

4V 56

JAN14'15 AM 9:55 DAS



Virginia M. Barry, Ph.D.  
Commissioner of Education  
Tel. 603-271-3144

Paul Leather  
Deputy Commissioner of Education  
Tel. 603-271-3801

STATE OF NEW HAMPSHIRE  
DEPARTMENT OF EDUCATION  
101 Pleasant Street  
Concord, N.H. 03301  
FAX 603-271-1953  
Citizens Services Line 1-800-339-9900

January 12, 2015

Her Excellency, Governor Margaret Wood Hassan  
and the Honorable Council  
State House  
Concord, New Hampshire 03301

REQUESTED ACTION

1. Authorize the Department of Education, Division of Educational Improvement to contract with the American Institutes for Research in the Behavioral Sciences (AIR), Washington, DC (vendor code 167227), in an amount not to exceed \$2,108,551 for the period effective from the date of Governor & Council approval to June 30, 2015. 66% State Funds 34% Federal Funds

Funding is available in the accounts entitled Curriculum & Assessment and State Assessment as follows:

	<u>FY 15</u>
06-56-56-562010-32600000-612-500942 State Testing	\$1,390,868.29
06-56-56-562010-64220000-102-500731 Contracts for Program Service	\$ 717,682.71

2. Subject to Governor and Council approval, authorize the Department of Education to exercise a renewal option on this contract for up to two additional one-year terms, subject to the contractor's acceptable performance of the terms therein, and pending legislative approval of the next biennium budget.

EXPLANATION

A Request for Proposals was developed and posted on the Bureau of Purchase and Property and Department of Education websites on April 28, 2014 with the deadline for receipt of proposals being June 6, 2014. The Department, in conjunction with Vermont and Connecticut, was seeking proposals from qualified individuals, companies and organizations to execute the scope of work outlined in the RFP covering an array of activities and services needed to manage the project, administer, score and report the Smarter Balanced Assessment Consortium (SBAC) English Language Arts and Mathematics assessments in grades 3 through 8 and 11.

Five proposals were received, reviewed and rated using the attached scoring rubric by an evaluation team. The team consisted of Scott Mantie, Ph.D., Administrator, Bureau of Accountability & Assessment, NH Department of Education; Adam Heard, Systems Development Specialist, NH Department of Information Technology; Mike Schwartz, Owner, Community & School Partners, LLC; and Heather Cummings, Assistant Superintendent, SAU 49.

Her Excellency, Governor Margaret Wood Hassan  
and the Honorable Council  
January 12, 2015  
Page Two

New Hampshire and Vermont are currently members of the New England Common Assessment Program (NECAP), which was formed in 2004 and has jointly administered annual reading, writing and mathematics assessments each fall to students in grades 3 to 8 and grade 11. The final administration of NECAP Reading, Writing and Mathematics assessments occurred in October 2013. The success of NECAP has demonstrated that a consortium of small states can share resources and apply economies of scale to produce high quality assessments at a price each state can afford. Subsequently, the New England Assessment Consortium (NEAC) was developed to build on the NECAP experience, and will expand both capacity and expertise with the addition of Connecticut.

By contracting with a vendor to develop and test web hosting for the administration platform, scoring procedures, training packs and methods for secure data transfers, New Hampshire will fulfill RSA 193-C:6, "Each year, a statewide assessment shall be administered in all school districts in the state in grades 3 through 8 and one grade in high school." and be able to provide valuable feedback and documentation to schools, districts and the public as to the status of K-12 education in New Hampshire. The components of this assessment will provide student learning information throughout the academic year that will inform instruction, guide interventions, help target professional development and ensure an accurate measure of each student's progress toward college- and career-readiness.

The Department of Education would like to contract with American Institutes for Research (AIR) to administer the Smarter Balanced Assessment. Founded in 1946 as a not-for-profit organization based in Washington, DC, they conduct their work with strict independence, objectivity, and non-partisanship and employ 1,600+ people worldwide. Their mission is to turn the best research into practice, which has resulted in 60 years of experience in aptitude and proficiency testing, including 37 years in K-12 educational assessments. Over the past few years, AIR staff has worked on 40+ state and national assessments (e.g., the National Assessment of educational Progress [NAEP], the National Assessment of Adult Literacy, the Voluntary National Tests), and on international assessments (e.g., TIMSS, PISA). AIR has successfully supported Elementary and Secondary Education Act (ESEA) state assessment projects across the country. Most relevant to the New England Assessment Consortium (NEAC) and specifically New Hampshire, is AIR's success delivering the small-scale tryouts, pilot test, and the earlier field-test for Smarter Balanced, as well as online adaptive testing in Oregon since 2007, Delaware and Hawaii since 2009, and Utah, which started earlier in 2014. AIR will begin test delivery in Missouri in June 2014 and has been selected for test development and delivery in Florida starting later in 2014.

