system is supported by an elastic infrastructure that seamlessly adjusts to demand, growing to support peak demands and shrinking to support the steady state.

Vendor shall provide this growth plan as part of the submission and include system design assurances to accommodate the number of concurrent users as laid out in the table below.

North Carolina IIS Usage Pattern Estimates (Full Adoption)

IIS Module	Slow Time (Summer and early yr) – (Jul 1 - Oct 31 each yr)			Busy Time (Nov 1 - Jun 30 each year)		
	Total User Base	Avg Simultaneous Users	Peak Simultaneous Users	Total User Base	Avg Simultaneous Users	Peak Simultaneous Users
Curriculum and Instruction	1,475,000	150,000	350,000	1,475,000	150,000	350,000
Assessment: Interim & Benchmark	500,000	30,000	50,000	1,475,000	90,000	150,000
Assessment: Summative (EOC/EOG)	5,000	500	1,000			
- Fall				120,000	1,000	120,000
- Spring				1,475,000	1,000	750,000
Educator Evaluation & Professional Development	95,000	9,500	30,000	95,000	9,500	30,000
Learner Profile & Work Samples	1,475,000	150,000	350,000	1,475,000	150,000	350,000

The user estimates above are anticipated users when the system is fully adopted across the state. The Vendor shall use these projections to extrapolate usage patterns for earlier phases of the project when there is lower adoption and fewer end-users and present a plan for ramping up the infrastructure to support the user base at various stages of the rollout. The Vendor shall include a system performance-monitoring plan that clearly states how the Vendor will monitor system performance across the LEAs and take corrective action whenever needed to ensure that the system infrastructure supports the user base and meets the performance metrics presented in this section and outlined in the Service Level Agreement.

In addition to the overall system performance and scalability requirements, the IIS system shall also meet the following requirements:

- The initial baseline response time shall be less than 2,500ms for Basic and 3,500ms for Complex transactions.
- The field to field on screen data entry response time will be less than .5 seconds

NCDPI acknowledges that there will be anomalies where specific exceptions can be made for super-complex transactions, such as generating a summary report over many years or a super-complex print transaction. For any specific super-complex transactions that inherently require longer response times than the range above, the Vendor shall itemize these functions and state the anticipated response times (with accompanying reasons) in the Vendor's submittal. The itemized information shall be available and clearly discussed in the Vendors submittal in Section III.E.9 Testing Strategy of the RFP.

Any other conditions or exceptions to the metrics stated above shall be identified by the Vendor in the proposal. These performance and scalability requirements are intended to ensure application usability and acceptable performance from a user's perspective and provide a quality experience leading a greater adoption rate of this system.

D.8. Virtualization

If the Vendor product is hosted at the State ITS data center, the State desires the flexibility to host Vendor's proposed solution in a virtualized environment, if it is determined in the future that virtualized hosting for such solution would be more economical or efficient. The State currently utilizes server virtualization technologies including VMware, Solaris and Linux. Vendor shall state whether its solution operates in a virtualized environment. Vendor also shall identify and describe all differences, restrictions, or limitations of its proposed solution with respect to operation, licensing, support, certification, warranties, and any other details that may affect its proposed solution, when hosted in a virtualized environment.

D.9. User Authentication and Authorization

The IIS shall be able to provision and authenticate users natively in the IIS.

In addition, the proposed solution shall externalize identity management and will be required to utilize either the North Carolina Identity Access Management System (IAM) or the North Carolina Identity Service (NCID) for the identity management and authentication related functions performed by this application. NCID is the State's enterprise identity management (IDM) service. It is operated by the North Carolina Office of Information Technology Services. Additional information regarding this service can be found in the ITS Service Catalog at: <http://www.its.state.nc.us/ServiceCatalog/Index.asp> (see Identity Management - NC Identity Management under the main menu item Application Services) and the NCID Web site at: <https://www.ncid.its.state.nc.us/>.

NCDPI prefers that the IIS externalize identity management solution by interfacing with the North Carolina Identity Access Management System (IAM) by supporting at least one of the authentication models specified in the Appendix E - Requirements for Integrating Cloud Applications. The NC IAM will federate with the NCID service, which is the service described above that has traditionally supported simplified sign-on for NC applications.

The IIS shall provide role-based security that limits IIS functional access and data access on a need-to-know basis. All application authorization shall be managed within the IIS application and shall be based on user role, LEA, and school. The Vendor shall work with NCDPI to define the various user roles and the access granted to each.

D.10. Equivalent Items

- 1) Whenever a material, article, or piece of equipment is identified in the specification(s) by reference to a manufacturer's or Vendor's name, trade name, catalog number or similar identifier, it is intended to establish a standard, unless otherwise specifically stated as a brand specific requirement (no substitute items will be allowed). Any material, article or piece of equipment of other manufacturers or Vendors shall perform to the standard of the item named. Equivalent bids shall be accompanied by sufficient descriptive literature and/or specifications to provide for detailed comparison. Samples of items, if required, shall be furnished at no expense to the State and if not destroyed in the evaluation process, may be returned to the Vendor at the Vendor's expense.
- 2) All bids shall include specifications and technical literature sufficient to allow the State to determine that the equipment meets all requirements. This technical literature will be the primary source for bid evaluation. If a requirement is not addressed in the technical literature, it shall be supported by additional documentation and included with the bid. Bid responses without sufficient technical documentation may be rejected.

- 3) The State may, in its sole discretion, investigate any substitute or equivalent goods irrespective of any representation made by a Vendor or manufacturer.
- 4) **Specifications:** Any deviation from specifications indicated herein shall be clearly identified as an exception and listed on a separate page labeled "Exceptions to Specification"; otherwise, it will be considered that items offered are in strict compliance with these specifications, and Vendor will be held responsible. Any deviations shall be explained in detail. **The Vendor shall not construe this paragraph as inviting deviation or implying that any deviation will be acceptable. Offers of alternative or equivalent goods may be rejected; and if offered, shall be supported by independent documentary verification of equivalence to the specified goods.**

E. Vendor Response Requirements

Vendors shall factor into their written response, the information presented in Section I, Introduction; Section 3, Technical Specifications; Appendix A, Instructional Improvement System Functional Specifications; and requirements specified in this section.

The items listed below shall be addressed in the written response proposal to this RFP.

1. Letter of Transmittal

Each proposal shall be accompanied by a letter of transmittal that provides the following information:

- Identify the submitting organization;
- Identify the name, title, telephone and fax number, along with an e-mail address of the person authorized by the organization to contractually obligate the organization;
- Identify the name, title, telephone and fax number, along with an e-mail address of the person authorized to negotiate the contract on behalf of the organization;
- Identify the names, titles, telephone and fax number, along with an e-mail address of the person to be contacted for clarification;
- Acknowledge receipt of any and all amendments to this RFP.

2. Table of Contents

Each proposal shall include a Table of Contents to guide the review.

3. Introduction

The introduction shall summarize the contents of the proposal in a way that gives readers a broad understanding of the entire proposal.

Clearly state your understanding of the problem(s) presented by this RFP.

Please describe the kinds of customers you typically serve. For example, are your customers small organizations or very large ones? Do you have a particular geographic or industry focus?

Describe how you will define whether or not the NCDPI IIS implementation been successful. How will benefits be measured and realized?

4. Firm Qualifications

The purpose of the Firm Qualifications section is to provide NCDPI the ability to verify the experience and knowledge claims made in the proposal by the Vendor and to assess the Vendor's prior record in providing services to other organizations. If the proposal involves the use of any subcontractor, where the subcontractor's project involvement exceeds ten percent (10%) of the proposal Total Cost amount,

the subcontractor shall also comply with the Vendor qualifications requirements identified in the following sections (a –f).

a. Firm History and Background

Please describe the Vendor’s corporate background and experience. Specifically address your corporate history and experience in developing, installing, and supporting IIS software for school districts whose needs and size are comparable to those of NCDPI. NCDPI is particularly interested in your experiences and success in the statewide implementations.

The Vendor shall provide the following information:

- General information about the Vendor’s organization
- Identification whether the firm is the prime Vendor or subcontractor on this project.
- Date established
- Ownership (e.g., public company, partnership, or subsidiary)
- Corporate office location
- Number of technical and service staff available to support installation, training, documentation, and maintenance efforts
- Number of technical staff devoted to new product development and/or enhancements to current Instructional Improvement System products
- History and experience in developing, installing, and supporting IIS software for school districts whose needs and size are comparable to those of NCDPI

b. Firm Required Financial Information

The Vendor shall provide evidence of financial stability with its response to this RFP as further described herein below. As used herein, Financial Statements shall exclude tax returns and compiled statements. The Vendor shall provide the following financial information:

- a) Dunn & Bradstreet number and report, if available.

- b) For a publicly traded company, audited Financial Statements for the past three (3) fiscal years, including at a minimum, income statements, balance sheets, and statement of changes in financial position or cash flows. If three (3) years of financial statements are not available, this information shall be provided to the fullest extent possible, but not less than one year. If less than 3 years, Vendor shall explain the reason why they are not available.

- c) For a privately held company, when certified audited financial statements are not prepared: a written statement from the company’s certified public accountant stating the financial condition, debt-to-asset ratio for the past three (3) years and any pending actions that may affect the company’s financial condition.

- d) The State may, in its sole discretion, accept evidence of financial stability other than Financial Statements for the purpose of evaluating Vendors’ responses to this RFP. The State reserves the right to determine whether the substitute information meets the requirements for Financial Information sufficiently to allow the State to evaluate the sufficiency of financial resources and the ability of the business to sustain performance of the contract award. Scope Statements issued may require the submission of Financial Statements and specify the number of years to be provided, the information to be provided, and the most recent date required.

- e) Explanation of any previous or outstanding lawsuits against the corporation, branch or department of the organization involved

c. Customer References

NCDPI is looking for the Vendor to demonstrate its experience with statewide implementations. Please provide three (3) references of statewide or large districts with the current software release fully implemented with at least one with a student enrollment of 100,000 students or more. Please do not provide references for states or districts using a product other than the one you are proposing.

Vendor shall have implemented the respective system within the last three (3) years. Customer references whose business processes and data needs are similar to those performed by NCDPI in terms of functionality, complexity, and transaction volume are encouraged.

For each reference, the Vendor shall provide the following information:

- Customer name
- Customer address
- Current telephone number of a customer employee most familiar with the project
- Time period over which each project was completed
- List of products installed and operational
- Number of students in school district or state
- Number of school sites
- Number of technical staff support, maintaining and managing product
- Number of instructional staff , maintaining and managing product
- Training staff or other training solution both initial and ongoing

d. NCDPI Required Staffing

NCDPI is interested in the Vendor's experience concerning state and district personnel and resources required for a successful deployment of the proposed application both for initial rollout and ongoing support. Please list the required state and district personnel including, but not limited to, functional area specialists, project managers, database administrators, building-level support specialists, trainers, application specialists, systems integrator, network support and help desk personnel. Please indicate for each role the number of personnel required, a narrative of the duties and responsibilities for all personnel, and estimated time for both the initial rollout and ongoing support. Please keep in mind that the Vendor will be responsible for data integration through the SLI API layer with minimal DPI personnel support.

e. Project Team Organization

Within the proposal, the Vendor shall provide an organizational chart of their proposed project team. The organization chart shall include the Vendor's and NCDPI resources to provide NCDPI an understanding as to how the Vendor envisions utilizing its own staff and NCDPI's personnel resources.

f. Project Team Staffing

Within the proposal, the Vendor shall define the roles and responsibilities of each of its assigned staff, including a skills summary for each of the proposed staff that explains how the staff person's professional background and qualifications qualify them to serve on the project. The Vendor shall identify Key Personnel to staff the project who possess demonstrated expertise in the IIS technologies and system conversion areas. The Vendor shall provide brief biographical narratives and professional qualifications of key professionals proposed for this project. Key personnel include the Vendor's principal dedicated account manager, principal systems/integration architect, and the principal training manager for the State project along with their direct reports. The Vendor shall designate key personnel to DPI with contact information before execution of the contract. The DPI Program/Project Manager has the right to approve

and reject any key personnel designated by the Vendor. The Vendor shall give DPI at least thirty days' advance notice of any change in key personnel. The DPI Program/Project Manager will approve or reject any changes in Vendor's key personnel. While the DPI Program/Project Manager will not unreasonably withhold approval, the DPI Program/Project Manager may terminate the contract for default if he rejects a Vendor-proposed change in key personnel and the contractor fails to designate an acceptable alternate replacement staff person within 30 days of the DPI Program/Project Manager's rejection.

5. Project Management Approach & Milestone Schedule

Please describe your firm's Project Management Approach used to manage the design, configuration, and implementation of the new IIS. The project management components that the Vendor is responsible for include, but are not limited to, project work plans, project deliverables, schedules and budgets, risk management, change management, issue management, and quality management.

NCDPI prefers that the Vendor's Project Manager have PMP certification and at least 5 years project management experience. Please include the resume for the proposed project manager.

Please address the following topics in your approach to Project Management.

a. Project Work plan

The Vendor will be responsible for the development and maintenance of a detailed work breakdown structure that shall include, but is not limited to, the identification and definition of all project phases, stages, and tasks and the respective start dates, duration of tasks, dependencies of tasks, milestones, deliverable due dates, and responsible party (e.g. IIS Software Vendor and/or NCDPI personnel).

Within the proposal, the Vendor shall provide its proposed project work plan. The project work plan shall identify all proposed tasks associated with the initial implementation.

The project work plan shall also include:

- Critical Path
- Task dependencies
- Project milestones and deliverables
- Task Owners by Organization (including tasks involving the Vendor and NCDPI and third-party Vendors).

The Vendor's project work plan shall identify tasks where NCDPI subject matter and technical staff will be working independently or collaboratively with the Vendor staff during the design, development, configuration, and implementation and training phases of the IIS solution.

b. Background to the preparation of the Project Work Plan

NCDPI requests that the Vendor address/include the following general project tasks in its work plan:

- Plan the overall Instructional Improvement System implementation schedule identifying all deployment milestones and target delivery dates.
- Install the Instructional Improvement System application supplied as part of its Proposal and train state level technical staff during the initial testing of the new system.
- Customize Instructional Improvement System product to support NCDPI state, district, and school operational requirements.
- Import the current State and Common Core standards and curriculum.
- Load the IIS component systems with initial student, class, teacher, building, and other information needed for the initial provisioning of the application.

- Develop import or integration routines for NCDPI assessments items and other instructional and professional development content.
- Interface the IIS components to the NC Learning Object Repository (LOR) and the Learning Registry so that assessment, instructional and learning, and professional development content stored external to the IIS may be served to end-users.
- Develop the IIS interfaces to the SLI to ensure that data needed for the IIS is kept synchronized with the SLI. Define all data flows to and from the IIS, and SLI and they types of data transferred in each direction for each interface event. Define periodicity of all data flows.
- If Vendor is proposing a SaaS solution, discuss how the proposed IIS solution will integrate student information with the SLI in near real-time. Describe how any other data originating in LEA authoritative source systems is kept current and synchronized with the SLI (which will push and pull data to DPI and LEA source systems).
- Test and provide a report to validate and verify that all IIS modular components and functions meet the Vendor’s acknowledged specifications as listed in Appendix A of the Vendor’s submittal and prove that all IIS modular components operate properly. This testing shall include functional testing, systems integration testing, and performance testing.
- Present the training of site level administrative and teaching staff personnel in conjunction with the Instructional Improvement System roll out schedule.
- Document milestones for piloting and general rollout of each module/function.
- Oversee the roll out of the new Instructional Improvement System to all school sites within North Carolina by June 30, 2014.
- Document the IIS operational and system backup procedures.
- Provision, deploy, and support student portal, teacher portal, parent portal, and administrator portal.

The Vendor shall address all the above tasks in their Project Work Plan.

c. Milestone Schedule

While NCDPI will develop the detailed IIS implementation plan with the selected Vendor, below is a list of high-level milestones. DPI has specified start date, end date, and the date when the project plan is due. **Vendors shall propose dates for all other milestones listed in the table.**

In discussions with NC LEAs, NCDPI has heard that the LEAs priority is the get the instructional and curriculum resources ahead of the remaining IIS functionality. That is the reason that NCDPI lists 4 phases below with a pilot and general rollout for each phase. Vendors are encouraged to offer alternate phased approaches as long as instructional content functionality is among the first features that are rolled out. LEA Pilots shall include one or more LEAs with a student population of at least 100,000 students.

Deliverable	Milestone Target Date
Vendor Project Manager assigned, fully devoted, and on-site at NCDPI.	August 15, 2012
Deliver project plan and high-level work breakdown structure for the IIS Implementation, including proposed dates for the following high level milestones.	No Later Than September 14, 2012
Install/configure base software to meet NC requirements.	
Create API calls to pull data from the SLI for data needed to initially populate the IIS, and build API interface with the SLI to ensure that data is kept synchronized between the IIS and the SLI.	

Set up interfaces between IIS and SLI and define periodicity of data transfers. NCDPI desires that this activity include a near-real-time interface to time-sensitive student data in the SLI.	
Provision system with end-user accounts and interface with Identity Access Management Service (IAM).	
Integration of any optional content that the Vendor included in the RFP response.	
Establish data interoperability between components.	
Establish interface and interoperability with the Learning Object Repository (LOR), and ensure the ability to leverage the Learning Registry to search, find, and access learning objects available on the Internet.	
Pilot 1: Rollout of at least curriculum and instructional resources module.	
Broad-scale rollout of curriculum and instructional resources module.	
System shall deliver C&I functionality, ramping up support for the user base in accordance with the following schedule: <ul style="list-style-type: none"> - 300,000 Students (date to be negotiated with NCDPI) - 600,000 Students (date to be negotiated with NCDPI) - 900,000 Students (date to be negotiated with NCDPI) - 1,200,000 Students (date to be negotiated with NCDPI) - 1,500,000 Students (date to be negotiated with NCDPI) 	
Pilot 2: Rollout of at least classroom and benchmark assessments module	
Broad-scale rollout of classroom and benchmark assessments module	
System shall deliver formative and benchmark assessment functionality, ramping up support for the user base in accordance with the following schedule: <ul style="list-style-type: none"> - 300,000 Students (date to be negotiated with NCDPI) - 600,000 Students (date to be negotiated with NCDPI) - 900,000 Students (date to be negotiated with NCDPI) - 1,200,000 Students (date to be negotiated with NCDPI) - 1,500,000 Students (date to be negotiated with NCDPI) 	
Pilot 3: Rollout of at least the End of Grade (EOG) and End of Course (EOC) assessment testing module.	
Broad-scale rollout of the EOG and EOC module.	
System shall deliver EOG and EOC assessment functionality, ramping up support for the user base in accordance with the following schedule. <ul style="list-style-type: none"> - 300,000 Students (date to be negotiated with NCDPI) - 600,000 Students (date to be negotiated with NCDPI) - 900,000 Students (date to be negotiated with NCDPI) - 1,200,000 Students (date to be negotiated with NCDPI) - 1,500,000 Students (date to be negotiated with NCDPI) 	
Pilot 4: Rollout of at least Educator Evaluation and Professional Development module	
Broad-scale rollout of Educator Evaluation and Professional development module	
Complete rollout of complete IIS to State	June 30, 2014

d. Work plan Management Approach

Within the proposal, the Vendor shall describe the proposed approach to effectively managing the project work plan. At a minimum, the Vendor shall describe the method for ensuring timely updates to the work plan, the approach for managing and communicating to NCDPI changes, and the approach for tracking baseline versus actual or the methods and procedures employed in other district implementations. Describe the type of project controls you use to manage scope, time, budget, and quality.

e. Risk Management Approach

Within the proposal, please describe your proposed approach to risk management. At a minimum, the Vendor shall describe its approach to risk identification, risk analysis, risk response development, risk monitoring, and control or the methods employed in other district implementations.

f. Change Management Approach

Within the proposal, please describe your proposed approach to change management. At a minimum, the Vendor shall describe the change control system to be used and its approach to change identification, impact evaluation, change authorization, and change implementation or the methods employed in other district implementations.

g. Issues Management Approach

Within the proposal, please describe your proposed approach to issues management. At a minimum, the Vendor shall describe the issue management control system to be used and its approach to issue identification, impact evaluation, issue assignment, and issue resolution or the methods employed in other district implementations.

h. Quality Management Approach

Within the proposal, please describe your proposed approach to quality management. At a minimum, the Vendor shall describe its approach to quality planning, quality assurance, and quality control or the methods employed in other district implementations. Describe how you will facilitate process re-engineering and improvements during the implementation?

i. Knowledge Transfer Approach

Within the proposal, please describe your proposed approach to performing knowledge transfer to NCDPI and district staff.

j. Communication Plan

Within the proposal, please describe your proposed approach for communicating timelines to all affected stakeholders.

6. Proposed Technical Environment

In response to this section, please provide a detailed description of the proposed IIS, including proposed hardware, software, and technical architecture, and the proposed technical approaches to addressing the major areas of the technical environment and future-state architecture that are to be provided within the IIS as laid out in the table below. The Vendor shall include high-level diagrams showing major system components, their interrelationships, and supporting diagrams and materials to provide NCDPI a complete visual, as well as narrative, representation of the IIS technical environment.

If the Vendor has additional technical environmental requirements, please enumerate them as well.

Table 6: NCDPI's Proposed Technical Environment

Technical Component	Requirement
Enterprise Architecture Standards	Vendors shall refer to both the NC Statewide Technical Architecture and the DPI Technical Architecture preferences when proposing enterprise applications and/or infrastructure.
Enterprise Licensing	The proposal shall: <ol style="list-style-type: none"><li data-bbox="678 415 1511 506">1. Identify components or products that are needed for your solution that may not be available with the State's existing license agreement.<li data-bbox="678 516 1511 575">2. Identify and explain any components that are missing from the State's existing license agreement.<li data-bbox="678 585 1511 676">3. If the Vendor can provide a more cost effective licensing agreement, please explain in detail the agreement and how it would benefit the State.<li data-bbox="678 686 1511 806">4. Explain the transportability and transferability of the proposed license agreements. Any licenses or warranties purchased on behalf of the State for this project shall be transferable at the time the Vendor is paid under contract for said component.

Technical Component	Requirement
IIS Operating Environment and Hosting	<p>The proposal shall identify the network infrastructure, system infrastructure, software and client architecture specifications required to provide the availability, reliability, scalability and performance described below for a fully deployed statewide IIS, for each of the hosting options and for the IIS development, test, training, and production environments.</p> <p>Network Infrastructure</p> <p>The proposal shall provide a diagram and a description of its proposed network infrastructure that is required to obtain acceptable availability and performance levels.</p> <p>System Infrastructure</p> <p>The proposal shall describe the required hardware and operating system platform and software components that shall be included in the IIS environment. Please address the following areas:</p> <ul style="list-style-type: none"> • Hardware platform • Operating system • Database • Web application development • Report writers • Data modeling tools <p>Database</p> <p>Within the proposal, please describe the proposed database management system (DBMS) and high-level database structure to be utilized in the proposed IIS environment.</p> <p>Software</p> <p>Please describe the proposed software components that will be included in the IIS solution, including software language, software modules, public domain software (if any), commercial off-the-shelf (COTS) software product(s) (as applicable), and standard ad hoc reporting software.</p>
System Availability and Reliability	<p>The IIS shall provide online summative assessment capabilities for all of the schools in the state. As such, the IIS shall be constructed on a highly available technology architecture to ensure that there is no disruption or delays during the summative assessment testing windows. There shall be availability and reliability during summative assessment testing windows are such that there is no disruption or delay in the testing process for any student, at any time, for any summative assessment. The IIS system up time shall be 99.9%, excluding approved maintenance windows, which shall always be in the late evenings (e.g., after midnight) when system usage is at a minimum.</p> <p>The proposal shall provide written descriptions and accompanying diagrams and system specifications to demonstrate how this requirement is met.</p>

Technical Component	Requirement
System Scalability and Performance Characteristics	The Vendor shall include the methodology they will use to measure the initial Base Response Time (BRT). In addition, the Vendor shall include a system performance monitoring plan for NCDPI to monitor the Vendor system based on the performance requirements presented in this section.
Virtualization	Vendor shall state whether its solution operates in a virtualized environment. Vendor also shall identify and describe all differences, restrictions or limitations of its proposed solution with respect to operation, licensing, support, certification, warranties, and any other details that may affect its proposed solution, when hosted in a virtualized environment.
User Authorization	Vendor shall state how the proposed solution will externalize identity management and utilize the NC Cloud Identity and Access Management solution for the identity management. Vendor shall also explain how the IIS performs role-based authentication related functions performed by this application <i>for NCDPI employees, teachers, students, parents, and school administrators.</i>
Conformance with NCDPI Architecture	
Data Movement Architecture	<p>The proposed IIS shall support data movement between the IIS and SLI via the SLI API interface. DPI anticipates a need for near real-time means of moving data for the IIS (especially data that changes frequently like grades, assignments, and formative and benchmark assessments). Also, for the data for which the IIS is determined to be the authoritative source, the IIS shall be capable of publishing these data to the SLI API infrastructure.</p> <p>Vendor shall state the types of data movement architectures that the Vendor solution will support.</p>

Technical Component	Requirement
Learning Object Repository	<p>The proposed IIS solution shall offer a built-in object repository that supports all file formats and links to other external content stores. It shall also support user definable metadata schemas based on the LRMI schema and user definable workflows for publishing and content review. Furthermore, it shall support permissions for all objects and collections of objects.</p> <p>The proposed solution shall also interface with the external LOR that NCDPI makes available and the Learning Registry. The IIS solution shall be able to search and deliver content from the LOR and from the Internet via Learning Registry search in a similar fashion as with the IIS built-in repository search features. NCDPI plans to link all NCDPI created and purchased content in the LOR for statewide distribution.</p> <p>The Vendor shall describe the approach for integrating the LOR and the Learning Registry Internet search with the IIS such that the IIS can present the search results and associated learning objects to the IIS end-user. Also, please describe the approach for working with test publishers and content providers to seamlessly automate content exchanges.</p>
Identity and Access Management	<p>In addition to providing its own identity and access management, the IIS shall support at least one of the four security models identified by the NC Education Cloud Identity Access Management (IAM) project:</p> <ol style="list-style-type: none"> 1. Identity Federation 2. Central Authentication and Authorization via Reverse-Proxy Portal 3. Centralized User Authentication and Authorization Management 4. Local Authentication <p>These models are defined in the white paper in Appendix E. The IIS shall be capable of using at least one of these models to grant access to users.</p>
Shared Learning Infrastructure (SLI)	<p>The IIS Vendor shall describe how it will be able to interface with the Shared Learning Infrastructure (SLI) Application Program Interface (APIs) to initially populate the IIS with data and integrate IIS and SLI to keep data synchronized. Vendor shall also define the data movement periodicity to push data to the SLI (minimum of daily).</p> <p>The SLI will provide additional assessment data from districts that use alternate assessment systems in the classrooms and upload data to the SLI. The IIS Vendor shall describe how it will be able to import these data and use the data for diagnostic services.</p>
Ed-Fi	<p>Developed for the K-12 sector, Ed-Fi is open, XML-based, and CEDS-aligned to integrate information from a broad range of existing sources so it can be sifted, analyzed and put to use every day.</p> <p>The IIS shall be able to interface with the SLI and other education systems using the Ed-Fi XML schema.</p> <p>http://www.ed-fi.org/</p>

Technical Component	Requirement
Learning Registry	<p>NCDPI desires that the IIS Vendor register learning resources that are created within the IIS to the Learning Registry. See more information about the Learning Registry at:</p> <p>http://www.learningregistry.org</p> <p>The IIS Vendor shall describe how their solution will be used to register learning resources that are created using the IIS applications.</p>
Data Governance and Master Data Management	<p>The IIS Vendor shall state how it conforms to and supports the basic concepts of master data management. This includes:</p> <ul style="list-style-type: none"> • The IIS will draw data for its transactional data structures from the Shared Learning Infrastructure, which in turn draws the data from the NCDPI authoritative source systems. For example, student demographic data will be populated in the IIS from the SLI through and API, and the SLI gets the data from NC WISE, the authoritative source system for this information, through the data movement layer. • The IIS cannot allow updates to data for which it is not the authoritative data source. Rather, it shall rely on the authoritative source to update the data and return it to the IIS. • The IIS itself will be designated the authoritative data source for certain types of data. For example, the IIS may be the authoritative source for formative and diagnostic assessment results. As such, the IIS shall send the data for which it is the authoritative source to the Shared Learning Infrastructure through an API, and the SLI will transmit the data to other DPI systems requesting these data.

7. Proposed Business Solution Approach

Describe the overall functionality of the proposed solution.

The Vendor's IIS solution shall provide functionality that fully supports, but is not limited to, the major processes discussed in the Introduction:

- Standards and Curriculum
- Instructional Design, Practice, and Resources
- Assessment and Growth
- Data Analysis and Reporting
- Educator Evaluation & Professional Development
- Learner Profile and Work Samples

Please provide narrative on how your solution will meet or exceed our vision for each of the above areas taking into consideration the other North Carolina background and Race to the Top priorities. Where available, please provide any process diagrams outlining how your solution supports the major teaching and components above.

The proposed solution shall provide a single interface to perform all functionality being delivered by the Vendor for the proposed solution whether the function is being served by the Vendor's software, public domain software, or a third-party tool or software product. NCDPI is seeking solutions from proposers that not only address software installation, configuration and user training, but also any required on-

going activities to make the system useful for students, parents, teachers, and administrators to improve instruction and student achievement. In particular, NCDPI is seeking solutions where:

- All modules of the system transparently link together to ease the burden of training and implementation for all state and district staff such as teachers, building level administrators, district administrators, and community members
- The system supports student ability to navigate with ease, to self-assess learning and achievement over time, to analyze and evaluate evidence to guide learning and set goals, and to use this platform as a tool throughout the learning process for on-going development of skills, understandings, strengths, and interests.
- The system supports teacher ability to measure student achievement and progress towards standards and learning goals, to evaluate and reflect upon student evidence to guide future instructional planning and set student learning goals, and to engage with student learning, such as by providing formative feedback.
- The system supports administrator ability to evaluate student and school achievement and progress towards standards and learning goals, to monitor student learning overtime, and to evaluate teacher impact on student learning and the effectiveness of the instructional program.
- The system supports parent/guardian ability to monitor student learning and achievement, to engage with student learning, and to help guide student learning goals.

Describe how you will handle instances where we discover mismatches between our business requirements and the software's off-the-shelf functionality.

While it is our intention for NCDPI content to be loaded or linked to the LOR, NCDPI would also like the Vendor to be able to import items into the IIS if we run into issues that preclude use of an external LOR. Please describe how your solution will support the import of assessment items, learning and instructional content, and professional development content into the IIS. Also, please describe how the IIS integrates with external object repositories.

While NCDPI is interested in the best toolset and application to support the IIS, we understand that the system will only be as good as the content contained therein. To that end, NCDPI is interested in the content (instructional, professional development, assessment) each Vendor has available that has already been integrated with your proposed solution or which may be added to your solution as an option.

In a separate attachment, please provide a detailed description for each set of content including, but not limited to:

- Who created the items or assessments
- Date created
- Target audience (Lesson plans for teachers, resources for students, etc.)
- Grade level(s)
- Content area(s)
- Aligned to which set of standards (e.g., North Carolina Standard Course of Study, including the Common Core Standards and the NC Essential Standards)
- Agency or method used to determine the (above) alignment
- Item types (for assessment items)
- Intact assessments (diagnostic, benchmark, alternative, etc.)
- Tagging standards (such as Learning Resource Metadata Standard or LRMI)
- Registration of resources to the Learning Registry (www.learningregistry.org).

For each of the available sets of content, please enter initial license cost and any recurring annual costs on Cost Form 9 in Appendix B.

8. Proposed Approach to Enhancements and Customizations

In order to satisfy the technical and business requirements identified throughout this RFP, as well as the IIS specifications outlined in Appendix A, the Vendor may be required to make customizations to its IIS, (for example, software features developed for another district or state). NCDPI asks the Vendor to explain its approach for prioritizing and developing software package extensions or customizations.

a. Approach to Enhancing IIS Software

Within the proposal, please describe the Vendor's system design and development approach for making enhancements to the IIS software. Explain the tools used to develop product.

b. Software Customizations for NCDPI

Within the proposal, please describe your proposed approach for determining and developing customizations to the IIS software to meet any NCDPI specifications that are currently unmet by the Vendor's IIS product.

9. Testing Strategy

The Vendor shall validate that the systems and integration interfaces, customizations, and configurations made to its IIS will operate properly in NCDPI's technical and business environment. The Vendor is responsible for establishing all appropriate testing environments to support IIS testing activities. In order to ensure that each component of the IIS has been adequately tested prior to implementation, the Vendor is responsible for performing and/or overseeing the following minimum levels of testing: Unit Testing, Systems and Integration Testing, and User Acceptance Testing. These testing levels are described below:

- **Unit Testing:** Unit testing is performed by an application developer or tester on an individual software module or component in the development environment. During Unit Testing, the developer or tester shall test all unit logic paths and conditions for accuracy, efficiency, and conformance to the respective requirements.
- **Systems and Integration Testing:** Systems and Integration Testing is testing the integration of the individual modules within a subsystem, subsystems within a system, and the components of the overall IIS and its interfaces to other DPI or LEA business applications. Systems and Integration Testing shall be conducted in the Test Environment.
- **Performance and Stress Testing:** Performance and stress testing of the IIS application and related network shall be conducted. Performance and stress testing shall be conducted in the Test Environment and Production Environment.
- **User Acceptance Testing:** User Acceptance Testing provides end-users the ability to test the new system. Testing at selected elementary, intermediate, and high school sites may serve as User Acceptance Testing for NCDPI modules. Formal User Acceptance Testing shall also be scheduled for district-level modules.

The Vendor is responsible for testing and validating the successful installation and operation of all third-party software that the Vendor provides as part of the solution.

a. Approach and Description of Testing Strategy

Within the proposal, please provide an overview of your testing strategy. This shall include, but not be limited to, the identification and overall approach to all levels of testing (e.g., unit testing, systems and integration testing, performance and stress testing, and user acceptance testing), proposed testing environments (e.g., location, hardware requirements, etc.), approach to requirements traceability, and proposed testing participants.

b. Approach to Testing Documentation

Within the proposal, please describe your proposed approach for documenting testing components (e.g., test procedures, test cases, test results, etc.).

c. Approach to Using Testing Tools

Within the proposal, please identify your proposed testing tools, describe the features provided in the proposed testing tools, and identify the levels of testing which will use the tools.

10. Integration Strategy

In the Vendor's proposal, the Vendor will be required to provide an overall Integration Strategy that describes how the Vendor will integrate NCDPI data for initial provisioning of the IIS and how the data will be integrated back to the SLI infrastructure and NCDPI source systems. During the project start up, the Vendor is required to add additional detail the Integration Strategy to create an Integration Plan that will guide the Vendor, SLI staff, and NCDPI through a structured, orderly, and seamless integration between the SLI API layer and the new IIS. The Integration Plan shall describe all related tasks, preparatory actions, required resources, time frames, work products, and success criteria for software installation and data integration. Data integration includes the manual and automated integration, as appropriate, of existing student, teacher, curriculum, and resource data to the new IIS. The Vendor is required to integrate student-level data bi-directionally with the SLI API layer. The Vendor will collaborate with NCDPI and SLC staff to assess the integrity of the student data to be integrated with the IIS and will take primary responsibility for coding integration routines that ingest data from the SLI API layer and push data updates to the SLI API layer. For the IIS, the data integration between the SLI API layer and the IIS will need to be closer to real-time. Therefore, we encourage potential IIS Vendors to present integration approaches that accomplish data integration between the IIS and SLI Infrastructure in near real time. **Vendors are welcomed to leverage the Agency's existing Oracle SOA infrastructure or recommend alternate means of data integration between the IIS and SLI API layer.**

The Integration Plan shall also address the process for import of Common Core State Standards, NC Essential Standards, instructional content from identified sources, and the import of assessment items from NCDPI summative, district and classroom assessment resources. The IIS Vendor shall ensure that all data passes consistency and audit checks prior to final data conversion into the production environment. The IIS Vendor shall document and resolve inconsistencies prior to the final conversion.

The Integration Strategy shall provide information that can be used by NCDPI to evaluate the Vendor's knowledge of, and intended approach to, transition and integration. This information shall include at least the following:

a. Approach to Data Integration

Within the proposal, the Vendor shall describe their proposed approach to data integration (e.g., timeline, participants, role responsibilities of both Vendor and NCDPI, contingency for rollback, etc.).

b. Approach to Systems Integration

Within the proposal, the Vendor shall describe their proposed approach for performing and documenting system integration (e.g., procedures, integration results and errors, etc.).

c. Approach to Conversion and Documentation

Within the proposal, the Vendor shall describe their proposed approach for performing and documenting system conversion (e.g., procedures, conversion results, etc.). Include examples of data conversion document with your proposal.

11. Software Support and Maintenance

The Vendor is responsible for maintaining the IIS during the term of the contract, including the Vendor software warranty period and ongoing software maintenance through the life of the contract for maintenance with the State.

Systems maintenance includes maintaining all IIS software components, including managing and tracking the periodic release of application and source code.

The Vendor shall discuss its approach to maintaining all version control methods and tools used to control the release of IIS software versions and source code. This includes the development and identification of a baseline software version and the tracking and deployment of subsequent software versions. Please discuss how the Vendor ensures that all software upgrades operate with the customizations made by the Vendor during the design, development, and implementation of the IIS and any subsequent customizations made by the Vendor post-implementation.

a. Warranty

NCDPI desires that the Vendor's warranty period will commence upon NCDPI's final acceptance of the system, which effectively ensures that the IIS functions as it was intended to in a reliable and stable manner. Within the proposal, please describe the IIS warranty, including the warranty period and items covered. NCDPI desires that the warranty will be provided at no additional cost to NCDPI.

Please address the following points of your IIS warranty services including:

- Your proposed warranty services
- Any exceptions or limitations to your proposed warranty services
- Warranty period

b. Ongoing IIS Software Maintenance Program

Within the proposal, please describe your company's IIS software maintenance program for your proposed IIS solution including, the products and services that the maintenance plan covers, the approach to upgrades and "point releases" of the software.

Please address the points in your response to this section:

- State the services that are included in your software maintenance program.
- State the hours of software maintenance coverage (e.g., Mon-Fri 7:00 a.m. to 5:00 p.m. Eastern Time).
- State your program for extended hours of telephone support operations. State how to evoke these services and the associated cost
- Explain your program for software problem resolution.
- State the procedure for contacting Vendor for maintenance (e.g. Help Desk)
- State the Service Level Objectives Response Times (defined as the time elapsed between the placement of the call and the start of remedial maintenance activities by Vendor maintenance service personnel).

c. Ongoing Program for IIS Product Enhancement

Please describe your company's approach to product development.

- State your product development lifecycle, including release planning, release development, release testing, and release rollout.
- Explain if all product enhancements are available to all customers as part of its annual maintenance fees.
- Describe your product enhancement process.
- State how product enhancements are determined.
- State the role that customers play in the product enhancement process.
- State how often enhancements are provided. Explain your company's release schedule.
- Describe the tasks required for the District following a new release.
- Describe the installation process for installing new releases of the IIS software.

NCDPI desires the IIS Vendor to provide post-implementation software modification support to ensure the IIS supports future State legislative or North Carolina Code Regulation changes within the mandated compliance due date including state reporting requirements.

d. Customer Call Center (Help Desk) Management

NCDPI desires the Vendor to provide a Help Desk service for supporting the IIS application. As part of the proposal, please discuss your company's Customer Call Center management.

- Describe how your call center operates.
- Service hours for contacting the Vendor with problems.
- Role and responsibilities of NCDPI and the Vendor.
- Describe the approach you use to track, report, and manage end-user calls for service.
- List the methods users can reach your call center representatives.
- State whether or not all communications with call center representatives are logged.
- Describe your Call Center Workflow Process.
- Based upon the urgency of the customer software problem, describe your escalation policies and procedures.
- State the guarantees or Service Level Agreements your company provides for critical support and emergency issues.
- If the approved Vendor solution is hosted by ITS, the Vendor shall leverage the existing enterprise incident management service as part of an overall support and service plan for IIS.
- In addition, please present your approach to certifying NCDPI staff to support its IIS locally.