During the spring of 2014, AIR administered the Smarter Balanced field-test items, with all accommodations and accessibility features, to approximately 4.2 million students nationwide. The Smarter Balanced open-source adaptive algorithm and test delivery system is not only modeled after AIR's own proprietary system; it is in fact being/has been developed by AIR engineers. AIR proposes to deliver to New Hampshire, the state-specific Smarter Balanced assessment using the same test delivery system used as the Smarter Balanced field-test. AIR's system offers all of the features available through the Smarter Balanced open-source system but adds a more robust architecture for scalability. Specifically, AIR's system is designed for use in schools where computer equipment and operating systems may be outdated, internet connections limited, and IT support limited or non-existent and is purely internet-based designed to reduce technology burdens on schools. Schools will need no special technology or computers to administer the assessment but only to install the specially built secure browser designed to protect security of the test and student data privacy.

Her Excellency, Governor Margaret Wood Hassan  
and the Honorable Council  
January 12, 2015  
Page Three

Because this contract fulfills both state and federal assessment requirements, the costs are shared between federal and state funds.

Respectfully submitted,

A handwritten signature in black ink that reads "Virginia M. Barry". The signature is written in a cursive style with a large, prominent "V" at the beginning.

Virginia M. Barry, Ph.D.  
Commissioner of Education

VMB:hg:sjm:emr



**STATE OF NEW HAMPSHIRE**  
**DEPARTMENT OF INFORMATION TECHNOLOGY**

27 Hazen Dr., Concord, NH 03301  
Fax: 603-271-1516 TDD Access: 1-800-735-2964  
[www.nh.gov/doit](http://www.nh.gov/doit)

**Steven J. Kelleher**  
*Acting Commissioner*

January 12, 2015

Virginia M. Barry, PhD  
Commissioner  
NH Department of Education  
101 Pleasant Street  
Concord, NH 03305

Dear Commissioner Barry:

This letter represents formal notification that the Department of Information Technology (DoIT) has approved your request to contract with American Institutes for Research (AIR) to administer a statewide educational assessment system as described below and referenced as DoIT No. 2014-018.

The purpose of this contract is to administer, score and report the Smarter Balanced English Language Arts and Mathematics assessments in grades 3 through 8 and 11. AIR will develop and test web hosting for the administration platform, scoring procedures, training packs, and methods for secure data transfer to and from the UCLA-Smarter Balanced Assessment Consortium. Each year, a statewide assessment shall be administered in all school districts in the state. Schools will need no special technology or computers to administer the assessment but only to install the specially built secure browser designed to protect security of the test and student data privacy. The contract price limit is \$2,108,551. The contract extends from Governor and Executive Council approval through June 30, 2015 with the authority to extend for an additional two years upon Governor and Council approval.

A copy of this letter should accompany the Department of Education's submission to the Governor and Executive Council.

Sincerely,

A handwritten signature in black ink that reads "Steven J. Kelleher".

Steven J. Kelleher

SJK/dcp  
DOE 2014-018

cc: David Perry, DoIT Contracts Manager  
Chris Hensel, DOIT Education Lead

Vendors:

Criterion	Questar				CTB/McGraw-Hill				American Institutes for Research				Measured Progress				Data Recognition Corp			
	M	H	A	S	M	H	A	S	M	H	A	S	M	H	A	S	M	H	A	S
A.1	3	4	4	3	6	6	6	6	6	6	6	6	5	4	4	5	6	2	6	6
A.2	3	4	4	3	2	4	4	2	4	6	4	5	4	6	4	6	6	2	4	6
A.3	5	4	4	4	3	6	6	3	6	6	6	6	5	6	4	6	4	4	6	4
A.4	4	2	4	4	3	4	6	3	5	4	6	5	4	6	4	4	4	4	4	4
B.1	3	4	4	4	3	4	4	4	5	4	6	5	3	6	4	6	3	2	6	4
B.2	3	4	4	4	2	6	4	4	5	6	4	5	5	6	4	6	3	4	4	4
B.3	3	4	4	4	4	6	4	4	4	6	4	4	3	6	6	6	5	4	4	4
B.4	2	2	4	2	3	6	6	4	5	6	6	6	3	6	4	6	4	6	6	4
C.1	4	4	4	4	2	4	4	4	6	6	6	6	4	4	4	6	6	2	4	5
C.2	4	4	4	4	3	6	6	4	6	6	6	6	4	6	4	6	5	4	4	5
C.3	4	4	6	4	2	6	4	4	5	6	6	4	3	6	4	6	5	4	6	5
C.4	4	4	4	4	2	4	6	4	6	6	4	5	4	4	4	6	5	4	4	5
C.5	4	4	4	4	3	4	6	2	5	6	6	6	4	6	6	6	5	6	6	5
D.1	2	2	4	2	0	2	2	0	4	4	4	4	6	6	6	6	5	4	2	4
D.2	3	4	4	4	0	2	4	0	5	4	4	4	5	4	6	5	5	2	4	4
T.1	4	4	4	4	4	7	7	4	8	10	10	10	6	7	7	7	7	4	7	7
Total	55	58	66	58	42	77	79	52	85	92	88	87	68	89	75	93	78	58	77	76
Cost 1	2/800				3.1/150				2.1/50				1.7/436				1.8/258			
Cost 2	2/600				2.3/110				2.0/50				1.7/386				1.9/68			
Cost 3	1.9/600				2.2/108				1.95/50				1.5/390				1.8/69			
FTE	19/8.5/8.5				52/37/35				13.5/13.5/11.5				5.2/5.2/5.2				18/15/10			
Avg	59.25				62.5				88				81.3				72.3			
StDev	0.749				1.752				1.357				1.117				1.260			

The people responsible for the review of the proposal include the following individuals: Scott Mantle, PhD, Administrator, Bureau of Accountability and Assessment; Adam Heard, Systems Development Specialist, Department of Information Technology; Mike Schwartz, Owner, Community & School Partners, LLC; and Heather Cummings, Assistant Superintendent, SAU 49.

The role of the reviewers was advisory in nature. The reviewers scored the application based on the criteria below and provided recommendations to the Commissioner of Education. The Commissioner of Education reviews the information provided and makes the final decision to bring forward for G&C approval.

Each Proposal Evaluation Criterion will be rated for evidence of quality, clarity, completeness, innovation and overall probability of success using the following ratings:

**S = SUPERIOR** *Meets and exceeds expectations for this criterion; demonstrates a high level of capacity, innovation and creativity; high probability of success.*

**A = ADEQUATE** *Meets expectations for this criterion; consistent with industry standards and practices; good probability of success.*

**M = MINIMAL** *Meets some but not all expectations, and/or meets expectations at the lowest acceptable levels; moderate to low probability of success*

**I = INADEQUATE** *Fails to meet some or all expectations; does not demonstrate sufficient capacity to reach project objectives; low to very low probability of success*

Criterion	(circle rating point value)	S	A	M	I
<b>Quality of Response to Project Priorities (24 points):</b>					
1. Responds clearly, concisely and completely to all RFP priorities and requirements		6	4	2	0
2. Demonstrates understanding of the states' vision and the challenges that need to be met in order to achieve it		6	4	2	0
3. Proposes methods, procedures and strategies that are sound, innovative, and represent current research and best practice in assessment design and delivery.		6	4	2	0
4. Achieves an acceptable level of balance between technical quality, efficiency, and cost effectiveness		6	4	2	0
<b>Corporate Capacity and Staffing (24 points):</b>					
1. Provides a staffing plan that is sufficient in terms of numbers, roles, and areas of expertise.		6	4	2	0
2. Includes evidence that key project staff are adequately trained and have sufficient experience with respect to each staff member's role in the project		6	4	2	0
3. Demonstrates the capacity to meet project deadlines, work within budgets, handle and solve problems, and achieve a high level of client satisfaction, citing satisfactory completion of similar projects and providing references where appropriate.		6	4	2	0
4. Proposes project management procedures and strategies that address the unique challenges of serving a multi-state collaboration, citing experience that prepares the bidder for this role.		6	4	2	0