Even when training is delivered close to the go-live date, new end users frequently require personal attention when they use the system for the first time. The Vendor shall propose an approach to provide support that accommodates a spike in end user assistance and demand on the Help Desk when the system goes live. In addition, NCDPI desires the Vendor to propose a method for ensuring that end user concerns and issues raised with Help Desk personnel will serve as input to curriculum content and revising training approaches in a continuous quality improvement feedback loop.

12. Security Strategy

a. Background on Security Architecture

The IIS solution shall satisfy general system security standards, including, without limitation, the Statewide Information Security Manual:

<https://www.scio.nc.gov/Mission/InformationSecurityManual.aspx>

and the ITS Security Standards and Policies:

<https://www.scio.nc.gov/mission/itPoliciesStandards.aspx>

Additionally, the IIS solution shall satisfy any other applicable state and federal security and privacy policies, especially the Family Educational Rights and Privacy Act (FERPA). System security shall be an integral component of the IIS design and implementation. NCDPI is looking for an IIS that provides security down to the data field level.

b. Security Architecture

Please discuss the proposed IIS product security architecture and the security and access structure, including:

- i. Role-based security
- ii. User account structure;

- iii. User account and profile maintenance;
- iv. User group profile and maintenance;
- v. User and group access security matrix (defining access to application menus and functions); and,
- vi. Audit reporting of system and application access.

c. Managing Security

Please describe the Vendor’s recommended approach for defining and managing security levels and the capabilities associated with each security level.

13. Training Approach

NCDPI recognizes there are several options that can be deployed to successfully train the district and state staff on the new system. NCDPI is seeking a blended or hybrid solution combining face-to-face training with other on-line training, webinars, and videos for on demand “just-in-time” training to coincide with the software deployment schedule.

a. Training Philosophy

Within the proposal, please describe your company's training philosophy.

b. Training Methodology

Within the proposal, please describe your training methodology and techniques in order to provide the most effective training of state, district and building-level staff. Please note that NCDPI prefers a “Train-the-trainer” approach in which the Vendor equips NCDPI and LEA staff to train teachers, students, parents, and administrators.

Describe training techniques for assuring the blended training options will be successful. Discuss when various training methodologies would be employed including, but not limited to:

- Face-to-Face training for NCDPI business staff (Approximately 30 people)
- Face-to-Face training at 8 Regional areas (Approximately 1,100 district personnel) with support from a subset of the trained NCDPI staff from the above. Please let us know if the Vendor will offer different levels of training to differentiate basic, intermediate, and advanced levels of end-users.
- Face-to-Face training for NCDPI technical support staff (Approximately 15 people)
- Training for LEA technical support staff (Approximately 350 people)
- Initial Webinar training by modules/roles with archiving ability (on a registration basis)
- Repeat Webinar training by modules/roles with archiving ability (on a registration basis)
- Embedded on-line training modules from within the application
- "On demand" multimedia/videos
- Use of Vendor-developed training materials for LEA training and beyond contract period

c. Certification

NCDPI desires that Vendors present a program to certify state and district trainers to deliver the equivalent quality training to that of Vendor’s trainers. NCDPI and the LEAs will review the training modules and designate appropriate staff to attend. NCDPI desires that the Vendor recommend which user types to attend each type of training and recommend which user types need deeper and/or broader training. The Vendor shall specify whether they will offer different levels of training to differentiate basic, intermediate, and advanced levels of end-users.

Please describe the process the Vendor will use to develop the state, district and building-level training plan. The plan shall address the various training audiences, training topics, proposed training materials and tools, required training logistics, and training evaluation procedures. The Vendor shall describe the order of training audiences.

d. Vendor IIS Training Modules

The districts understand that not all personnel need training on all modules of the new IIS. With that in mind, NCDPI would like for the Vendor to propose a training approach that includes training NCDPI staff, district administrative staff, school-level staff, teachers, students, and parents. The training approach shall include a breakdown of end-user roles and the specific classes that will be offered to each role. The tables below are examples, but the Vendor may feel free to use an alternate format for presenting the training approach.

Table 7: District-Level Staff Training Needs by Application Module

District-level Staff	Training Needs											
Staff Groups	System Overview	Access and Navigation	Curriculum Development	Instructional Monitoring	Assessment item Creation	Interim Assessment Development	Interim Assessment Scheduling	Class and Student Results Analysis	School and Grade Level Results Analysis	Professional Development	Role and Access Administration	System Maintenance
Administrators												
Directors												
Curriculum Specialists												
Instructional Specialists												
Assessment Specialists												
Professional Development Directors												
Technology Support												

Table 8: School-level Staff Training Needs by Application Module

School-level Staff	Training Needs										
Staff Groups	System Overview	Access and Navigation	Instructional/Lesson Planning	Classroom Assessment Creation	Classroom Assessment Delivery	Class Management Grade book	Class and Student Results Analysis	Interim Assessment Delivery	Professional Development	Teacher-Student-Parent Collaboration	Student/Parent Portal
Principals and Assistant Principals											

School-level Staff	Training Needs										
Staff Groups	System Overview	Access and Navigation	Instructional/Lesson Planning	Classroom Assessment Creation	Classroom Assessment Delivery	Class Management Grade book	Class and Student Results Analysis	Interim Assessment Delivery	Professional Development	Teacher-Student-Parent Collaboration	Student/Parent Portal
School Secretaries											
Counselors											
Teachers											
Students											
Parents											

e. Vendor IIS Training Curriculum

The Vendor shall use following table template or an alternate clearly readable format to list the company’s IIS training module syllabi. In your proposal, include a separate table for each of the company’s training modules.

Table 9: IIS Training Syllabus Template

IIS Module Name	
<p>Learning Objectives: (Enter the major learning objectives for this training module.)</p>	
<p>Topics include: (List major topics covered in this module.)</p>	<p>Type: (Core or Optional Course) Prerequisite: (List any prerequisites) Delivery: (Type of training delivery) Class Size: (List the class size) Audience: (List all district/school job roles that should take this course module.)</p>

f. Sample Training Curriculum

Please provide samples of your company’s IIS training materials in your proposal CD. These samples shall include academic/educational training materials and technical training materials.

g. Training Curriculum Pricing

Please provide a cost breakdown for development and delivery of each of the training module. The Vendor shall assume NCDPI and the districts will provide the logistical support for scheduling the training and arranging for training space.

NCDPI will need this information as the state's districts will implement the IIS functionalities at different rates as their needs demand.

14. Response to IIS Functional Specifications (Appendix A)

Vendors are to complete Appendix A for all worksheets using the codes indicated on the Instructions tab. Any requirement not marked will be considered a "No". **Note: It is required for each Vendor to call Mike Beaver @ 919-807-3683 or email michael.beaver@dpi.nc.gov , in order to obtain the MS Excel File of this Appendix A document.**

15. Cost Response Forms (Appendix B, under separate cover)

See instructions for completion of these forms in Section IV, Cost Proposal below. **Note: It is required for each Vendor to call Mike Beaver @ 919-807-3683 or email michael.beaver@dpi.nc.gov , in order to obtain the MS Excel File of this Appendix B document.**

16. Conflict of Interest

- i. Provide a statement that no assistance in preparing the response was received from any current or former employee of the State of North Carolina whose duties relate(d) to this RFP, unless such assistance was provided by the state employee in his or her official public capacity and that neither such employee nor any member of his or her immediate family has any financial interest in the outcome of this RFP;
- ii. State if the Vendor or any employee of the Vendor is related by blood or marriage to an Agency employee or resides with an Agency employee. If there are such relationships, list the names and relationships of said parties. Include the position and responsibilities within the Vendor's organization of such Vendor employees; and
- iii. State the employing State Agency, individual's title at that State Agency, and termination date.

17. Vendor's Additional Terms and Conditions, if any.

18. Errata and Exceptions, if any.

19. Copy of Vendor's License and Maintenance Agreements, as applicable.

20. Other Supporting Materials Including Technical System Documentation.

21. Other Materials, Samples or Examples (as applicable).

Section IV. Cost Proposal

- 1) The Instructional Improvement System Total Cost Summary Forms described in Appendix B shall be used by the Vendor to provide the necessary pricing data for the proposal evaluation.

The Vendor's response shall contain all prices as defined on these forms. Vendors choosing to propose more than one alternative shall use a separate cost form for each of the sections of their respective proposals differing from one another. Should additional forms be required they shall be clearly marked as "1 of _" to allow for appropriate evaluation.

The proposal shall provide cost forms, which reflect implementation costs of all Instructional Improvement System components.

The costs shall be specified separately as follows:

- a) Instructional Improvement System Total Cost Summary (Cost Form 1)
- b) Installation, Implementation, and Integration Services (Cost Form 2)
- c) Training Services (Cost Form 3)
- d) SaaS Cost Summary (Cost Form 4)
- e) Vendor-Hosted Service Costs (Cost Form 5)
- f) NC ITS-Hosted Service Costs (Cost Form 6)
- g) Required System Software (Cost Form 7)
- h) Required Hardware (Cost Form 8)
- i) Vendor Consultant Hourly Rates (Cost Form 9)
- j) Available Content (Cost Form 10)

Price quotations shall include the estimated costs of furnishing all materials, equipment, labor, maintenance, complete and accurate data conversion costs for all data contained in the current system, training, operating manuals, and services necessary or proper for the completion of the work described in this RFP unless otherwise noted in the RFP. NCDPI shall not be liable for any costs beyond those proposed in this RFP and awarded. Time and materials quotes are not acceptable. Vendors shall include all travel and living expenses in their Professional Services costs.

Proposals shall include five years of maintenance costs after the end of the first year following the expiration of the warranty period. Any annual increase in maintenance costs after that time shall be stated as the maximum percentage increase over the previous year's base. Any increase realized cannot exceed the increase in the consumer price index for the previous twelve (12) months.

A. Individual Cost Form Instructions

This section describes the necessary information to be provided on each required cost form. **Please enter information in the green cells only.**

1. Total Cost Summary (Cost Form 1)

The Instructional Improvement System Total Cost Summary (Cost Form 1) is included as an aggregate of all detailed cost sheets. This summary sheet addresses the following components for NCDPI:

- a. Instructional Improvement System Software Enterprise License. Please separately list the costs for licensing and annual maintenance for each of the IIS components that are proposed in your solution for any of the hosting environments.
- b. Application Software Installation and Implementation and Data Integration Services – These costs will be populated on this sheet from Cost Form 2.
- c. Training Services – These costs will be populated on this sheet from Cost Form 3.

In addition to the above costs, this form will summarize the costs for provisioning of the system either with any or all of the three possible solutions:

1. Vendor providing the solution via Software as a Service (SaaS)
2. Vendor hosting the solution
3. Hosting costs for NC to host the IIS at the State ITS data center(s). This would include any required purchase of the hardware and system software to support the system.

NCDPI is interested in options among the three scenarios but Vendors shall provide costs for at least one scenario.

2. Services (Cost Form 2)

Vendor-supplied installation, implementation, and data integration services are to be recorded on Cost Form 2.

NCDPI anticipates the following types of installation and implementation services to be supplied by the Vendor:

- a. On-site Implementation Project Management
- b. Software Installation and configuration
- c. Application tailoring/customization and report development
- d. Implementation Rollout Assistance
- e. Other – please list any other costs for Installation and Implementation Services

NCDPI anticipates the following types of interface and integration services to be supplied by the Vendor:

- a. Data integration services
- b. Curriculum/Instructional resources integration services
- c. Assessment item integration services
- d. Professional development content integration services

3. Training Services (Cost Form 3)

Vendor-supplied Instructional Improvement System training services are to be recorded on Training Services (Form 3).

Cost Form 3 provides for the various and types of training NCDPI is requesting for both state-level and district-level staff. The Vendor shall list the length of the training (in hours) required by each category along with the cost of training for the number of participants indicated. Vendors shall plan for a class size of 20 participants.

NCDPI is looking to have certification at multiple levels for the various training options.

- Basic - Shall be basic training to address all IIS components of the proposed solution
- Intermediate - Shall be additional training for advanced users
- Advanced - Shall meet the highest level for “power users” and advanced train-the trainer knowledge

NCDPI intends to utilize Vendor trainers to augment its own state-level trainers for training to the district end users.

In addition to face-to-face training, NCDPI is requesting other methods for system training such as webinars, videos, and on-line training delivered through the system. Please enter the available resources and cost for these options.

Instructional Improvement System training costs will be automatically entered on the appropriate line of the Installation Services column of the Instructional Improvement System Total Cost Summary (Cost Form 1).

4. SaaS Cost (Cost Form 4)

If the Vendor offers a “Software as a Service” (SaaS) model, NCDPI would like the Vendor to present the pricing in a per-student cost model. Please enter the cost per student at the four points of adoption by North Carolina schools. For example, price per student may be one cost for the first 300,000 students, a lower cost for student 300,001 up to 600,000, a lower cost per student from 600,001 to 900,000.... In a narrative description for this option, please list all services, licensing, or other assistance included in the SaaS price. Respondents are encouraged to incorporate NCREN backbone interconnection when such connectivity optimizes the total cost of service delivery. More information about NCREN and LEA connectivity is available from MCNC (<http://www.mcnc.org>), the operator of the NCREN. All NC LEAs connect to the NC Research and Education Network (NCREN) via high

bandwidth fiber optic circuits. NCITS data centers are NCREN on-net facilities and NCREN peers with many tier one and tier two Internet service providers.

5. Vendor Hosted Service Cost *Cost Form 5)

If the Vendor offers a hosted services environment either at its, or an external hosting facility, please list the costs for any additional services or costs for this solution on Cost Form 5. Please check which hosted services are the responsibility of the hosting site and which will be your responsibility (Vendor Service), and list the associated costs for services you provide.

6. Hosting Cost (Cost Form 6)

If the Vendor offers a hosted services environment either at the State ITS facility or an external facility, please list any costs for additional services on Cost Form 6. Please check which hosted services are the responsibility of the State ITS and which will be your responsibility (Vendor Service), and list the associated costs for services you provide.

7. System Software (Cost Form 7)

If the proposed solution be hosted at State ITS or an external facility, please list costs of system software required to support the application for statewide deployment.

8. Hardware (Cost Form 8)

If the proposed solution be hosted at the State ITS or an external facility, please list costs of system hardware to support the application for statewide deployment.

9. Consultant Hourly Rates (Cost Form 9)

Hourly rates for staffing are to be recorded on the Vendor Consultant Hourly Rates Form

- a. Cost of "Data Integration Specialist"
- b. Cost of "Application Programmer"
- c. Cost of "Systems Analyst"
- d. Cost of "Application Training Specialist"
- e. Database Administrator (Outsourced Services)

This cost schedule will be used if NCDPI chooses to purchase additional support services. The rates shall be effective for the duration of the contract.

10. Available Content Cost (Cost Form 10)

NCDPI is interested in the content (instructional, professional development, assessment) each Vendor has available that has already been integrated with your proposed solution. For each of the available sets of content, please enter initial license cost and any recurring annual costs on Cost Form 9.

In a separate attachment, please provide a detailed description for each set of content including, but not limited to:

- Who created the items or assessments
- Date created
- Target audience (Lesson plans for teachers, resources for students, etc.)
- Grade level(s)
- Content area(s)
- Aligned to which set of standards (CCSS, NC Essential Standards, extended content standards, etc.)
- Agency or method used to determine the (above) alignment
- Item types (for assessment items)

- Intact assessments (diagnostic, benchmark, alternative, etc.)

11. Attachments

If any form not have sufficient space, Vendors may add attachments in the same format provided herein. Notwithstanding any omissions or unspecified items in this RFP, the Vendor is required to include all software and other components necessary for the successful implementation and operation of the entire IIS, including auxiliary functions and entities. It is incumbent upon the Vendor to point out any such omissions or unspecified items and to include their costs, if any, on the appropriate cost forms. An attachment to that cost form, describing the items, shall accompany the Vendor's response.

Section V. Other Requirements and Special Terms

- 1) VENDOR UTILIZATION OF WORKERS OUTSIDE U.S.: In accordance with NC General Statute 147-33.97, the Vendor must detail in the bid response, the manner in which it intends to utilize resources or workers. The State of North Carolina will evaluate the additional risks, costs, and other factors associated with such utilization prior to making an award for any such Vendor's proposal. The Vendor shall provide the following for any proposal or actual utilization or contract performance:
- a) The location of work performed under a state contract by the Vendor, any subcontractors, employees, or other persons performing the contract and whether any of this work will be performed outside the United States
 - b) The corporate structure and location of corporate employees and activities of the Vendors, its affiliates or any other subcontractors
 - c) Notice of the relocation of the Vendor, employees of the Vendor, subcontractors of the Vendor, or other persons performing services under a state contract outside of the United States
 - d) Any Vendor or subcontractor providing call or contact center services to the State of North Carolina shall disclose to inbound callers the location from which the call or contact center services are being provided

Will any work under this contract be performed outside the United States?

Where will services be performed: _____ YES _____ NO _____

- 2) Special Terms and Conditions Paragraph #13 of the State's General Terms and Conditions for Goods and Related Services is superseded as follows: The Agency reserves the right to perform post-delivery and post-training acceptance testing for a period beginning at installation and lasting 24 weeks. The Agency also reserves the right to have an independent Vendor conduct assurance testing pertaining to the functions, auditability, and related matters. At any time before the end of the test and assurance period the Agency may require any or all of the following:
- i) Have the Vendor modify the installed software to eliminate the deficiency to the Agency's satisfaction.
 - ii) Have the Vendor re-install a new copy of the software product(s).
 - iii) Extend the acceptance testing period for an additional period of 180 days beginning after acceptance of Vendor remedy of identified deficiencies and to allow time for Vendor to remedy any additional deficiencies.
 - iv) Remove the application software, cancel this Agreement, and recover payments extended from Agency funds.
- 3) Reserved
- 4) Disclosure of Litigation – The Vendor's failure to fully and timely comply with the terms of this section, including providing reasonable assurances satisfactory to the State, may constitute a material breach of this Contract.
- a) The Vendor shall notify the State in its bid proposal, if it, or any of its subcontractors, or their officers, directors, or key personnel who may provide services under any contract awarded pursuant to this solicitation, have ever been convicted of a felony, or any crime involving moral turpitude, including, but not limited to fraud, misappropriation or deception. Vendor shall promptly notify the State of any criminal litigation, investigations or proceeding involving Vendor or any subcontractor, or any of the foregoing entities' then current officers or directors during the term of this Contract or any Scope Statement awarded to Vendor.

- b) Vendor shall notify the State in its bid proposal, and promptly thereafter as otherwise applicable, of any civil litigation, arbitration, proceeding, or judgments against it or its subcontractors during the three (3) years preceding its bid proposal, or which may occur during the term of any awarded to Vendor pursuant to this solicitation, that involve (1) services or related goods similar to those provided pursuant to any contract and that involve a claim that may affect the viability or financial stability of the Vendor, or (2) a claim or written allegation of fraud by the Vendor or any subcontractor hereunder, arising out of their business activities, or (3) a claim or written allegation that the Vendor or any subcontractor hereunder violated any federal, state or local statute, regulation or ordinance. Multiple lawsuits and or judgments against the Vendor or subcontractor shall be disclosed to the State to the extent they affect the financial solvency and integrity of the Vendor or subcontractor.
 - c) All notices under subsection A and B herein shall be provided in writing to the State within thirty (30) calendar days after the Vendor learns about any such criminal or civil matters; unless such matters are governed by the ITS General Terms and Conditions annexed to the solicitation. Details of settlements, which are prevented from disclosure by the terms of the settlement, shall be annotated as such. Vendor may rely on good faith certifications of its subcontractors addressing the foregoing, which certifications shall be available for inspection at the option of the State.
- 5) Criminal Conviction – In the event the Vendor, an officer of the Vendor, or an owner of a 25% or greater share of the Vendor, is convicted of a criminal offense incident to the application for or performance of a State, public or private Contract or subcontract; or convicted of a criminal offense including but not limited to any of the following: embezzlement, theft, forgery, bribery, falsification or destruction of records, receiving stolen property, attempting to influence a public employee to breach the ethical conduct standards for State of North Carolina employees; convicted under State or federal antitrust statutes; or convicted of any other criminal offense which in the sole discretion of the State, reflects upon the Vendor's business integrity and such Vendor shall be prohibited from entering into a contract for goods or services with any department, institution or agency of the State.
- 6) Security and Background Checks – The Agency reserves the right to conduct a security background check or otherwise approve any employee or agent provided by Vendor, and to refuse access to or require replacement of any such personnel for cause, including, but not limited to, technical or training qualifications, quality of work or change in security status or non-compliance with the Agency's security or other requirements.
- 7) Assurances – In the event that criminal or civil investigation, litigation, arbitration or other proceedings disclosed to the State pursuant to this Section, or of which the State otherwise becomes aware, during the term of this Contract, causes the State to be reasonably concerned about:
- a) the ability of the Vendor or its subcontractor to continue to perform this Contract in accordance with its terms and conditions, or
 - b) whether the Vendor or its subcontractor in performing services is engaged in conduct which is similar in nature to conduct alleged in such investigation, litigation, arbitration or other proceedings, which conduct would constitute a breach of this Contract or violation of law, regulation or public policy, then the Vendor shall be required to provide the State all reasonable assurances requested by the State to demonstrate that: the Vendor or its subcontractors hereunder will be able to continue to perform this Contract in accordance with its terms and conditions, and the Vendor or its subcontractors will not engage in conduct in performing services under this Contract which is similar in nature to the conduct alleged in any such litigation, arbitration or other proceedings.
- 8) Confidentiality of Data and Information – All financial, statistical, personnel, technical and other data and information relating to the State's operation which are designated confidential by the State and made available to the Vendor in order to carry out this Contract, or which become available to the Vendor in carrying out this Contract, shall be protected by the Vendor from unauthorized use and disclosure through the observance of the same or more effective procedural requirements as are applicable to the State. The identification of all such confidential data and information as well as the State's procedural requirements for protection of such data and information from unauthorized use and disclosure shall be provided by the State in writing to the Vendor. If the methods and procedures employed by the Vendor for the protection of

the Vendor's data and information are deemed by the State to be adequate for the protection of the State's confidential information, such methods and procedures may be used, with the written consent of the State, to carry out the intent of this section. The Vendor shall not be required under the provisions of this section to keep confidential, (1) information generally available to the public, (2) information released by the State generally, or to the Vendor without restriction, (3) information independently developed or acquired by the Vendor or its personnel without reliance in any way on otherwise protected information of the State. Notwithstanding the foregoing restrictions, the Vendor and its personnel may use and disclose any information, which it is otherwise required by law to disclose, but in each case only after the State has been so notified, and has had the opportunity, if possible, to obtain reasonable protection for such information in connection with such disclosure.

- 9) Project Management –All project management and coordination on behalf of the Agency shall be through a single point of contact designated as the Agency Project Manager. Vendor shall designate a Vendor Project Manager who will provide a single point of contact for management and coordination of Vendor's work. All work performed pursuant to this Contract shall be coordinated between the Agency Project Manager and the Vendor Project Manager.
- 10) Meetings – The Vendor is required to meet with Agency personnel, or designated representatives, to resolve technical or contractual problems that may occur during the term of the Contract. Meetings will occur as problems arise and will be coordinated by Agency. The Vendor will be given reasonable and sufficient notice of meeting dates, times, and locations. Face to face meetings are desired. However, at the Vendor's option and expense, a conference call meeting may be substituted. Consistent failure to participate in problem resolution meetings, two (2) consecutive missed or rescheduled meetings, or failure to make a good faith effort to resolve problems, may result in termination of the Contract.
- 11) Transition Assistance – If this Contract is not renewed at the end of this term, or is canceled prior to its expiration, for any reason, the Vendor must provide for up to six (6) months after the expiration or cancellation of this Contract, all reasonable transition assistance requested by the State, to allow for the expired or canceled portion of the Services to continue without interruption or adverse effect, and to facilitate the orderly transfer of such services to the State or its designees. Such transition assistance will be deemed by the parties to be governed by the terms and conditions of this Contract, (notwithstanding this expiration or cancellation) except for those Contract terms or conditions that do not reasonably apply to such transition assistance. The State shall pay the Vendor for any resources utilized in performing such transition assistance at the most current rates provided by the Contract for Contract performance. If the State cancels this Contract for cause, then the State will be entitled to offset the cost of paying the Vendor for the additional resources the Vendor utilized in providing transition assistance with any damages the State may have otherwise accrued as a result of said cancellation.
- 12) Quality Assurance, Performance and Reliability
 - a) Cross reference to any acceptance testing
 - b) Contract Performance Security
 - c) Project Assurance, Performance and Reliability Evaluation
- 13) Unanticipated Tasks In the event that additional work must be performed that was wholly unanticipated, and that is not specified in this Contract, but which in the opinion of both parties is necessary to the successful accomplishment of the contracted scope of work, the procedures outlined in this article will be followed. For each item of unanticipated work, Vendor shall prepare a work authorization in accordance with the State's practices and procedures.
 - a) It is understood and agreed by both parties that all of the terms and conditions of this Contract shall remain in force with the inclusion of any work authorization. A work authorization shall not constitute a contract separate from this Contract, nor in any manner amend or supersede any of the other terms or provisions of this Contract or any amendment hereto.
 - b) Each work authorization shall comprise a detailed statement of the purpose, objective, or goals to be undertaken by Vendor, the job classification or approximate skill level or sets of the personnel required, an identification of all significant material then known to be developed by Vendor's personnel as a Deliverable, an identification of all significant materials to be delivered by the State to Vendor's

personnel, an estimated time schedule for the provision of the services by Vendor, completion criteria for the work to be performed, the name or identification of Vendor's personnel to be assigned, the Vendor's estimated work hours required to accomplish the purpose, objective or goals, the Vendor's billing rates and units billed, and the Vendor's total estimated cost of the work authorization.

- c) All work authorizations must be submitted for review and approval by the procurement office that approved the original Contract and procurement. This submission and approval must be completed prior to execution of any work authorization documentation or performance there under. All work authorizations must be written and signed by Vendor and the State prior to beginning work.
- d) The State has the right to require Vendor to stop or suspend performance under the "Stop Work" provision of the General Terms and Conditions for Goods and Related Services.
- e) Vendor shall not expend Personnel resources at any cost to the State in excess of the estimated work hours unless this procedure is followed: If, during performance of the work, the Vendor determines that a work authorization to be performed under this Contract cannot be accomplished within the estimated work hours, the Vendor will be required to complete the work authorization in full. Upon receipt of such notification, the State may:
 - 1. Authorize the Vendor to expend the estimated additional work hours or service in excess of the original estimate necessary to accomplish the work authorization, or
 - 2. Terminate the work authorization, or
 - 3. Alter the scope of the work authorization in order to define tasks that can be accomplished within the remaining estimated work hours.
 - 4. The State will notify Vendor in writing of its election within seven (7) calendar days after receipt of the Vendor's notification. If notice of the election is given to proceed, the Vendor may expend the estimated additional work hours or services.

14) **Family Educational Rights & Privacy Act:** Student educational records are subject to 20 U.S.C. 1232g, Family Rights and Privacy Act (FERPA) and are not disclosable except in very limited circumstances. The contractor will ensure that every employee responsible for carrying out the terms of this contract is aware of the confidentiality requirements of federal law. In addition, every such employee must sign a confidentiality acknowledgement that indicates that he or she understands the legal requirements for confidentiality. The contractor is responsible for the actions of its employee and must take all precautions necessary to ensure that no violations occur. Finally, access to personally identifiable student education information will be limited to those employees who must have access to it in order to perform their responsibilities pursuant to this contract.

15) **Debarment:** If any of the Services rendered under this contract are to be paid with federal funds, the contractor, by responding to this solicitation, hereby certifies that the organization and its principals are not suspended or debarred from doing business with the federal government.

Section VI. Proposal Content and Organization

- 1) This section contains instructions to Vendors on how to prepare their written responses to this RFP. If any relevant and material information is not provided, the offer may be rejected from consideration and evaluation. Proposals will be considered and evaluated based upon the Vendor's full completion and response to the following, and any additional requirements herein, or stated in a separate Exhibit.
- 2) Vendors must furnish all information requested; and if response spaces are provided in this document, the Vendor shall furnish said information in the spaces provided. Further, if required elsewhere in this proposal, each Vendor must submit with their proposal sketches, descriptive literature and/or complete specifications covering the products offered. References to literature submitted with a previous proposal will not satisfy this provision. Proposals that do not comply with these requirements may be rejected.
- 3) Any errata or exceptions must be stated on a separate page, labeled "Errata and/or Exceptions" with references to the corresponding terms or provisions of the Solicitation.
- 4) Proposal Format. The proposals should be organized in the exact order in which the requirements and/or desirable performance criteria are presented in the RFP. The Execution page of this RFP must be placed at the front of the Proposal. Each page should be numbered. The proposal should contain a table of contents, which cross-references the RFP requirement and the specific page of the response in the Vendor's proposal. All proposals should be typewritten on standard 8 ½ x 11 paper (larger paper is permissible for charts, spreadsheets, etc.) and placed within a binder with tabs delineating each section.
- 5) Vendors are strongly encouraged to adhere to the following general instructions in order to bring clarity and order to the proposal and subsequent evaluation process:
 - a) Elaborate proposals in the form of brochures or other presentations beyond that necessary to present a complete and effective proposal are not desired.
 - b) The response should be complete and comprehensive with a corresponding emphasis on being concise and clear.
 - c) Within each section of their proposal, Vendors should address the items in the order in which they appear in this RFP. Forms, if any provided in the RFP, must be completed and included in the appropriate section of the proposal. All discussion of proposed costs, rates, or expenses must be presented with the cost response.
- 6) Any proposal that does not adhere to these requirements may be deemed non-responsive and rejected on that basis.
- 7) Vendors may attach other materials that they feel may improve the quality of their responses. However, these materials should be included as items in a separate appendix.
- 8) The proposal should be organized and indexed in the following format and should contain, at a minimum, the first 16 listed items in the sequence indicated.
 1. Letter of Transmittal
 2. Table of Contents
 3. Introduction
 4. Firm Qualifications
 5. Project Management Approach & Milestone Schedule
 6. Proposed Technical Environment
 7. Proposed Business Solution Approach
 8. Proposed Approach to Enhancements and Customizations
 9. Testing Strategy
 10. Integration Strategy
 11. Software Support and Maintenance

12. Security Strategy
13. Training Approach
14. Response to IIS Functional Specifications (Appendix A)
15. Completed Cost Response Form (Appendix B)
16. Conflict of Interest
17. Vendor's Additional Terms and Conditions
18. Errata and Exceptions, if any
19. Copy of Vendor's License and Maintenance Agreements
20. Other Supporting Material Including Technical System Documentation
21. Other Materials, Samples or Examples

Section VII. North Carolina Information Technology Procurement Office General Terms and Conditions for Goods and Related Services

Definitions: As used herein;

State shall mean the State of North Carolina, the Office of Information Technology Services as an Agency or in its capacity as the Award Authority.

Purchasing State Agency or Agency shall mean the Agency purchasing the goods or services.

1) Standards: Manufactured items and/or fabricated assemblies comprising Deliverables shall meet all requirements of the Occupational Safety and Health Act (OSHA), and State and federal requirements relating to clean air and water pollution, if applicable. Vendor will provide and maintain a quality assurance system or program that includes any Deliverables and will tender to the State only those Deliverables that have been inspected and found to conform to the requirements of this Contract. All manufactured items and/or fabricated assemblies comprising Deliverables are subject to operation, certification or inspection, and accessibility requirements as required by:

- State or Federal Regulation,
 - The Chief Information Officer's (CIO) policy or regulation, or
 - Acceptance with appropriate standards of operations or uses of said Deliverables as may be shown by identification markings or other means of the appropriate certifying standards organization.
- a) **Site Preparation:** Vendors shall provide the Purchasing State Agency complete site requirement specifications for the Deliverables, if any. These specifications shall ensure that the Deliverables to be installed shall operate properly and efficiently within the site environment. The Vendor shall advise the State of any site requirements for any Deliverables required by the State's specifications. Any alterations or modification in site preparation which are directly attributable to incomplete or erroneous specifications provided by the Vendor and which would involve additional expenses to the State, shall be made at the expense of the Vendor.
- b) **Goods Return:** Deliverables and any other goods or materials furnished by the Vendor to fulfill technical requirements shall be in good working order and be maintained in good working order by Vendor for the duration of the Contract; unless otherwise provided in a separate maintenance agreement or in the Solicitation Documents. Deliverables failing to meet the State's technical requirements shall be considered non-conforming goods and subject to return to the Vendor for replacement at the State's option, and at the Vendor's expense. The State is responsible for the return costs related to the termination of a Contract, including de-installation, and freight to destinations within the Continental United States; except in the case of default by the Vendor or delivery of non-conforming goods by Vendor. Shipping or freight charges, if any, paid by the State for non-conforming goods will be reimbursed to the State.
- c) **Specifications:** The apparent silence of the specifications as to any detail, or the apparent omission of detailed description concerning any point, shall be regarded as meaning that only the best commercial practice is to prevail and only material and workmanship of the first quality may be used. Upon any notice of noncompliance provided by the State, Vendor shall supply proof of compliance with the specifications. Vendor must provide written notice of its intent to deliver alternate or substitute products, goods or Deliverables. Alternate or substitute products, goods or Deliverables may be accepted or rejected in the sole discretion of the State; and any such alternates or substitutes must be accompanied by Vendor's certification and evidence satisfactory to the State that the function, characteristics, performance and endurance will be equal or superior to the original Deliverables specified.

2) Warranties: The Vendor warrants to the State that all items furnished will be new (unless otherwise requested in this bid), of good material and workmanship, and agrees to replace any items which fail to comply with the specifications by reason of defective material or workmanship under normal use, free of State's negligence or accident for a minimum of 90 days from date of acceptance. Such replacement shall include transportation costs free of any charge to the State. This statement is not intended to limit any additional coverage, which may normally be associated with a product. Vendor shall assign all applicable third party warranties for Deliverables to the Purchasing State Agency.

3) Personnel: Vendor shall not substitute key personnel assigned to the performance of this Contract without prior written approval by the Agency Contract Administrator. Any desired substitution shall be noticed to the Agency's Contract Administrator accompanied by the names and references of Vendor's recommended substitute personnel. The Agency will approve or disapprove the requested substitution in a timely manner. The Agency may, in its sole discretion, terminate the services of any person providing services under this Contract. Upon such termination, the Agency may request acceptable substitute personnel or terminate the contract services provided by such personnel.

- a) Vendor personnel shall perform their duties on the premises of the State, during the State's regular workdays and normal work hours, except as may be specifically agreed otherwise, established in the specification, or statement of work.
- b) This contract shall not prevent Vendor or any of its personnel supplied under this Contract from performing similar services elsewhere or restrict Vendor from using the personnel provided to the State, provided that:
 - i) Such use does not conflict with the terms, specifications or any amendments to this Contract, or
 - ii) Such use does not conflict with any procurement law, regulation or policy or
 - iii) Such use does not conflict with any non-disclosure agreement, or term thereof, by and between the State and Vendor or Vendor's personnel.

4) Subcontracting: The Vendor may subcontract the performance of required services with other Vendors or third parties, or change subcontractors, only with the prior written consent of the contracting authority. Vendor shall provide the State with complete copies of any agreements made by and between Vendor and all subcontractors. The selected Vendor remains solely responsible for the performance of its subcontractors. Subcontractors, if any, shall adhere to the same standards required of the selected Vendor. Any contracts made by the Vendor with a subcontractor shall include an affirmative statement that the State is an intended third party beneficiary of the contract; that the subcontractor has no agreement with the State; and that the State shall be indemnified by the Vendor for any claim presented by the subcontractor. Notwithstanding any other term herein, Vendor shall timely exercise its contractual remedies against any non-performing subcontractor and, when appropriate, substitute another subcontractor.

5) Vendor's Representation: Vendor warrants that qualified personnel will provide services in a professional manner. "Professional manner" means that the personnel performing the services will possess the skill and competence consistent with the prevailing business standards in the information technology industry. Vendor agrees that it will not enter any agreement with a third party that might abridge any rights of the State under this Contract. Vendor will serve as the prime Vendor under this Contract. Should the State approve any subcontractor(s), the Vendor shall be legally responsible for the performance and payment of the subcontractor(s). Names of any third party Vendors or subcontractors of Vendor may appear for purposes of convenience in Contract documents; and shall not limit Vendor's obligations hereunder. Third party subcontractors, if approved, may serve as subcontractors to Vendor. Vendor will retain executive representation for functional and technical expertise as needed in order to incorporate any work by third party subcontractor(s).

- a) Intellectual Property. Vendor has the right to provide the Services and Deliverables without violating or infringing any law, rule, regulation, copyright, patent, trade secret or other proprietary right of any third party. Vendor represents that its Services and Deliverables are not the subject of any actual or threatened actions arising from, or alleged under, any intellectual property rights of any third party.
- b) Inherent Services. If any Services, Deliverables, functions, or responsibilities not specifically described in this Contract are required for Vendor's proper performance, provision and delivery of the Service and Deliverables pursuant to this Contract, or are an inherent part of or necessary sub-task included within the Service, they will be deemed to be implied by and included within the scope of the Contract to the same extent and in the same manner as if specifically described in the Contract. Unless otherwise expressly provided in the Contract, Vendor will furnish all of its own necessary management, supervision, labor, facilities, furniture, computer and telecommunications equipment, software, supplies and materials necessary for the Vendor to provide and deliver the Services and Deliverables.
- c) Vendor warrants that it has the financial capacity to perform and to continue perform its obligations under the Contract; that Vendor has no constructive or actual knowledge of an actual or potential legal proceeding being brought against Vendor that could materially adversely affect performance of this Contract; and that entering into this Contract is not prohibited by any contract, or order by any court of competent jurisdiction.
- d) Warranty as to Equipment; Hardware. Vendor warrants that the equipment and hardware that it provides pursuant to this Contract shall be free from defects in materials, in good working order and be maintained in good working order.

6) Software License (for internal embedded software, firmware and unless otherwise provided in the State's solicitation document, or in an attachment hereto): Deliverables comprising goods, equipment or products (hardware) may contain software for internal operation, or as embedded software or firmware that is generally not sold or licensed as a severable software product. Software may be provided on separate media, such as floppy diskettes or CD-ROM, or may be included within the hardware at or prior to delivery. Such software is proprietary, copyrighted, and may also contain valuable trade secrets and may be protected by patents. Vendor grants the State a license to use the Code (or any replacement provided) on, or in conjunction with, only the Deliverables purchased, or with any system identified in the solicitation documents. The State shall have a worldwide, nonexclusive, non-sub-licensable license to use such software and/or documentation for its internal use. The State may make and install copies of the software to support the authorized level of use. Provided, however that if the hardware is inoperable, the software may be copied for temporary use on other hardware. The State shall promptly affix to any such copy the same proprietary and copyright notices affixed to the original. The State may make one copy of the software for archival, back-up or disaster recovery purposes. The license

set forth in this Paragraph shall terminate immediately upon the State's discontinuance of the use of the equipment on which the software is installed. The software may be transferred to another party only with the transfer of the hardware. If the hardware is transferred, the State shall i) destroy all software copies made by the State, ii) deliver the original or any replacement copies of the software to the transferee, and iii) notify the transferee that title and ownership of the software and the applicable patent, trademark, copyright, and other intellectual property rights shall remain with Vendor, or Vendor's licensors. The State shall not disassemble, decompile, reverse engineer, modify, or prepare derivative works of the embedded software, unless permitted under the solicitation documents.