<b>Expertise and Experience in Priority Areas (30 points):</b>				
<b>1. Demonstrates the capacity to develop, administer and process student assessments across four states within a three month testing window</b>	6	4	2	0
<b>2. Demonstrates the capacity to score student assessments with a high degree of accuracy, integrity and efficiency</b>	6	4	2	0
<b>3. Demonstrates the capacity to host a web-based assessment delivery system, provide technical assistance to system users, and implement sound quality assurance protocols</b>	6	4	2	0
<b>4. Demonstrates the capacity to analyze and report student results to meet a variety of purposes and satisfy the needs of key constituent groups, including educators, policy makers and parents.</b>	6	4	2	0
<b>5. Provides evidence that all project activities and deliverables will adhere to the highest standards of integrity particularly as it relates to the confidentiality of student information</b>	6	4	2	0
<b>Fiscal Management and Cost (12 points)</b>				
<b>1. Proposes a budget that is cost effective and consistent with the states' histories with projects of similar size and scope</b>	6	4	2	0
<b>2. Demonstrates the ability to employ sound fiscal management practices that meet and exceed standards of practice for the industry and in accordance with billing and reporting practices required by the states.</b>	6	4	2	0
<b>Overall Quality of the Proposal: Provides a comprehensive, coherent and integrative response to the scope of work and other project priorities that demonstrates the capacity to implement the project on time, within budget and at a high level of quality (10 points)</b>	10	7	4	0
<b>Sub-Totals</b>				
<b>Total</b>	<b>/100</b>			

identified in block 1.9, or his or her successor, certificate(s) of insurance for all renewal(s) of insurance required under this Agreement no later than fifteen (15) days prior to the expiration date of each of the insurance policies. The certificate(s) of insurance and any renewals thereof shall be attached and are incorporated herein by reference. Each certificate(s) of insurance shall contain a clause requiring the insurer to endeavor to provide the Contracting Officer identified in block 1.9, or his or her successor, no less than ten (10) days prior written notice of cancellation or modification of the policy.

**15. WORKERS' COMPENSATION.**

15.1 By signing this agreement, the Contractor agrees, certifies and warrants that the Contractor is in compliance with or exempt from, the requirements of N.H. RSA chapter 281-A ("*Workers' Compensation*").

15.2 To the extent the Contractor is subject to the requirements of N.H. RSA chapter 281-A, Contractor shall maintain, and require any subcontractor or assignee to secure and maintain, payment of Workers' Compensation in connection with activities which the person proposes to undertake pursuant to this Agreement. Contractor shall furnish the Contracting Officer identified in block 1.9, or his or her successor, proof of Workers' Compensation in the manner described in N.H. RSA chapter 281-A and any applicable renewal(s) thereof, which shall be attached and are incorporated herein by reference. The State shall not be responsible for payment of any Workers' Compensation premiums or for any other claim or benefit for Contractor, or any subcontractor or employee of Contractor, which might arise under applicable State of New Hampshire Workers' Compensation laws in connection with the performance of the Services under this Agreement.

**16. WAIVER OF BREACH.** No failure by the State to enforce any provisions hereof after any Event of Default shall be deemed a waiver of its rights with regard to that Event of Default, or any subsequent Event of Default. No express failure to enforce any Event of Default shall be deemed a waiver of the right of the State to enforce each and all of the provisions hereof upon any further or other Event of Default on the part of the Contractor.

**17. NOTICE.** Any notice by a party hereto to the other party shall be deemed to have been duly delivered or given at the time of mailing by certified mail, postage prepaid, in a United States Post Office addressed to the parties at the addresses given in blocks 1.2 and 1.4, herein.

**18. AMENDMENT.** This Agreement may be amended, waived or discharged only by an instrument in writing signed by the parties hereto and only after approval of such amendment, waiver or discharge by the Governor and Executive Council of the State of New Hampshire.

**19. CONSTRUCTION OF AGREEMENT AND TERMS.**

This Agreement shall be construed in accordance with the laws of the State of New Hampshire, and is binding upon and inures to the benefit of the parties and their respective successors and assigns. The wording used in this Agreement is the wording chosen by the parties to express their mutual intent, and no rule of construction shall be applied against or in favor of any party.

**20. THIRD PARTIES.** The parties hereto do not intend to benefit any third parties and this Agreement shall not be construed to confer any such benefit.

**21. HEADINGS.** The headings throughout the Agreement are for reference purposes only, and the words contained therein shall in no way be held to explain, modify, amplify or aid in the interpretation, construction or meaning of the provisions of this Agreement.

**22. SPECIAL PROVISIONS.** Additional provisions set forth in the attached EXHIBIT C are incorporated herein by reference.

**23. SEVERABILITY.** In the event any of the provisions of this Agreement are held by a court of competent jurisdiction to be contrary to any state or federal law, the remaining provisions of this Agreement will remain in full force and effect.