7) Maintenance/Support Services: *Unless otherwise provided in the State's solicitation document, or in an attachment hereto*, for the first year and all subsequent Contract years, Vendor agrees to provide the following services for the current version and one previous version of any Software provided with the Deliverables, commencing upon installation of the Deliverables or delivery of the Software:

- a) Error Correction. Upon notice by State of a problem with the Software (which problem can be verified), Vendor shall use reasonable efforts to correct or provide a working solution for the problem. The State shall comply with all reasonable instructions or requests of Vendor in attempts to correct an error or defect in the Program. Vendor and the State shall act promptly and in a reasonably timely manner in communicating error or problem logs, other related information, proposed solutions or workarounds, and any action as may be necessary or proper to obtain or affect maintenance services under this Paragraph.
- b) Vendor shall notify the State of any material errors or defects in the Deliverables known, or made known to Vendor from any source during the Contract term that could cause the production of inaccurate or otherwise materially incorrect, results. Vendor shall initiate actions as may be commercially necessary or proper to effect corrections of any such errors or defects.
- c) Updates. Vendor shall provide to the State, at no additional charge, all new releases and bug fixes (collectively referred to as "Changes") for any Software Deliverable developed or published by Vendor and made generally available to its other customers at no additional charge. All such Updates shall be a part of the Program and Documentation and, as such, be governed by the provisions of this Contract.
- d) Telephone Assistance. Vendor shall provide the State with telephone access to technical support engineers for assistance in the proper installation and use of the Software, and to report and resolve Software problems, during normal business hours, **6:00 AM - 6:00 PM Eastern Standard Time, Monday-Friday**. Vendor shall respond to the telephone requests for Program maintenance service, within four hours, for calls made at any time.

8) Travel Expenses: Vendor may be reimbursed for travel expenses arising under the performance of this Contract at the out-of-state rates set forth in GS §138-6; as amended from time to time. Vendor agrees to use the lowest available airfare not requiring a weekend stay and to use the lowest available rate for rental vehicles. All Vendor incurred travel expenses shall be billed on a monthly basis, shall be supported by receipt and shall be paid by the State within thirty (30) days after invoice approval. Travel expenses exceeding the foregoing rates shall not be paid by the State. The State will reimburse travel allowances only for days on which the Vendor is required to be in North Carolina performing services under this Contract.

9) Governmental Restrictions: In the event that any restrictions are imposed by governmental requirements that necessitate alteration of the material, quality, workmanship, or performance of the Deliverables offered prior to delivery thereof, the Vendor shall provide written notification of the necessary alteration(s) to the Agency Contract Administrator. The State reserves the right to accept any such alterations, including any price adjustments occasioned thereby, or to cancel the Contract. The State may advise Vendor of any restrictions or changes in specifications required by North Carolina legislation, rule or regulatory authority that require compliance by the State. In such event, Vendor shall use its best efforts to comply with the required restrictions or changes. If compliance cannot be achieved by the date specified by the State, the State may terminate this Contract and compensate Vendor for sums due under the Contract.

10) Prohibition Against Contingent Fees and Gratuities: Vendor warrants that it has not paid, and agrees not to pay, any bonus, commission, fee, or gratuity to any employee or official of the State for the purpose of obtaining any contract or award issued by the State. Vendor further warrants that no commission or other payment has been or will be received from or paid to any third party contingent on the award of any contract by the State, except as shall have been expressly communicated to the State Purchasing Agent in writing prior to acceptance of the Contract or award in question. Each individual signing below warrants that he or she is duly authorized by their respective Party to sign this Contract and bind the Party to the terms and conditions of this Contract. Vendor and their authorized signatory further warrant that no officer or employee of the State has any direct or indirect financial or personal beneficial interest, in the subject matter of this Contract; obligation or contract for future award of compensation as an inducement or consideration for making this Contract. Subsequent discovery by the State of non-compliance with these provisions shall constitute sufficient cause for immediate termination of all outstanding contracts. Violations of this provision may result in debarment of the Vendor(s) as permitted by 9 NCAC 06B.1030, or other provision of law.

11) Availability of Funds: Any and all payments to Vendor are expressly contingent upon and subject to the appropriation, allocation and availability of funds to the Agency for the purposes set forth in this Contract. If this Contract or any Purchase Order issued hereunder is funded in whole or in part by federal funds, the Agency's performance and payment shall be subject to and contingent upon the continuing availability of said federal funds for the purposes of the Contract or Purchase Order. If the term of this Contract extends into fiscal years, subsequent to that in which it is approved, such continuation of the Contract is expressly contingent upon the appropriation, allocation and availability of funds by the N.C. Legislature for the purposes set forth in the Contract. If funds to effect payment are not available, the Agency will provide written notification to Vendor. If the Contract is terminated under this paragraph, Vendor agrees to take back any affected Deliverables and software not yet delivered under this Contract, terminate any services supplied to the Agency under this Contract, and relieve the Agency of any further obligation thereof. The State shall remit payment for Deliverables and services accepted prior to the date of the aforesaid notice in conformance with the payment terms.

12) Payment Terms: Payment terms are Net 30 days after receipt of correct invoice or acceptance of the Deliverables, whichever is later; unless a period of more than 30 days is required by the Agency. The Purchasing State Agency is responsible for all payments under the Contract. No additional charges to the Agency will be permitted based upon, or arising from, the Agency's use of a Business Procurement Card. The State may exercise any and all rights of Set Off as permitted in Chapter 105A-1 et. seq. of the N.C. General Statutes and applicable Administrative Rules. Upon Vendor's written request of not less than 30 days and approval by the State or Agency, the Agency may:

- a) Forward the Vendor's payment check(s) directly to any person or entity designated by the Vendor, or
- b) Include any person or entity designated in writing by Vendor as a joint payee on the Vendor's payment check(s), however
- c) In no event shall such approval and action obligate the State to anyone other than the Vendor and the Vendor shall remain responsible for fulfillment of all Contract obligations.

13) Acceptance Criteria: In the event that acceptance of Deliverables is not described in additional Contract documents, the State shall have the obligation to notify Vendor, in writing ten calendar days following installation of any Deliverable described in the Contract if it is not acceptable. The notice shall specify in reasonable detail the reason(s) a deliverable is unacceptable. Acceptance by the State shall not be unreasonably withheld; but may be conditioned or delayed as required for installation and/or testing of Deliverables. Final acceptance is expressly conditioned upon completion of all applicable inspection and testing procedures. Should the Deliverables fail to meet any specifications or acceptance criteria the State may exercise any and all rights hereunder, including such rights provided by the Uniform Commercial Code as adopted in North Carolina. Deliverables discovered to be defective or failing to conform to the specifications may be rejected upon initial inspection or at any later time if the defects contained in the Deliverables or non-compliance with the specifications was not reasonably ascertainable upon initial inspection. If the Vendor fails to promptly cure the defect or replace the Deliverables, the State reserves the right to cancel the Purchase Order, contract with a different Vendor, and to invoice the original Vendor for any differential in price over the original Contract price. When Deliverables are rejected, the Vendor must remove the rejected Deliverables from the premises of the State Agency within seven (7) calendar days of notification, unless otherwise agreed by the State Agency. Rejected items may be regarded as abandoned if not removed by Vendor as provided herein.

14) Equal Employment Opportunity: Vendor shall comply with all Federal and State requirements concerning fair employment and employment of the disabled, and concerning the treatment of all employees without regard to discrimination by reason of race, color, religion, sex, national origin or physical disability.

15) Inspection at Vendor's Site: The State reserves the right to inspect, during Vendor's regular business hours at a reasonable time, upon notice of not less than two (2) weeks, and at its own expense, the prospective Deliverables comprising equipment or other tangible goods, or the plant or other physical facilities of a prospective Vendor prior to Contract award, and during the Contract term as necessary or proper to ensure conformance with the specifications/requirements and their adequacy and suitability for the proper and effective performance of the Contract.

16) Advertising/Press Release: The Vendor absolutely shall not publicly disseminate any information concerning the Contract without prior written approval from the State or its Agent. For the purpose of this provision of the Contract, the Agent is the Purchasing Agency Contract Administrator unless otherwise named in the solicitation documents.

17) Confidentiality: In accordance with 9 NCAC 06B.0103, 06B.0207 and 06B.1001 and to promote maximum competition in the State competitive bidding process, the State may maintain the confidentiality of certain types of information described in N.C. Gen. Stat. §132-1 et. seq. Such information may include trade secrets defined by N.C. Gen. Stat. §66-152 and other information exempted from the Public Records Act pursuant to N.C. Gen. Stat. §132-1.2. Vendor may designate appropriate portions of its response as confidential, consistent with and to the extent permitted under the Statutes and Rules set forth above, by marking the top and bottom of pages containing confidential information with a legend in boldface type "**CONFIDENTIAL**". By so marking any page, the Vendor warrants that it has formed a good faith opinion, having received such necessary or proper review by counsel and other knowledgeable advisors that the portions marked confidential meet the requirements of the Rules and Statutes set forth above. **However, under no**

circumstances shall price information be designated as confidential. The State may serve as custodian of Vendor's confidential information and not as an arbiter of claims against Vendor's assertion of confidentiality. If an action is brought pursuant to N.C. Gen. Stat. §132-9 to compel the State to disclose information marked confidential, the Vendor agrees that it will intervene in the action through its counsel and participate in defending the State, including any public official(s) or public employee(s). The Vendor agrees that it shall hold the State and any official(s) and individual(s) harmless from any and all damages, costs, and attorneys' fees awarded against the State in the action. The State agrees to promptly notify the Vendor in writing of any action seeking to compel the disclosure of Vendor's confidential information. The State shall have the right, at its option and expense, to participate in the defense of the action through its counsel. The State shall have no liability to Vendor with respect to the disclosure of Vendor's confidential information ordered by a court of competent jurisdiction pursuant to N.C. Gen. Stat. §132-9 or other applicable law.

a) Care of Information: Vendor agrees to use commercial best efforts to safeguard and protect any data, documents, files, and other materials received from the State or the Agency during performance of any contractual obligation from loss, destruction or erasure.

b) Vendor warrants that all its employees and any approved third party Vendors or subcontractors are subject to a non-disclosure and confidentiality agreement enforceable in North Carolina. Vendor will, upon request of the State, verify and produce true copies of any such agreements. Production of such agreements by Vendor may be made subject to applicable confidentiality, non-disclosure or privacy laws; provided that Vendor produces satisfactory evidence supporting exclusion of such agreements from disclosure under the N.C. Public Records laws in NCGS §132-1 et. seq. The State may, in its sole discretion, provide a non-disclosure and confidentiality agreement satisfactory to the State for Vendor's execution. The State may exercise its rights under this subparagraph as necessary or proper, in its discretion, to comply with applicable security regulations or statutes including, but not limited to 26 USC 6103 and IRS Publication 1075, (Tax Information Security Guidelines for Federal, State, and Local Agencies), HIPAA, 42 USC 1320(d) (Health Insurance Portability and Accountability Act), any implementing regulations in the Code of Federal Regulations, and any future regulations imposed upon the Office of Information Technology Services or the N.C. Department of Revenue pursuant to future statutory or regulatory requirements.

c) Nondisclosure: Vendor agrees and specifically warrants that it, its officers, directors, principals and employees, and any subcontractors, shall hold all information received during performance of this Contract in the strictest confidence and shall not disclose the same to any third party without the express written approval of the State.

18) Deliverables: Deliverables, as used herein, shall comprise all project materials, including goods, software licenses, data, and documentation created during the performance or provision of services hereunder. Deliverables are the property of the State of North Carolina. Proprietary Vendor materials licensed to the State shall be identified to the State by Vendor prior to use or provision of services hereunder and shall remain the property of the Vendor. Embedded software or firmware shall not be a severable Deliverable. Deliverables include "Work Product" and means any expression of Licensor's findings, analyses, conclusions, opinions, recommendations, ideas, techniques, know-how, designs, programs, enhancements, and other technical information; but not source and object code or software. All Software source and object code is the property of Licensor and is licensed nonexclusively to the State, at no additional license fee, pursuant to the terms of the software license contained herein, and in the Supplemental Terms and Conditions for Software and Services or the License Agreement if incorporated in the Solicitation Documents.

19) Late Delivery, Back Order: Vendor shall advise the Agency contact person or office immediately upon determining that any Deliverable will not, or may not, be delivered at the time or place specified. Together with such notice, Vendor shall state the projected delivery time and date. In the event the delay projected by Vendor is unsatisfactory, the Agency shall so advise Vendor and may proceed to procure substitute Deliverables or services.

20) Patent, Copyright, and Trade Secret Protection:

a) Vendor has created, acquired or otherwise has rights in, and may, in connection with the performance of services for the State, employ, provide, create, acquire or otherwise obtain rights in various concepts, ideas, methods, methodologies, procedures, processes, know-how, techniques, models, templates and general purpose consulting and software tools, utilities and routines (collectively, the "Vendor Technology"). To the extent that any Vendor Technology is contained in any of the Deliverables including any derivative works, the Vendor hereby grants the State a royalty-free, fully paid, worldwide, perpetual, non-exclusive license to use such Vendor Technology in connection with the Deliverables for the State's purposes.

b) Vendor shall not acquire any right, title and interest in and to the copyrights for goods, any and all software, technical information, specifications, drawings, records, documentation, data or derivative works thereof, or other work products provided by the State to Vendor. The State hereby grants Vendor a royalty-free, fully paid, worldwide, perpetual, non-exclusive license for Vendor's internal use to non-confidential Deliverables first originated and prepared by the Vendor for delivery to the State.

c) The Vendor, at its own expense, shall defend any action brought against the State to the extent that such action is based upon a claim that the services or Deliverables supplied by the Vendor, or the operation of such Deliverables

pursuant to a current version of Vendor-supplied software, infringes a patent, or copyright or violates a trade secret in the United States. The Vendor shall pay those costs and damages finally awarded against the State in any such action. Such defense and payment shall be conditioned on the following:

- i) That the Vendor shall be notified within a reasonable time in writing by the State of any such claim; and,
 - ii) That the Vendor shall have the sole control of the defense of any action on such claim and all negotiations for its settlement or compromise provided, however, that the State shall have the option to participate in such action at its own expense.
- d) Should any services or software supplied by Vendor, or the operation thereof become, or in the Vendor's opinion are likely to become, the subject of a claim of infringement of a patent, copyright, or a trade secret in the United States, the State shall permit the Vendor, at its option and expense, either to procure for the State the right to continue using the goods/hardware or software, or to replace or modify the same to become non-infringing and continue to meet procurement specifications in all material respects. If neither of these options can reasonably be taken, or if the use of such goods/hardware or software by the State shall be prevented by injunction, the Vendor agrees to take back such goods/hardware or software, and refund any sums the State has paid Vendor less any reasonable amount for use or damage and make every reasonable effort to assist the State in procuring substitute Deliverables. If, in the sole opinion of the State, the return of such infringing Deliverables makes the retention of other items of Deliverables acquired from the Vendor under this Contract impractical, the State shall then have the option of terminating the Contract, or applicable portions thereof, without penalty or termination charge. The Vendor agrees to take back such Deliverables and refund any sums the State has paid Vendor less any reasonable amount for use or damage.
- e) Vendor will not be required to defend or indemnify the State if any claim by a third party against the State for infringement or misappropriation (i) results from the State's alteration of any Vendor-branded product or Deliverable, or (ii) results from the continued use of the good(s) or Services and Deliverables after receiving notice they infringe a trade secret of a third party.
- f) Nothing stated herein, however, shall affect Vendor's ownership in or rights to its preexisting intellectual property and proprietary rights.

21) Access to Persons and Records: Pursuant to N.C. General Statute 147-64.7, the Agency, the State Auditor, appropriate federal officials, and their respective authorized employees or agents are authorized to examine all books, records, and accounts of the Vendor insofar as they relate to transactions with any department, board, officer, commission, institution, or other Agency of the State of North Carolina pursuant to the performance of this Contract or to costs charged to this Contract. The Vendor shall retain any such books, records, and accounts for a minimum of three (3) years after the completion of this Contract. Additional audit or reporting requirements may be required by any Agency, if in the Agency's opinion, such requirement is imposed by federal or state law or regulation.

22) Assignment: Vendor may not assign this Contract or its obligations hereunder except as permitted by 09 NCAC 06B.1003 and this Paragraph. Vendor shall provide reasonable notice of not less than thirty (30) days prior to any consolidation, acquisition, or merger. Any assignee shall affirm this Contract atoning to the terms and conditions agreed, and that Vendor shall affirm that the assignee is fully capable of performing all obligations of Vendor under this Contract. An assignment may be made, if at all, in writing by the Vendor, Assignee and the State setting forth the foregoing obligation of Vendor and Assignee.

23) Insurance Coverage: During the term of the Contract, the Vendor at its sole cost and expense shall provide commercial insurance of such type and with such terms and limits as may be reasonably associated with the Contract. As a minimum, the Vendor shall provide and maintain the following coverage and limits:

- a) **Worker's Compensation** - The Vendor shall provide and maintain Worker's Compensation Insurance, as required by the laws of North Carolina, as well as employer's liability coverage with minimum limits of \$100,000.00, covering all of Vendor's employees who are engaged in any work under the Contract. If any work is sublet, the Vendor shall require the subcontractor to provide the same coverage for any of his employees engaged in any work under the Contract ; and
- b) **Commercial General Liability** - General Liability Coverage on a Comprehensive Broad Form on an occurrence basis in the minimum amount of \$2,000,000.00 Combined Single Limit (Defense cost shall be in excess of the limit of liability); and
- c) **Automobile** - Automobile Liability Insurance, to include liability coverage, covering all owned, hired and non-owned vehicles, used in connection with the Contract. The minimum combined single limit shall be \$500,000.00 bodily injury and property damage; \$500,000.00 uninsured/under insured motorist; and \$5,000.00 medical payment; and
- d) Providing and maintaining adequate insurance coverage described herein is a material obligation of the Vendor and is of the essence of this Contract. All such insurance shall meet all laws of the State of North Carolina. Such insurance coverage shall be obtained from companies that are authorized to provide such coverage and that are

authorized by the Commissioner of Insurance to do business in North Carolina. The Vendor shall at all times comply with the terms of such insurance policies, and all requirements of the insurer under any such insurance policies, except as they may conflict with existing North Carolina laws or this Contract. The limits of coverage under each insurance policy maintained by the Vendor shall not be interpreted as limiting the Vendor's liability and obligations under the Contract.

24) Dispute Resolution: The parties agree that it is in their mutual interest to resolve disputes informally. A claim by the Vendor shall be submitted in writing to the Agency Contract Administrator for decision. A claim by the State shall be submitted in writing to the Vendor's Contract Administrator for decision. The Parties shall negotiate in good faith and use all reasonable efforts to resolve such dispute(s). During the time the Parties are attempting to resolve any dispute, each shall proceed diligently to perform their respective duties and responsibilities under this Contract. If a dispute cannot be resolved between the Parties within thirty (30) days after delivery of notice, either Party may elect to exercise any other remedies available under this Contract, or at law. This term shall not constitute an agreement by either party to mediate or arbitrate any dispute.

25) Default: In the event any Deliverable furnished by the Vendor during performance of any Contract term fails to conform to any material requirement of the Contract specifications, notice of the failure is provided by the State and if the failure is not cured within ten (10) days, or Vendor fails to meet the requirements of Paragraph 13) herein, the State may cancel and procure the articles or services from other sources; holding Vendor liable for any excess costs occasioned thereby, subject only to the limitations provided in Paragraphs 28) and 29) and the obligation to informally resolve disputes as provided in Paragraph 24) of these Terms and Conditions. Default may be cause for debarment as provided in 09 NCAC 06B.1030. The State reserves the right to require performance guaranties pursuant to 09 NCAC 06B.1031 from the Vendor without expense to the State. The rights and remedies of the State provided above shall not be exclusive and are in addition to any other rights and remedies provided by law or under the Contract.

a) If Vendor fails to deliver Deliverables within the time required by this Contract, the State may provide written notice of said failure to Vendor, and by such notice require payment of a penalty.

b) Should the State fail to perform any of its obligations upon which Vendor's performance is conditioned, Vendor shall not be in default for any delay, cost increase or other consequences due to the State's failure. Vendor will use reasonable efforts to mitigate delays, costs or expenses arising from assumptions in the Vendor's bid documents that prove erroneous or are otherwise invalid. Any deadline that is affected by any such failure in assumptions or performance by the State shall be extended by an amount of time reasonably necessary to compensate for the effect of such failure.

c) Vendor shall provide a plan to cure any default if requested by the State. The plan shall state the nature of the default, the time required for cure, any mitigating factors causing or tending to cause the default, and such other information as the Vendor may deem necessary or proper to provide.

26) Waiver of Default: Waiver by either party of any default or breach by the other Party shall not be deemed a waiver of any subsequent default or breach and shall not be construed to be a modification or notation of the terms of this Contract, unless so stated in writing and signed by authorized representatives of the Agency and the Vendor, and made as an amendment to this Contract pursuant to Paragraph 40) herein below.

27) Termination: Any notice or termination made under this Contract shall be transmitted via US Mail, Certified Return Receipt Requested. The period of notice for termination shall begin on the day the return receipt is signed and dated.

a) The parties may mutually terminate this Contract by written agreement at any time.

b) The State may terminate this Contract, in whole or in part, pursuant to Paragraph 25), or pursuant to the Special Terms and Conditions in the Solicitation Documents, if any, or for any of the following:

i) Termination for Cause: In the event any goods, software, or service furnished by the Vendor during performance of any Contract term fails to conform to any material requirement of the Contract, and the failure is not cured within the specified time after providing written notice thereof to Vendor, the State may cancel and procure the articles or services from other sources; holding Vendor liable for any excess costs occasioned thereby, subject only to the limitations provided in Paragraphs 28) and 29) herein. The rights and remedies of the State provided above shall not be exclusive and are in addition to any other rights and remedies provided by law or under the Contract. Vendor shall not be relieved of liability to the State for damages sustained by the State arising from Vendor's breach of this Contract; and the State may, in its discretion, withhold any payment due as a set off until such time as the damages are finally determined or as agreed by the parties. Voluntary or involuntary Bankruptcy or receivership by Vendor shall be cause for termination.

ii) Termination for Convenience without Cause: The State may terminate service and indefinite quantity contracts, in whole or in part by giving 30 days prior notice in writing to the Vendor. Vendor shall be entitled to sums due as compensation for Deliverables provided and services performed in conformance with the Contract.

In the event the Contract is terminated for the convenience of the State, the Agency will pay for all work performed and products delivered in conformance with the Contract up to the date of termination.

28) Limitation of Vendor's Liability:

- a) Where Deliverables are under the State's exclusive management and control, the Vendor shall not be liable for direct damages caused by the State's failure to fulfill any State responsibilities of assuring the proper use, management and supervision of the Deliverables and programs, audit controls, operating methods, office procedures, or for establishing all proper checkpoints necessary for the State's intended use of the Deliverables.
- b) The Vendor's liability for damages to the State for any cause whatsoever, and regardless of the form of action, whether in contract or in tort, shall be limited to two times the value of the Contract.
- c) The foregoing limitation of liability shall not apply to the payment of costs and damage awards referred to in the Paragraph entitled "Patent, Copyright, and Trade Secret Protection", to claims covered by other specific provisions calling for liquidated damages or specifying a different limit of liability, or to claims for injury to persons or damage to property caused by Vendor's negligence or willful or wanton conduct. This limitation of liability does not apply to the receipt of court costs or attorney's fees that might be awarded by a court in addition to damages after litigation based on this Contract.

29) Vendor's Liability for Injury to Persons or Damage to Property:

- a) The Vendor shall be liable for damages arising out of personal injuries and/or damage to real or tangible personal property of the State, employees of the State, persons designated by the State for training, or person(s) other than agents or employees of the Vendor, designated by the State for any purpose, prior to, during, or subsequent to delivery, installation, acceptance, and use of the Deliverables either at the Vendor's site or at the State's place of business, provided that the injury or damage was caused by the fault or negligence of the Vendor.
- b) The Vendor agrees to indemnify, defend and hold the Agency and the State and its Officers, employees, agents and assigns harmless from any liability relating to personal injury or injury to real or personal property of any kind, accruing or resulting to any other person, firm or corporation furnishing or supplying work, services, materials or supplies in connection with the performance of this contract, whether tangible or intangible, arising out of the ordinary negligence, willful or wanton negligence, or intentional acts of the Vendor, its officers, employees, agents, assigns or subcontractors, in the performance of this Contract.
- c) Vendor shall not be liable for damages arising out of or caused by an alteration or an attachment not made or installed by the Vendor, or for damage to alterations or attachments that may result from the normal operation and maintenance of the Vendor's goods.

30) General Indemnity: The Vendor shall hold and save the State, its officers, agents and employees, harmless from liability of any kind, including all claims and losses, with the exception of consequential damages, accruing or resulting to any other person, firm or corporation furnishing or supplying work, services, materials or supplies in connection with the performance of this Contract. The foregoing indemnification and defense by the Vendor shall be conditioned upon the following:

- a) The Agency shall give Vendor written notice within thirty (30) days after it has actual knowledge of any such claim(s) or action(s) filed; and
- b) The Vendor shall have the sole control of the defense of any such claim(s) or action(s) filed and of all negotiations relating to settlement or compromise thereof, provided, however, that the Agency or State shall have the option to participate at their own expense in the defense of such claim(s) or action(s) filed.

31) Changes: This Contract and subsequent purchase order(s) is awarded subject to shipment of quantities, qualities, and prices indicated by the order or Contract, and all conditions and instructions of the Contract or proposal on which it is based. Any changes made to this Contract or purchase order proposed by the Vendor are hereby rejected unless accepted in writing by the Agency or State Award Authority. The State shall not be responsible for Deliverables or services delivered without a purchase order from the Agency or State Award Authority.

32) Stop Work Order: The State may issue a written Stop Work Order to Vendor for cause at any time requiring Vendor to suspend or stop all, or any part, of the performance due under this Contract for a period up to 90 days after the Stop Work Order is delivered to the Vendor. The 90-day period may be extended for any further period for which the parties may agree.

- a) The Stop Work Order shall be specifically identified as such and shall indicate that it is issued under this term. Upon receipt of the Stop Work Order, the Vendor shall immediately comply with its terms and take all reasonable steps to minimize incurring costs allocable to the work covered by the Stop Work Order during the period of work suspension or stoppage. Within a period of 90 days after a Stop Work Order is delivered to Vendor, or within any extension of that period to which the parties agree, the State shall either:
 - i) Cancel the Stop Work Order, or

- ii) Terminate the work covered by the Stop Work Order as provided for in the termination for default or the termination for convenience clause of this Contract.
- b) If a Stop Work Order issued under this clause is canceled or the period of the Stop Work Order or any extension thereof expires, the Vendor shall resume work. The State shall make an equitable adjustment in the delivery schedule, the Contract price, or both, and the Contract shall be modified, in writing, accordingly, if:
 - i) The Stop Work Order results in an increase in the time required for, or in the Vendor's cost properly allocable to the performance of any part of this Contract, and
 - ii) The Vendor asserts its right to an equitable adjustment within 30 days after the end of the period of work stoppage; provided that if the State decides the facts justify the action, the State may receive and act upon a proposal submitted at any time before final payment under this Contract.
- c) If a Stop Work Order is not canceled and the work covered by the Stop Work Order is terminated in accordance with the provision entitled Termination for Convenience of the State, the State shall allow reasonable direct costs resulting from the Stop Work Order in arriving at the termination settlement.
- d) The State shall not be liable to the Vendor for loss of profits because of a Stop Work Order issued under this term.

33) Price Adjustments for Term Contracts: Reserved.

34) Time is of the Essence. Time is of the essence in the performance of this Contract.

35) Date and Time Warranty: The Vendor warrants that any Deliverable, whether hardware, firmware, middleware, custom or commercial software, or internal components, subroutines, and interface therein which performs any date and/or time data recognition function, calculation, or sequencing, will provide accurate date/time data and leap year calculations. This warranty shall survive termination or expiration of the Contract.

36) Independent Contractors: Vendor and its employees, officers and executives, and subcontractors, if any, shall be independent Vendors and not employees or agents of the State. This Contract shall not operate as a joint venture, partnership, trust, agency or any other business relationship.

37) Transportation: Transportation of Deliverables shall be FOB Destination; unless otherwise specified in the solicitation document or purchase order. Freight, handling, hazardous material charges, and distribution and installation charges shall be included in the total price of each item. Any additional charges shall not be honored for payment unless authorized in writing by the Purchasing State Agency. In cases where parties, other than the Vendor ship materials against this order, the shipper must be instructed to show the purchase order number on all packages and shipping manifests to ensure proper identification and payment of invoices. A complete packing list must accompany each shipment.

38) Notices: Any notices required under this Contract should be delivered to the Contract Administrator for each party. Unless otherwise specified in the Solicitation Documents, any notices shall be delivered in writing by U.S. Mail, Commercial Courier or by hand.

39) Titles and Headings: Titles and Headings in this Contract are used for convenience only and do not define, limit or proscribe the language of terms identified by such Titles and Headings.

40) Amendment: This Contract may not be amended orally or by performance. Any amendment must be made in written form and signed by duly authorized representatives of the State and Vendor in conformance with Paragraph 31) herein.

41) Taxes: The State of North Carolina is exempt from Federal excise taxes and no payment will be made for any personal property taxes levied on the Vendor or for any taxes levied on employee wages. Agencies of the State may have additional exemptions or exclusions for federal or state taxes. Evidence of such additional exemptions or exclusions may be provided to Vendor by Agencies, as applicable, during the term of this Contract. Applicable State or local sales taxes shall be invoiced as a separate item.

42) Governing Laws, Jurisdiction, and Venue:

- a) This Contract is made under and shall be governed and construed in accordance with the laws of the State of North Carolina. The place of this Contract or purchase order, its situs and forum, shall be Wake County, North Carolina, where all matters, whether sounding in contract or in tort, relating to its validity, construction, interpretation and enforcement shall be determined. Vendor agrees and submits, solely for matters relating to this Contract, to the jurisdiction of the courts of the State of North Carolina, and stipulates that Wake County shall be the proper venue for all matters.
- b) Except to the extent the provisions of the Contract are clearly inconsistent therewith, the applicable provisions of the Uniform Commercial Code as modified and adopted in North Carolina shall govern this Contract. To the extent the Contract entails both the supply of "goods" and "services," such shall be deemed "goods" within the meaning of the Uniform Commercial Code, except when deeming such services as "goods" would result in a clearly unreasonable interpretation.

43) Force Majeure: Neither party shall be deemed to be in default of its obligations hereunder if and so long as it is prevented from performing such obligations as a result of events beyond its reasonable control, including without

limitation, fire, power failures, any act of war, hostile foreign action, nuclear explosion, riot, strikes or failures or refusals to perform under subcontracts, civil insurrection, earthquake, hurricane, tornado, or other catastrophic natural event or act of God.

44) Compliance with Laws: The Vendor shall comply with all laws, ordinances, codes, rules, regulations, and licensing requirements that are applicable to the conduct of its business, including those of federal, state, and local agencies having jurisdiction and/or authority. In providing Services and Deliverables, and without limiting or modifying in any respect the Vendor's obligations, Vendor shall comply, and shall cause each of its employees and subcontractors to comply at all times, with State policies that are of general application to State contractors or that Vendor has otherwise agreed to, comply with, including, without limitation, the Statewide Information Security Manual and ITS Security Standards and Policies.

45) Severability: In the event that a court of competent jurisdiction holds that a provision or requirement of this Contract violates any applicable law, each such provision or requirement shall be enforced only to the extent it is not in violation of law or is not otherwise unenforceable and all other provisions and requirements of this Contract shall remain in full force and effect. All promises, requirement, terms, conditions, provisions, representations, guarantees and warranties contained herein shall survive the expiration or termination date unless specifically provided otherwise herein, or unless superseded by applicable federal or State statute, including statutes of repose or limitation.

46) Federal Intellectual Property Bankruptcy Protection Act: The Parties agree that the Agency shall be entitled to all rights and benefits of the Federal Intellectual Property Bankruptcy Protection Act, Public Law 100-506, codified at 11 U.S.C. 365(n), and any amendments thereto.

47) Electronic Procurement (Applies to all contracts that include E-Procurement and are identified as such in the body of the solicitation document): Purchasing shall be conducted through the Statewide E-Procurement Service. The State's third party agent shall serve as the Supplier Manager for this E-Procurement Service. The Vendor shall register for the Statewide E-Procurement Service within two (2) business days of notification of award in order to receive an electronic purchase order resulting from award of this contract.

a) **The successful Vendor(s) shall pay a transaction fee of 1.75% (.0175) on the total dollar amount (excluding sales taxes) of each purchase order issued through the Statewide E-Procurement Service.** This applies to all purchase orders, regardless of the quantity or dollar amount of the purchase order. The transaction fee shall neither be charged to nor paid by the State, or by any State approved users of the contract. The transaction fee shall not be stated or included as a separate item in the proposed contract or invoice. There are no additional fees or charges to the Vendor for the services rendered by the Supplier Manager under this contract. Vendor will receive a credit for transaction fees they paid for the purchase of any item(s) if an item(s) is returned through no fault of the Vendor. Transaction fees are non-refundable when an item is rejected and returned, or declined, due to the Vendor's failure to perform or comply with specifications or requirements of the contract.

b) Vendor, or its authorized Reseller, as applicable, will be invoiced monthly for the State's transaction fee by the Supplier Manager. The transaction fee shall be based on purchase orders issued for the prior month. Unless Supplier Manager receives written notice from the Vendor identifying with specificity any errors in an invoice within thirty (30) days of the receipt of invoice, such invoice shall be deemed to be correct and Vendor shall have waived its right to later dispute the accuracy and completeness of the invoice. Payment of the transaction fee by the Vendor is due to the account designated by the State within thirty (30) days after receipt of the correct invoice for the transaction fee, which includes payment of all portions of an invoice not in dispute. Within thirty (30) days of the receipt of invoice, Vendor may request in writing an extension of the invoice payment due date for that portion of the transaction fee invoice for which payment of the related goods by the governmental purchasing entity has not been received by the Vendor. If payment of the transaction fee invoice is not received by the State within this payment period, it shall be considered a material breach of contract. The Supplier Manager shall provide, whenever reasonably requested by the Vendor in writing (including electronic documents), supporting documentation from the E-Procurement Service that accounts for the amount of the invoice.

c) The Supplier Manager will capture the order from the State approved user, including the shipping and payment information, and submit the order in accordance with the E-Procurement Service. Subsequently, the Supplier Manager will send those orders to the appropriate Vendor on State Contract. The State or State approved user, not the Supplier Manager, shall be responsible for the solicitation, bids received, evaluation of bids received, award of contract, and the payment for goods delivered.

d) Vendor agrees at all times to maintain the confidentiality of its user name and password for the Statewide E-Procurement Services. If a Vendor is a corporation, partnership or other legal entity, then the Vendor may authorize its employees to use its password. Vendor shall be responsible for all activity and all charges for such employees. Vendor agrees not to permit a third party to use the Statewide E-Procurement Services through its account. If there is a breach of security through the Vendor's account, Vendor shall immediately change its password and notify the Supplier Manager of the security breach by e-mail. Vendor shall cooperate with the state and the Supplier Manager to mitigate and correct any security breach.

48) Electronic Procurement (Applies only to Statewide Term Contracts): Reserved

North Carolina Office of Information Technology Supplemental Terms and Conditions for Software and Services

1) Supplement: The additional terms and conditions set forth herein shall supplement the General Terms and Conditions for Goods and Related Services. In the event of a conflict between this Supplement and the General Terms and Conditions, or any other document, the order of precedence shall be determined by the State's solicitation document(s).

2) License Grant: This paragraph recites the scope of license granted, if not superseded by a separate licensing agreement as follows:

a) Vendor grants to the State, its Agencies and lawful customers a non-exclusive, non-transferable and non-sub-licensable license to use, in object code format, Vendor's software identified in the solicitation documents, Vendor's Statement of Work (SOW), or an Exhibit thereto executed by the parties ("Software"), subject to the restrictions set forth therein, such as the authorized computer system, the data source type(s), the number of target instance(s) and the installation site. Use of the Software shall be limited to the data processing and computing needs of the State, its Agencies and lawful customers. This license shall be perpetual unless terminated as provided herein. The State agrees not to distribute, sell, sublicense or otherwise transfer copies of the Software or any portion thereof. For purposes of this Agreement, a State Entity shall be defined as any department or agency of the State of North Carolina, which is controlled by or under common control of the State or who is a lawful customer of the State pursuant to Article 3D of Chapter 147 of the General Statutes.

b) Vendor shall provide all encryption or identification codes or authorizations that are necessary or proper for the operation of the licensed Software.

c) The State shall have the right to copy the Software, in whole or in part, for use in conducting benchmark or acceptance tests, for business recovery and disaster recovery testing or operations, for archival or emergency purposes, for back up purposes, for use in preparing derivative works if allowed by the solicitation documents or statements of work, or to replace a worn copy.

d) The State may modify non-personal Software in machine-readable form for its internal use in merging the same with other software program material. Any action hereunder shall be subject to uses described in this paragraph, the restrictions imposed by Paragraph 2, and applicable terms in the solicitation documents or statements of work.

3) Restrictions. State's use of the Software is restricted as follows:

a) The license granted herein is granted to the State and to any political subdivision or other entity permitted or authorized to procure Information Technology through the Office of Information Technology. If the License Grant and License Fees are based upon the number of Users, the number of Users may be increased at any time, subject to the restrictions on the maximum number of Users specified in the solicitation documents.

b) No right is granted hereunder to use the Software to perform services for commercial third parties (so-called "service bureau" uses). Services provided to other State Departments, Agencies or political subdivisions of the State are permitted.

c) The State may not copy, distribute, reproduce, use, lease, rent or allow access to the Software except as explicitly permitted under this Agreement, and State will not modify, adapt, translate, prepare derivative works (unless allowed by the solicitation documents or statements of work,) decompile, reverse engineer, disassemble or otherwise attempt to derive source code from the Software or any internal data files generated by the Software.

d) State shall not remove, obscure or alter Vendor's copyright notice, trademarks, or other proprietary rights notices affixed to or contained within the Software.

4) Vendor's Retained Rights: Subject only to the rights granted to State hereunder, Vendor retains all right, title and interest in and to the Software and all copies of the Software, including without limitation all modifications, enhancements, upgrades and new versions with respect to any of the foregoing, all patent rights, copyrights and trade secret rights embodying any of the foregoing, and all know-how, concepts, inventions and ideas related to the foregoing. State shall provide Vendor with access to State's facilities, at reasonable times and upon reasonable notice, to verify State's compliance with the terms of this Agreement.

5) Support or Maintenance Services: This paragraph recites the scope of maintenance services due under the license granted, if not superseded by a separate licensing and maintenance agreement or as may be stated in the solicitation documents. Subject to payment of a Support Service or Maintenance Fee stated in the solicitation documents for the first

year and all subsequent years, if requested by the State, Vendor agrees to provide the following support services ("Support Services") for the current version and one previous version of the Software commencing upon delivery of the Software:

a) Error Correction: If the error conditions reported by the State pursuant to the General Terms and Conditions are not corrected in a timely manner, the State may request a replacement copy of the licensed Software from Vendor. In such event, Vendor shall then deliver a replacement copy, together with corrections and updates, of the licensed Software within 24 hours of the State's request at no added expense to the State.

b) Other Agreement: This Paragraph 6 may be superseded by agreement provided that: Support and maintenance services shall be fully described in a separate agreement annexed hereto and incorporated herein

c) Temporary Extension of License: If any licensed Software or CPU/computing system on which the Software is installed fails to operate or malfunctions, the term of the license granted shall be temporarily extended to another CPU selected by the State and continue until the earlier of:

- i) Return of the inoperative CPU to full operation, or
- ii) Termination of the license.

d) Encryption Code: Vendor shall provide any temporary encryption code or authorization necessary or proper for operation of the licensed Software under the foregoing temporary license. The State will provide notice by expedient means, whether by telephone, e-mail or facsimile of any failure under this paragraph. On receipt of such notice, Vendor shall issue any temporary encryption code or authorization to the State within 24 hours; unless otherwise agreed.

e) Updates. Vendor shall provide to the State, at no additional charge, all new releases and bug fixes (collectively referred to as "Updates") for any Software Deliverable developed or published by Vendor and made generally available to its other customers at no additional charge. All such Updates shall be a part of the Program and Documentation and, as such, be governed by the provisions of this Contract.

f) Telephone Assistance. Vendor shall provide the State with telephone access to technical support engineers for assistance in the proper installation and use of the Software, and to report and resolve Software problems, during normal business hours, **6:00 AM - 6:00 PM Eastern Time, Monday-Friday**. Vendor shall respond to the telephone requests for Program maintenance service, within **four (4) hours**, for calls made at any time

6) Termination of Support or Maintenance: If the State fails to pay Support or Maintenance Services for the Software or choose not to pay for Support or Maintenance Services, the State may continue to use the Software pursuant to the license granted hereunder, but will not be entitled to receive routine Support Services for such Software. If the State does not subscribe or purchase Support or Maintenance Services effective with the date of this Contract, Support or Maintenance Services may be subsequently subscribed or purchased at any time during the term of this Contract by payment of Support Service or Maintenance Fees at Vendor's then current prices. During the term of this Agreement, the State may also purchase implementation services, consulting and training from Vendor at Vendor's then current prices.