**24. ENTIRE AGREEMENT.** This Agreement, which may be executed in a number of counterparts, each of which shall be deemed an original, constitutes the entire Agreement and understanding between the parties, and supersedes all prior Agreements and understandings relating hereto.

See Attachment 2

## 8. EVENT OF DEFAULT/REMEDIES.

8.1 Any one or more of the following acts or omissions of the Contractor shall constitute an event of default hereunder ("Event of Default"):

8.1.1 failure to perform the Services satisfactorily or on schedule;

8.1.2 failure to submit any report required hereunder; and/or

8.1.3 failure to perform any other covenant, term or condition of this Agreement.

8.2 Upon the occurrence of any Event of Default, the State may take any one, or more, or all, of the following actions:

8.2.1 give the Contractor a written notice specifying the Event of Default and requiring it to be remedied within, in the absence of a greater or lesser specification of time, thirty (30) days from the date of the notice; and if the Event of Default is not timely remedied, terminate this Agreement, effective two (2) days after giving the Contractor notice of termination;

8.2.2 give the Contractor a written notice specifying the Event of Default and suspending all payments to be made under this Agreement and ordering that the portion of the contract price which would otherwise accrue to the Contractor during the period from the date of such notice until such time as the State determines that the Contractor has cured the Event of Default shall never be paid to the Contractor;

8.2.3 set off against any other obligations the State may owe to the Contractor any damages the State suffers by reason of any Event of Default; and/or

8.2.4 treat the Agreement as breached and pursue any of its remedies at law or in equity, or both.

## 9. DATA/ACCESS/CONFIDENTIALITY/PRESERVATION.

9.1 As used in this Agreement, the word "data" shall mean all information and things developed or obtained during the performance of, or acquired or developed by reason of, this Agreement, including, but not limited to, all studies, reports, files, formulae, surveys, maps, charts, sound recordings, video recordings, pictorial reproductions, drawings, analyses, graphic representations, computer programs, computer printouts, notes, letters, memoranda, papers, and documents, all whether finished or unfinished.

9.2 All data and any property which has been received from the State or purchased with funds provided for that purpose under this Agreement, shall be the property of the State, and shall be returned to the State upon demand or upon termination of this Agreement for any reason.

9.3 Confidentiality of data shall be governed by N.H. RSA chapter 91-A or other existing law. Disclosure of data requires prior written approval of the State.

**10. TERMINATION.** In the event of an early termination of this Agreement for any reason other than the completion of the Services, the Contractor shall deliver to the Contracting Officer, not later than fifteen (15) days after the date of

termination, a report ("Termination Report") describing in detail all Services performed, and the contract price earned, to and including the date of termination. The form, subject matter, content, and number of copies of the Termination Report shall be identical to those of any Final Report described in the attached EXHIBIT A.

**11. CONTRACTOR'S RELATION TO THE STATE.** In the performance of this Agreement the Contractor is in all respects an independent contractor, and is neither an agent nor an employee of the State. Neither the Contractor nor any of its officers, employees, agents or members shall have authority to bind the State or receive any benefits, workers' compensation or other emoluments provided by the State to its employees.

**12. ASSIGNMENT/DELEGATION/SUBCONTRACTS.** The Contractor shall not assign, or otherwise transfer any interest in this Agreement without the prior written consent of the N.H. Department of Administrative Services. None of the Services shall be subcontracted by the Contractor without the prior written consent of the State.

**13. INDEMNIFICATION.** The Contractor shall defend, indemnify and hold harmless the State, its officers and employees, from and against any and all losses suffered by the State, its officers and employees, and any and all claims, liabilities or penalties asserted against the State, its officers and employees, by or on behalf of any person, on account of, based or resulting from, arising out of (or which may be claimed to arise out of) the acts or omissions of the Contractor. Notwithstanding the foregoing, nothing herein contained shall be deemed to constitute a waiver of the sovereign immunity of the State, which immunity is hereby reserved to the State. This covenant in paragraph 13 shall survive the termination of this Agreement.

## 14. INSURANCE.

14.1 The Contractor shall, at its sole expense, obtain and maintain in force, and shall require any subcontractor or assignee to obtain and maintain in force, the following insurance:

14.1.1 comprehensive general liability insurance against all claims of bodily injury, death or property damage, in amounts of not less than \$250,000 per claim and \$2,000,000 per occurrence; and

14.1.2 fire and extended coverage insurance covering all property subject to subparagraph 9.2 herein, in an amount not less than 80% of the whole replacement value of the property.