7) Program Retirement: Vendor retains the right to retire a version of the Program and stop providing Maintenance, Updates or Services, upon providing 180 day written notice to the State of its intent to do so. The decision to stop maintaining a version of the Program is the sole business discretion of Vendor and shall not be deemed a breach of contract. If Vendor retires the version of the Program provided to the State and if the State has paid all applicable annual Maintenance Fees subsequent to executing this Agreement, the State shall be entitled to receive, at no additional charge, a newer version of the Program that supports substantially the same functionality as the licensed version of the Program. Newer versions of the Program containing substantially increased functionality will be made available to the State for an additional fee.

8) Applies if marked: **Services Provided by Vendor:** Vendor shall provide the State with implementation services as specified in a Statement of Work ("SOW") executed by the parties. This Agreement in combination with each SOW individually comprises a separate and independent contractual obligation from any other SOW. A breach by Vendor under one SOW will not be considered a breach under any other SOW. The services intended hereunder are related to the State's implementation and/or use of one or more Software Deliverables licensed hereunder or in a separate software license agreement between the parties ("License Agreement").

9) Payment Terms: The total License Fee and the Support Service or Maintenance Fee (provided the State subscribes or purchases such services) for the first year shall be invoiced upon delivery of the Software. The Support Service or Maintenance Fee for subsequent contract years, if any, will be invoiced annually 60 days prior to the anniversary date beginning each subsequent year. Increases in Vendor's Contract price for Support Services or Maintenance shall not exceed five percent (5%) per year following the first Contract year. Payment terms for software are Net 30 days after receipt of correct invoice or acceptance of software, whichever is later. Payment terms for services are due and payable

the month following the month for which charges accrue, or in accordance with the contract payment schedule. The using agency is responsible for all payments under the contract.

10) Acceptance: Acceptance testing is required for all Vendor supplied software unless provided otherwise in the solicitation documents or a Statement of Work. The State may define such processes and procedures as may be necessary or proper, in its opinion and discretion, to ensure compliance with the State's specifications and Vendor's technical representations. Acceptance of software or services may be controlled by amendment hereto, or additional terms as agreed by the parties. In the event acceptance of software or services is not described in additional contract documents, the State shall have the obligation to notify Vendor, in writing and within a reasonable time following installation of any software deliverable described in the contract if it is not acceptable. The notice shall specify in reasonable detail the reason(s) a deliverable is unacceptable. Acceptance by the State shall not be unreasonably withheld; but may be conditioned or delayed as required for installation and/or testing of software.

11) Warranty Terms: Notwithstanding anything in this Contract or Exhibit hereto to the contrary, Vendor shall assign warranties for any Deliverable supplied by a third party to the State.

a) Vendor warrants that any Software or Deliverable will operate substantially in conformity with prevailing specifications as defined by the current standard documentation (except for minor defects or errors which are not material to the State) for a period of 90 days from the date of acceptance ("Warranty Period"), unless otherwise specified in the Solicitation Documents. If the Software does not perform in accordance with such specifications during the Warranty Period, Vendor will use reasonable efforts to correct any deficiencies in the Software so that it will perform in accordance with or substantially in accordance with such specifications.

b) Vendor warrants to the best of its knowledge that:

i) The licensed Software and associated materials do not infringe any intellectual property rights of any third party;

ii) There are no actual or threatened actions arising from, or alleged under, any intellectual property rights of any third party;

iii) The licensed Software and associated materials do not contain any surreptitious programming codes, viruses, Trojan Horses, "back doors" or other means to facilitate or allow unauthorized access to the State's information systems.

iv.) The licensed Software and associated materials do not contain any timer, counter, lock or similar device (other than security features specifically approved by Customer in the Specifications) that inhibits or in any way limits the Software's ability to operate.

c) UNLESS MODIFIED BY AMENDMENT OR THE SOLICITATION DOCUMENTS, THE WARRANTIES IN THIS PARAGRAPH ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, OR WHETHER ARISING BY COURSE OF DEALING OR PERFORMANCE, CUSTOM, USAGE IN THE TRADE OR PROFESSION OR OTHERWISE, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND NO OTHER REPRESENTATIONS OR WARRANTIES HAVE FORMED THE BASIS OF THE BARGAIN HEREUNDER.

12) Applies if marked: **Escrow of Code:** Vendor has established an Escrow Agreement ("Escrow Agreement") with a third party escrow agent acceptable to the State, as required in the solicitation documents. Within thirty days from the Effective Date of the Agreement, Vendor will add the State as a beneficiary to such Escrow Agreement. In the event (i) this Agreement is terminated due to insolvency or the filing of involuntary bankruptcy proceedings pursuant to Chapter 7 of the U.S. Bankruptcy Code and (ii) Vendor no longer offers support or maintenance services for the Software (both (i) and (ii) constituting the release condition ("Release Condition") under the Escrow Agreement), the Software code deposited in accordance with the Escrow Agreement (the "Deposit Materials") shall be delivered to the State and the State shall be granted a license to use the Deposit Materials solely to repair, maintain and support the Software licensed to State pursuant to this Agreement. The license to the Deposit Materials under this Section shall terminate upon the termination or cure of the Release Condition.

13) Confidentiality: Vendor shall employ security measures and standards, including encryption technologies, as may be necessary or proper, and as mutually agreed by the State and Vendor during performance of this Agreement. Vendor and its agents, if any, shall not have access to any information except as required to perform Vendor's obligations under this Contract.

14) State Property and Intangibles Rights: The parties acknowledge and agree that the State shall own all right, title and interest in and to the copyright in any and all software, technical information, specifications, drawings, records, documentation, data and other work products first originated and prepared by the Vendor for delivery to the State (the "Deliverables"). To the extent that any Vendor Technology is contained in any of the Deliverables, the Vendor hereby

grants the State a royalty-free, fully paid, worldwide, perpetual, non-exclusive license to use such Vendor Technology in connection with the Deliverables for the State's internal business purposes. Vendor shall not acquire any right, title and interest in and to the copyrights for goods, any and all software, technical information, specifications, drawings, records, documentation, data or derivative works thereof, or other work products provided by the State to Vendor. The State hereby grants Vendor a royalty-free, fully paid, worldwide, perpetual, non-exclusive license to non-confidential Deliverables first originated and prepared by the Vendor for delivery to the State.

15) License Rights: All licenses granted to either party include the right to make, have made, use, have used, import, offer to sell, sell, lease or otherwise transfer any apparatus, or practice and have practiced any method and shall include the right to grant, directly or indirectly, revocable or irrevocable sublicenses to affiliates of such party; and nothing contained in this contract shall be deemed to grant any license under any other patents or patent applications arising out of any other inventions of either party.

16) Default: If the prescribed acceptance testing stated in the Solicitation Documents or performed pursuant to Paragraph 13 of the General Terms and Conditions for Goods and Related Services is not completed successfully, the State may request substitute Software, cancel the portion of the Contract that relates to the unaccepted Software, or continue the acceptance testing with or without the assistance of Vendor. These options shall remain in effect until such time as the testing is successful or the expiration of any time specified for completion of the testing. If the testing is not completed after exercise of any of the State's options, the State may cancel any portion of the contract related to the failed Software and take action to procure substitute software. If the failed software (or the substituted software) is an integral and critical part of the proper completion of the work for which the Deliverables identified in the solicitation documents or statement of work were acquired, the State may terminate the entire contract pursuant to the Default terms in the General Terms and Conditions.

17) Limitation of Liability for Software Deliverables:

a) Where equipment is under the State's exclusive management and control, Vendor shall not be liable for any damages caused by the State's failure to fulfill any State responsibilities including, without limitation, those relating to assuring the proper use, management and supervision of the equipment and programs, audit controls, operating methods, office procedures or for establishing all property checkpoints necessary for the State's intended use of the machines.

b) The Vendor's liability for damages to the State for any cause whatsoever, and regardless of the form of action, whether in contract or in tort, shall not exceed two times the value of the contract, but in no event shall the liability for damages be less than the total value of the contract.

c) WITH THE EXCEPTIONS OF INTELLECTUAL PROPERTY RIGHTS INFRINGEMENT ACTIONS, THE STATE'S CONSTITUTIONAL RIGHTS AS A SOVEREIGN, AND PENALTIES IMPOSED UPON THE STATE BY ANY FEDERAL ENTITY OR EXPENDITURES OF PUBLIC FUNDS REQUIRED OR RESULTING FROM AN OPERATIONAL FAILURE OF THE DELIVERABLE(S) OR SERVICES PROVIDED HEREUNDER, BUT NOTWITHSTANDING ANY OTHER TERM TO THE CONTRARY CONTAINED IN THIS CONTRACT, NEITHER PARTY NOR THEIR RESPECTIVE AFFILIATES SHALL, UNDER ANY CIRCUMSTANCES, BE LIABLE TO THE OTHER PARTY OR ITS AFFILIATES (I) FOR ANY CLAIM BASED UPON ANY THIRD PARTY CLAIM, (II) FOR ANY CONSEQUENTIAL, INCIDENTAL OR INDIRECT DAMAGES OF ANY NATURE WHATSOEVER, INCLUDING, WITHOUT LIMITATION, LOST PROFITS, LOST SAVINGS OR OTHER ECONOMIC CONSEQUENTIAL DAMAGES, WHETHER RESULTING FROM DELAYS, LOSS OF DATA, INTERRUPTION OF SERVICE OR OTHERWISE, EVEN IF A PARTY OR ITS AFFILIATES HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, OR (III) FOR ANY PUNITIVE OR EXEMPLARY DAMAGES OF ANY NATURE WHATSOEVER.

18) Vendor Obligations: In the event the State does not perform the State Obligations in a timely manner; Vendor may revise the applicable SOW and/or amount it is charging for Services, and present it as a Change pursuant to Paragraph 31 of the General Terms and Conditions for Goods and Related Services, or terminate this Agreement, at Vendor's option. For each SOW, Vendor will designate one (1) Vendor point of contact who shall be responsible for responding to the State's questions and issues relating to the Services. The State understands and agrees that Vendor may subcontract with third parties to perform all or part of the Services in conformance with Paragraph 4 of the General Terms and Conditions for Goods and Related Services.

19) Qualified Personnel: Each party shall provide sufficient, qualified, knowledgeable personnel capable of: (i) performing obligations set forth in this Agreement and each SOW; (ii) making timely decisions necessary to move the Services forward; (iii) participating in the project and assisting Vendor in rendering the Services; and (iv) facilitating development, testing and implementation of Vendor software, if applicable. Vendor warrants that qualified personnel will perform the services in a professional manner. As used in this Paragraph, "professional manner" means that the

personnel performing the services will be of a skill and competence consistent with prevailing norms of company providers in the information technology industry.

20) Vendor shall not be responsible for any alleged breach of the foregoing Paragraph 17) that is attributable to (i) misuse or modification of Vendor's Software by or on behalf of the State, (ii) the State's failure to use corrections or enhancements made available by Vendor, (iii) the quality or integrity of data from other automated or manual systems with which the Vendor's Software interfaces, (iv) errors in or changes to third party software or hardware implemented by the State or a third party (including the vendors of such software or hardware) that is not a subcontractor of Vendor or that is not supported by the Deliverables, or (v) the operation or use of the Vendor's Software not in accordance with the operating procedures developed for the Vendor's Software or otherwise in a manner not contemplated by this Agreement.

21) Transportation: Transportation of software shall be FOB Destination unless delivered by internet or file transfer as agreed by the State, or otherwise specified in the solicitation document or purchase order.

Section VIII. Attachments or Appendices

Attachment A – Certification of Compliance With Executive Order # 24

The undersigned certifies, to the best of his or her knowledge and belief, that:

By Executive Order 24, issued by Governor Perdue, and N.C.G.S. § 133-32, it is unlawful for any vendor or contractor (i.e. architect, bidder, contractor, construction manager, design professional, engineer, landlord, offeror, seller, subcontractor, supplier, or vendor), to make gifts or to give favors to any State employee of the Governor's Cabinet Agencies (i.e., Administration, Commerce, Correction, Crime Control and Public Safety, Cultural Resources, Environment and Natural Resources, Health and Human Services, Juvenile Justice and Delinquency Prevention, Revenue, Transportation, and the Office of the Governor). This prohibition covers those vendors and contractors who:

- (1) have a contract with a governmental agency; or
- (2) have performed under such a contract within the past year; or
- (3) anticipate bidding on such a contract in the future.

For additional information regarding the specific requirements and exemptions, vendors and contractors are encouraged to review Executive Order 24 and G.S. § 133-32.

The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub-contractors shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction.

N.C.G.S. § 133-32 and Executive Order 24 prohibit the offer to, or acceptance by, any State Employee of any gift from anyone with a contract with the State, or from any person seeking to do business with the State. By execution of this Attachment and submitting a bid in response to the accompanying solicitation, you attest, for your entire organization and its employees or agents, that you are not aware that any such gift has been offered, accepted, or promised by any employees of your organization.

TYPE OR PRINT NAME & TITLE OF PERSON SIGNING:	E-MAIL:
AUTHORIZED SIGNATURE:	DATE:

Appendix A – IIS Functional Specifications

(It is required for each Vendor to call Mike Beaver @ 919-807-3683 or email michael.beaver@dpi.nc.gov , in order to obtain the MS Excel File of this Appendix A document).

Appendix B – Total Cost Summary Forms

(It is required for each Vendor to call Mike Beaver @ 919-807-3683 or email michael.beaver@dpi.nc.gov , in order to obtain the MS Excel File of this Appendix B document).

Appendix C – Glossary of Terms

Anchor Item

An anchor item is an exemplar of what the work should look like at a particular level.

Anchor Standard

An anchor standard is a broad statement of what students should be able to know and do for college and career readiness expectations. These standards work in tandem with the more specific grade level standards.

Adaptive Assessment

An adaptive assessment is an online form of assessment in which items are presented in a sequence that is dependent on the correctness of the examinee's response to the preceding item. Through this process, each examinee is administered a unique set of items that provides an accurate measure of his or her achievement level.

Benchmark Assessments

Benchmark Assessments are assessments given to students periodically throughout the year to determine how much learning has taken place up to a particular point in time (or up to a particular place in the learning continuum) and to track progress toward meeting curriculum goals and objectives.

Classroom Assessments

Classroom assessments are those assessments designed uniquely by each teacher for a student or set of students.

Component

The components are the main sections of the IIS that need to be included in the Request for Proposal (RFP) procurement document. These include the primary business requirements of the IIS Model (Standards and Curriculum; Instructional Design, Practice, and Resources; Assessment and Growth; Data Analysis and Reporting; Professional Development; and, Learner Profile and Work Samples) and the supporting components (Documentation, Training and Support; Data and Systems Integration; and IT Platform, Security, and Access).

Charter School

See the following link for the NC legal definition of a Charter School:

http://www.ncga.state.nc.us/EnactedLegislation/Statutes/HTML/BySection/Chapter_115C/GS_115C-238.29E.html

Curriculum

Curriculum is defined here as an organized set of instructional content and practices designed in a manner that builds on learning concepts that allow students to reach proficiency on the standards. Curriculum is typically designed in a hierarchical structure such as courses, units, objectives, activities, and resources. Other structures allow for organization by themes, projects, "big ideas", or other methods.

Diagnostic Assessments

Diagnostic Assessments provide observable indicators of covert ordered states of cognitive reasoning development with regard to "big ideas" over time. These indicators comprise common obstacles, landmarks, transformative states, and essential components of key ideas and include healthy growth indicators as well as evidence of deficits, gaps or misconceptions. They are based on explicit cognitive models informed by empirical research using cross-sectional or longitudinal studies. They are intended to assist students, teachers, and others in determining what instructional activities and tasks are needed to foster further learning.

Formative Assessment

Formative Assessment is a process used by teachers and students during instruction that provides feedback to adjust ongoing teaching and learning to improve students' achievement of intended instructional outcomes.

Functional Requirements

Functional requirements define WHAT the application shall be able to do.

Instructional Blueprint

Instructional Blueprint is the systematic process of developing instructional content by drawing up specifications for a course before the course begins. The blueprint helps to create materials that improve performance and streamline the instructional design process.

Interactive Diagnostic Assessments

Interactive diagnostic assessment systems (IDAS) to refer to systems in which such assessments function in support of ongoing and engaged classroom instruction.

Interim or Benchmark Assessments

Interim or benchmark assessments are assessments normally designed at the building or school district level to measure progress toward a particular set of standards for a particular grade level or course.

Learning Object Repository

A learning object repository is an accessible online area that is capable of storing and sharing out digital resources that can be used or reused to support learning.

Lesson Plans

Lesson plans consist of a particular set of curricular materials (objectives, activities, resources) planned by a teacher or set of teachers for a specific set of students for a particular time period. A lesson becomes a "lesson plan" once it is connected to a specific set of students for a particular time period.

Meta- tag

A meta-tag is a tag that describes some aspect of the contents of an object. The information that you provide in a met- tag is used by search engines to index the object so that someone searching for the kind of information the object addresses will be able to find it.

Pacing Guide

Pacing guides are documents created by school district leaders to help teachers stay on track and to ensure curricular continuity across schools in the district. These guides lay out expectations of the material to be covered in each subject at each grade level.

Performance-based Assessments

Performance assessments require a student to create an answer or a product that demonstrates his or her knowledge or skills. Examples of performance assessments include:

- Group projects enabling a number of students to work together on a complex problem that requires planning, research, internal discussion, and group presentation.
- Essays assessing students' understanding of a subject through a written description, analysis, explanation, or summary.
- Experiments testing how well students understand scientific concepts and can carry out scientific processes.
- Demonstrations giving students opportunities to show their mastery of subject-area content and procedures.

Standards

At the simplest level, standards are statements of what students should know and be able to do. These may include, but are not limited to: common core standards, state essential content standards, process skills, technology competencies, and 21st century learning skills.

Summative Assessments

Summative assessments are assessments normally given at the end of a course or end of the school year and are normally “high-stakes” in nature.

Appendix D - IIS Acronym List

ACRE – Accountability and Curriculum Revision Effort
ADA – Americans with Disabilities Act
ADB – Accountability Database
ADM – Average Daily Membership
AEP – Association of Educational Publishers
AIG – Academically and Intellectually Gifted
AMTR – Annual Media Technology Report
AP – Advanced Placement
APEX – Oracle Application Express
API – Application Program Interface
APIP – Accessible Portable Item Protocol
AUP – Acceptable Use Policy
AYP – Adequate Yearly Progress
BPEL – Oracle Business Process Execution Language
COTS – Commercial of the Shelf products
DBMS – Database Management System
DIF – Differential Item Function
DMG – North Carolina Department of Public Instruction Data Management Group
DPI – North Carolina Department of Public Instruction
CECAS – Comprehensive Exceptional Children Accountability System
CEDS – Common Education Data Standards
CC – Common Cartridge
CFDC Consolidated Federal Data Collection
CEDARS – Common Education Data Analysis and Reporting System (CEDARS) longitudinal data system
CSSO – Chief State School Officer
CTE – Career and Technical Education
DIF – Differential Item Function
EDDIE – Educational Directory & Demographical Information Exchange
Ed-Fi – Ed-Fi is an XML-based standard for exchanging student data among information systems
EDM – Enterprise Data Master
EOC – End of Class
EOG – End of Grade
ELP – English Language Proficiencies
ESE – Exceptional Student Education

ESEA – Elementary and Secondary Education Act
eSIS – Electronic Student Information System
ESL – English as a Second Language
ESOL – English to Speakers of Other Languages
FERPA – Family Educational Rights and Privacy Act
GPA – Grade Point Average
HIPA – Health Information Privacy Act
IaaS – Infrastructure as a Service
IAM – Identity Access Management
IAT – Intervention Assistant Team
IB – International Baccalaureate
ICT – Information and Communication Technology
IEP – Individual Education Plan
IIS – Instructional Improvement System
IRT – Item Response Theory
ITS – North Carolina Information Technology Services
LDAP – Lightweight Data Access Protocol
LDS – Longitudinal Data System
LDW – Longitudinal Data Warehouse
LEA – Local Education Agency
LEP – Limited English Proficiency
LOR – Learning Object Repository
LRMI – Learning Resource Metadata Initiative
LTI – Learning Tools Interoperability
MDR – Metadata Repository
MIS2000 – Migrant Information System
MFR/AFR – Monthly Financial Report/Annual Financial Report
MFTS – Managed File Transfer Services
NCAC – Official North Carolina Administrative Code
NCDPI – North Carolina Department of Public Instruction
NCID – North Carolina Identity Management
NCSCS – North Carolina Standard Course of Study
NCSTA – North Carolina State Technical Architecture
NC Wise – North Carolina Window of Information for Student Education
OBIEE – Oracle Business Intelligence Enterprise Edition
ODI – Oracle Data Integrator
OCR – Optical Character Recognition

ODS – Operational Data Store
ODBC – Open Database Connectivity
OMR – Optical Mark Reader
PDP – Professional Development Plan
PEP – Personalized Education Plan
PMP – Project Management Professional
PMR – Principal Monthly Report
PNP –Personal Needs Preference
QTI – Question and Test Interoperability
RAC – Real Application Cluster
REAP – Rural Education Achievement Program
RTI – Response to Intervention
RttT– Race to the Top
SaaS – Software as a Service
SBAC – Smarter Balanced Assessment Consortium
SBE – State Board of Education
SCORM – Sharable Content Object Reference Model
SEA – State Education Agency
SES – Supplemental Education System
SIF – Schools Interoperability Framework
SIS –Student Information System
SLA –Service Level Agreement
SLI Cloud –Shared Learning Infrastructure
SLP – Student Learning Plan
SOA – Oracle Service Oriented Architecture
SOAP – Simplified Object Access Protocol
SSL –Secure Socket Layer
UI – User Interface
UID – eScholar Unique Identifier for Student and Staff
USED – United States Education Department
VOC ED – Vocational Education
W3C – World Wide Web Consortium
WIDA – World Class Instructional Design and Assessment
WYSIWYG –What You See Is What You Get

Appendix E – NC RttT Identity and Access Management Plan

Requirements for Integrating Cloud Applications

This appendix will serve as a reference and requirements guide for Vendors, cloud-based service providers, and other RttT project teams, for planning purposes around identity management. Two main areas are discussed – the provisioning of service accounts at the Vendor site, and recommended authentication methods.

The following are applicable to all models:

Policy and Governance. Each cloud application, resource, or service that integrates with the central IAM system will require a certain level of policy and governance that defines how and what user data identities are exchanged. Personal identifiable information (PII) will be provided for some applications, and service level agreements (SLAs) or contracts need to be in place to enforce confidentiality and data disclosure policies.

Detailed Technical Specifications. When the time comes to integrate cloud-based applications, resources, or services with the IAM system, a more detailed set of technical specifications will be needed and provided. Some of these specifications cannot be documented until the central IAM system actually exists, but sufficient planning can be done based on the information provided below.

Security. The IAM system will require the secure transfer of the user identity data to and from itself. Whether from the source systems to the IAM system, or between the IAM system and cloud applications, all user data will be encrypted during transfer. Data transferred internal to the IAM System will also be over encrypted channels where necessary. If user identity data is provisioned into a cloud application, the policy and governance section will define how data is managed throughout the process, along with any SLA or contractual obligations related to its storage and protection at the Vendor site.

“Currency” of Identity Data. Updates made to user data in the Source Systems will be reflected in the IAM System as soon as it is available and can be processed. This will vary greatly depending on the availability and format of the feeds. Initially, updates will take place nightly, with full database extracts from the source systems being processed in a batch mode. This will naturally result in up to a 24-hour delay in user updates being made available to the IAM System. A more “realtime” availability of user changes would be possible if the source systems could provide deltas of changed data only, on a more frequent basis. This may be possible once the IAM system is in production and more is known about the entire process.

Provisioning and De-provisioning of Cloud Accounts

Automated (Direct) Provisioning

The IAM System will have the ability to provision, update, and de-provision user accounts to target resources using a variety of connectors. Updates to the Systems of Record or source systems will trigger changes to the IAM Service, and if configured, changes to any service accounts that are part of the provisioning process. Requested user information will be provided during the provisioning process, including an individual's user ID and (if part of the Vendor agreement), his/her password in encrypted form. The cloud service providers will need to have automated mechanisms in place to consume the identity data or provide an API into their applications.

Advantages: Less configuration and implementation work for cloud application owners. De-provisioning removes accounts (or access), which eliminates cleanup of old accounts for the Vendor as well as reducing the security risk to users or client organizations.

Disadvantages: If the user's account and password exist at the service provider site, it needs to be maintained (synchronized) and could get out of sync if not done properly. There is also the risk that if the service site is compromised, the user's credential could be used to access other cloud resources including self-service modifications to the IAM System (if the password exists at the service site). Lastly, the user's account name and password may need to be passed to the service *every time* they login.

“Manual” (Indirect) Provisioning

If automated provisioning and de-provisioning is not an option at the time of implementation, manual updates can be handled by the Vendor with user files provided through encrypted file transfers. These can be made available in different formats depending on the service provider's update process (e.g. Comma Separated Value (CSV) files, spreadsheets, etc.). A de-provisioning process shall also be in place to prevent inactive accounts from existing in the Vendor application. The Vendor shall have a mechanism in place for handling new, changed and deleted/disabled account updates.

Advantages: Eliminates the need for individual user provisioning of accounts, which is primarily a benefit for the user. Authoritative data provided by the IAM Service will be more dependable than self-asserted user data. A de-provisioning process removes accounts (or access), which eliminates cleanup of old accounts for the Vendor as well as reducing the security risk to users or client organizations.

Disadvantages: Similar disadvantage to automated provisioning for applications where the passwords are stored at the service site. Disadvantage to manual provisioning is that there is more of a time lag between changes to the user data and updates to the application accounts. If the updates themselves are also done manually, there is more room for error or process failures.

Provisioning on “First Use” (Special Case)

This process is used by some applications that require a limited amount of user data, usually including username, first name, last name and email address. Release of this data is governed by policy and any SLA or Contract in place with the Vendor. The preferred method is “automated” provisioning where the data is supplied by the IAM System, usually using a Security Assertion Markup Language (SAML) assertion during federated access. Manual processes don't differ from any public web service/application where users provide their own data (self-asserted).

Advantages: In the “federation” case above, the data provided is authoritative, coming from the IAM System. It eliminates the need for passing files to the Vendor for (manual) account creation. There are no real advantages to the self-asserted process.

Disadvantages: Major disadvantage is that this process only works for applications that require a limited amount of user data to be supplied to the service provider. Applications requiring user accounts with “protected” data or multiple attributes might favor one of the other options.

Provisioning and De-provisioning: Specifications

The IAM System will support APIs using most standard protocols, transports, and formats, like Java Database Connectivity (JDBC), Lightweight Directory Access Protocol (LDAP), Java Message Service (JMS), Java Naming and Directory Interface (JNDI), and Extensible Markup Language (XML). The IAM system will package the identity information into the appropriate format and provision the identity information into the application, resource, or service using the target's preferred method. Identity

provisioning mechanisms typically shall be through one or more of the following: API (preferred method), local directory services, or flat file (not preferred).

API example: The IAM System could create user accounts in Google Apps for Education using Google Provisioning API¹ calls from the central identity manager. If a similar, well-documented provisioning API is available from another resource provider, then a suitable connector could be identified (or written) in the IAM system to communicate with the other resource providers.

Local directory services example: The IAM system could populate and maintain user identity information to a directory server that is local to the resource provider, such as Microsoft Active Directory. The resource provider application uses its local directory for authentication and authorization, and the IAM system is configured to make updates as necessary to that local directory.

Flat file example: Simple American Standard Code for Information Interchange (ASCII) files in CSV or tab-separated format could be provided to external service providers from the IAM system, with the required information. This is not a preferred method of provisioning, and if it is the only available method for a given service provider, the service provider shall be given lower priority in the on-boarding process.

Authentication Methods for Cloud Services

Model 1: Identity Federation

The IAM system will include federated identity management functionality that supports exchanging authenticated user identity information between member organizations using SAML assertions. The federation or Vendor agreement will document the necessary procedures and policies to securely and effectively exchange the user identity information. The application/resource Vendor will need to have federation software in place and satisfactory security and privacy policies and procedures to take advantage of this model. This model is typically used for accessing shared services within an identity federation, although single Vendor implementations can be configured.

Advantages: The major advantage of using federated access is that authentication accounts do not need to be set up at each cloud service, which prevents remote service account passwords from having to be synchronized whenever the user makes a change. It allows the service provider to rely on the user's home institution to maintain the account and any information about the user – whether his/her role has changed, whether he/she has left the organization, when he/she changes schools, etc. Cloud service providers can focus on providing their service and not on the management of accounts. Coupled with direct provisioning and de-provisioning from the IAM Service, this is the best option for the Vendor and the NC Education Cloud. An additional advantage for the identity provider (and the K-12 user community) is that it frequently takes little effort to “onboard” new applications that are added to the federation. If the Cloud Service is already enabled for federated access, it is a very simple process for them to add another client.

Disadvantages: Disadvantages for Cloud service providers exist if their application is not already SAML/Federation-ready. Depending on the requirements for authentication and whether there are associated service accounts, the effort on the part of the Vendor can be relatively simple (standing up a federation service in front of their application) or required a programming effort to consume the SAML assertion and convert or map attributes to service account data elements. However, once this is done, any client then has the ability to use federated access.

¹ The Google Provisioning API is available in several languages: Java, .NET, PHP, and Python. For further information, please see “Google Provisioning API Reference Guide” at

http://code.google.com/googleapps/domain/gdata_provisioning_api_v2.0_reference.html#How_the_API_Works

Model 1: Specifications

Federation is enabled using the Security Assertion Markup Language (SAML) protocol. Identity and attribute assertions are shared through the user's web browser session using SAML. Service Providers (SPs, or applications) and Identity Providers (IdPs) "recognize" each other as federation members based on previously exchanged metadata information.

An IdP is a web application that uses its organization's authentication mechanism. A user logs in to his/her home institution's IdP with his/her usual login and password. The IdP then obtains user attributes through a query to the central directory. The IdP generates a SAML assertion according to the IdP organization's security policies as configured in the IdP. Attributes are shared through the user's web session and consumed by an SP, which is often hosted by a different administrative organization. The SP determines whether to grant access to the user, based on its own policies and the attribute values asserted by the IdP.

Two well-known implementations of the SAML protocol are provided by Microsoft's Active Directory Federation Service (ADFS)² and by the open-source Shibboleth³ software. The IAM system will provide one or more instances of a SAML IdP, for use by approved SAML-capable SPs hosted by application providers.

Example: The NC Cloud organization and the Cabarrus County Google Apps service have setup a federation between their two entities, which allows a user from an NC Cloud IdP to access the Google organization's Cabarrus County service with his/her attributes as presented through SAML assertions. Sue, a Cabarrus County teacher, attempts to log in to Google Apps with her NC Cloud login and password and is redirected to an NC Cloud IdP. Upon successful authentication, her browser is redirected back to Google Apps and she is granted access with the attributes presented through SAML assertion. Note: Assuming a Google Apps domain existed for NCID users, was configured for SAML-based SSO access, and an NCID IdP was operational and federated with the Google Apps NCID domain, then a user with an NCID could log in to the Google Apps NCID domain using a similar process.

Model 2: Central Authentication and Authorization via Reverse-Proxy Portal

In this model, authentication and authorization for applications takes place through the IAM User Portal. Users access the portal and are authenticated against a central directory. Applications only needing authentication for access could rely on the users being authenticated through the portal and would not allow access through other means (e.g. local login, direct browser access).

Service Providers that required a more granular authorization decision (based on directory attributes for the user) could have the portal check for valid attribute values before passing the user through to the application.

Advantages: This provides authentication (and authorization) to the application through a common interface (the portal) for the user, and is essentially "single sign-on". While more complex to configure than using the federated access model (and likely unique for each application using this method), it prevents the transmission of the user's institutional credential (username and password) to the service site where it might be stored and later compromised.

² [http://msdn.microsoft.com/en-us/library/ms674895\(v=vs.85\).aspx](http://msdn.microsoft.com/en-us/library/ms674895(v=vs.85).aspx)

³ <http://shibboleth.internet2.edu/>

Disadvantages: This just adds complexity to each individual configuration, particularly on the IAM Service side. Given the choice between this method and Federation, it would be much more efficient (and take less time) to use federation.

Model 2: Specifications

The cloud application, resource, or service would apply a simple firewall or web-based filter that only allows network traffic from the central IAM system. The user authenticates against the IAM portal and then if authorized, would be allowed to see the cloud application, resource, or service. The central IAM system grants access to these authorized systems based on group, role, or entitlement policy defined inside the IAM system. The target cloud application, resource, or service does not have any user management capabilities other than standard OS or service filtering.

Model 3: Centralized User Authentication and Authorization Management

The IAM system will provide a central access control service that resource provider applications could use for authentication and authorization.

Advantages: The benefit of this approach is that the user accounts and data are always current and passwords do not need to be maintained at the resource. If a user's role or status changes which removes his/her entitlement to access to the resource, it is updated in the central directory and prevents access.

Disadvantages: Depending on how this model is implemented, it still requires the user to send his/her username and password to the Vendor before it is "tested" against the central IAM Service. If the user is redirected to an authentication site at his/her own institution to login (similar to federated logins) then security is not an issue.

Model 3: Specifications

Applications would be configured to use the IAM system and user authentication requests would be passed to the central system instead of using the application's local authentication service. These mechanisms would typically use a Web Service API.

Web Services API Example: The IAM system will provide a web services API [Simple Object Access Protocol (SOAP) or Representational State Transfer (REST) based] to service authentication requests over an encrypted http channel.

Model 4 - Local Authentication

Disaster Recovery

Depending on how critical the availability of an application is (as determined by the governance committees of the NC Education Cloud and its stakeholders) there may be a requirement to provide an alternate method of access in the event that the Cloud IAM Service is unsustainable. This would not need to be a failover mechanism or even activated, unless a planned migration away from the IAM Service is decided upon or in the event of a prolonged service outage.

Model 4: Specifications

The application or service would likely need to support creating users, possibly groups, and a mechanism for managing access controls internally for those accounts.

Example: An LEA has a Moodle Server that is using the central IAM system for user authentication and authorization. The central IAM system experienced an extreme circumstance and could no longer be provided as a state IAM service. The LEA could either find another authentication source for its Moodle

system or just use the application's internal capabilities to manage users. The Moodle application allows administrators to create and manage user accounts in a variety of ways. One of these methods⁴ includes local application authentication. The administrator would create users, groups, and access control rules internally to its Moodle server.

⁴ <http://docs.moodle.org/20/en/Authentication>

Attachment B. - American Recovery & Reinvestment Act / Race to the Top Contract Provisions

By submission of a proposal, Vendor agrees to comply with the following provisions. Failure to comply with any and all provisions herein may be cause for the contracting agency to issue a cancellation notice to a contractor.

The following is the legislation that created ARRA and the resulting RttT awards by USED: *American Recovery and Reinvestment Act of 2009 (ARRA)*, Section 14005-6, Title XIV, (Public Law 111-5) <http://www2.ed.gov/policy/gen/leg/recovery/statutory/stabilization-fund.pdf>

Reporting Requirements

The Vendor is notified that this project will be financed with *American Recovery and Reinvestment Act of 2009* (hereinafter, "ARRA") Funds. The Contractor shall ensure that all subcontracts and other contracts for goods and services for an ARRA-funded project have the mandated provisions of this directive in their contracts. Pursuant to Title XV, Section 1512 of the ARRA, the State shall require that the Vendor provide reports and other employment information as evidence to document the number of jobs created or jobs retained by this contract from the Vendor's own workforce and any sub-contractors. No direct payment will be made for providing said reports, as the cost for same shall be included in the various items in the contract.

Posting with the Local Employment Security Commission

In addition to any other job postings the Vendor normally utilizes, the Office of Economic Recovery & Investment (hereinafter, "OERI") requires that the Vendor shall post with the local Employment Security Commission Office all positions for which he intends to hire workers as a result of being awarded this contract. Labor and semiskilled positions must be posted for at least 48 hours before the hiring decision. All other positions must be posted a minimum posting of five days before the hiring decision. The Vendor and any Subcontractor shall report the new hires in the manner prescribed by the Employment Security Commission and the OERI.

Required Contract Provision to Implement ARRA Section 902

Section 902 of the ARRA requires that each contract awarded using ARRA funds must include a provision that provides the U.S. Comptroller General and his representatives with the authority to:

- (1) examine any records of the Vendor or any of its subcontractors, or any State or local agency administering such contract, that directly pertain to, and involve transactions relating to, the contract or subcontract; and
- (2) interview any officer or employee of the Vendor or any of its subcontractors, or of any State or local government agency administering the contract, regarding such transactions.

Accordingly, the Comptroller General and his representatives shall have the authority and rights prescribed under Section 902 of the ARRA with respect to contracts funded with recovery funds made available under the ARRA. Section 902 further states that nothing in 902 shall be interpreted to limit or restrict in any way any existing authority of the Comptroller General.

Authority of the Inspector General provision

Section 1515(a) of the ARRA provides authority for any representatives of the United States Inspector General to examine any records or interview any employee or officers working on this contract. The contractor is advised that representatives of the Inspector General have the authority to examine any record and interview any employee or officer of the contractor, its subcontractors or other firms working on this contract. Section 1515(b) further provides that nothing in this section shall be interpreted to limit or restrict in any way any existing authority of an Inspector General.

Buy American provision

Section 1605 of the ARRA requires that iron, steel and manufactured goods used in public buildings or public works projects be manufactured in the United States. Contractor agrees to abide by this provision and shall maintain records of such purchases for inspections by authorized agents of the State of North Carolina and federal agencies. The Contractor must obtain written exception from this provision from the agency issuing the contract.

Wage Rate Provision

Section 1606 of the ARRA requires that all laborers and mechanics employed by contractors and subcontractors with funds from the ARRA shall be paid wages at rates not less than the prevailing wage rate under the Davis-Bacon Act. The contractor agrees that by the submission of a proposal in response to a solicitation funded in whole or in part with recovery funds, continuous compliance will be maintained with the Davis-Bacon Act.

Availability and Use of Funds

Vendors understand and acknowledge that any and all payment of funds or the continuation thereof is contingent upon funds provided solely by ARRA or required state matching funds. Pursuant to Section 1604 of the ARRA, V agree not to undertake or make progress toward any activity using recovery funds that will lead to the development of such activity as casinos or other gambling establishments, aquariums, zoos, golf courses, swimming pools or any other activity specifically prohibited by the Recovery Act.

Whistleblower Provisions

Vendors understand and acknowledge that Article 14 of Chapter 124, NCGS 126-84 through 126-88 (applies to the State and state employees), Article 21 of Chapter 95, NCGS 95-240 through 85-245 (applies to anyone, including state employees), and Section 1553 of the Recovery Act (applies to anyone receiving federal funds), provide protection to State, Federal and contract employees.

Outsourcing outside the USA without Specific Prior Approval Provision

Vendor agrees not to use any recovery funds from a contract or any other performance agreement awarded by the State of North Carolina, its agencies, or political subdivisions for outsourcing outside of the United States, without specific prior written approval from the agency issuing the contract.

Federal, State and Local Tax Obligations

By submission of a proposal, Vendors and subcontractors assert and self-certify that all Federal, State and local tax obligations have been or will be satisfied prior to receiving recovery funds.

Anti-Discrimination and Equal Opportunity

Pursuant to Section 1.7 of the guidance memorandum issued by the United States Office of Management and Budget on April 3, 2009, recovery funds must be distributed in accordance with all anti-discrimination and equal opportunity statutes, regulations, and Executive Orders pertaining to the expenditure of funds.

Office of State Budget and Management Access to Records

OERI requires that the Vendor and subcontractor agree to allow the Office of State Budget and Management internal auditors and state agency internal auditors access to records and employees pertaining to the performance of any contract awarded by a public agency.