14.2 The policies described in subparagraph 14.1 herein shall be on policy forms and endorsements approved for use in the State of New Hampshire by the N.H. Department of Insurance, and issued by insurers licensed in the State of New Hampshire.

14.3 The Contractor shall furnish to the Contracting Officer identified in block 1.9, or his or her successor, a certificate(s) of insurance for all insurance required under this Agreement. Contractor shall also furnish to the Contracting Officer

**STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
NEW ENGLAND ASSESSMENT CONSORTIUM:  
A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
IN GRADES 3 THROUGH 8 AND 11  
CONTRACT 2014-018  
CONTRACT AGREEMENT -PART 2**

**New Hampshire Department of Information Technology  
Contract Cover Sheet**

**Name of Agency/Division: Department Of Education**

**Contract Number/Name:**

**2014-018 New England Assessment Consortium:**

**A Three-State Procurement Collaborative For The Implementation Of The  
Smarter Balanced English Language Arts And Mathematics Assessments  
In Grades 3 Through 8 And 11**

**Contract Purpose: Administration, scoring and reporting of NH K-12  
assessment**

**Name of AIR: American Institutes  
for Research (AIR)**

**Who Negotiated the Contract:  
Scott J. Mantie, PhD**

**Amount of Contract: \$2,108,551**

**Federal: 6422**

**State: 3260**

**Term of Contract:**

**Is this an amendment? No**

**Competitive Bid Process: (Explain if "No"): YES**

**Background Information:**

**An RFP was issued by NEAC, the New England Education Consortium  
including NH, VT, and CT. Each state is entering into its own contract.**

**Special Concerns: NA**

**Amendment History (if applicable): NA**

**Submitted By: Chris Hensel**

**Phone: 271-3884**

**Email:**

**Norman.hensel@doit.nh.gov**

**STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
 NEW ENGLAND ASSESSMENT CONSORTIUM:  
 A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
 SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
 IN GRADES 3 THROUGH 8 AND 11  
 CONTRACT 2014-018  
 CONTRACT AGREEMENT -PART 2**

**TERMS AND DEFINITIONS**

The following general contracting terms and definitions apply except as specifically noted elsewhere in this document.

<b>Acceptance</b>	Notice from the State that a Deliverable has satisfied Acceptance Test or Review.
<b>Acceptance Letter</b>	An Acceptance Letter provides notice from the State that a Deliverable has satisfied Acceptance Tests or Review.
<b>Acceptance Period</b>	The timeframe during which the Acceptance Test is performed.
<b>Acceptance Test and Review</b>	Tests performed to determine that no Defects exist in the application Software or the System.
<b>Acceptance Test Plan</b>	The Acceptance Test Plan provided by AIR and agreed to by the State that describes at a minimum, the specific Acceptance process, criteria, and Schedule for Deliverables.
<b>Access Control</b>	Supports the management of permissions for logging onto a computer or network.
<b>Agreement</b>	A contract duly executed and legally binding.
<b>AIR</b>	American Institutes for Research
<b>AI Scoring</b>	Artificial Intelligence Scoring
<b>Appendix</b>	Supplementary material that is collected and appended at the back of a document.
<b>Artificial Intelligence Scoring</b>	An automated approach to scoring student test responses that uses a machine-scoring engine that applies artificial intelligence technologies in a manner that emulates human scoring.
<b>Assessment System</b>	The complete package of Project components, both IT and non-IT that are needed to deliver the test to the students. Therefore, the Assessment System includes, but is not limited to the student interface, the CAT algorithm, and also things like policies, manuals, training materials, scoring services, reporting, etc.
<b>Assessment Testing</b>	Academic proficiency testing under this Contract.
<b>Audit Trail Capture and</b>	Supports the identification and monitoring of activities within an

149

**STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
 NEW ENGLAND ASSESSMENT CONSORTIUM:  
 A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
 SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
 IN GRADES 3 THROUGH 8 AND 11  
 CONTRACT 2014-018  
 CONTRACT AGREEMENT –PART 2**

<b>Analysis</b>	application or system.
<b>Best and Final Offer (BAFO)</b>	For negotiated procurements, a AIR's final offer following the conclusion of discussions.
<b>CCP</b>	Change Control Procedures
<b>Certification</b>	AIR's written declaration with full supporting and written Documentation (including without limitation test results as applicable) that AIR has completed development of the Deliverable and certified its readiness for applicable Acceptance Testing or Review.
<b>Change Control</b>	Formal process for initiating changes to the proposed solution or process once development has begun.
<b>Change Order</b>	Formal documentation prepared for a proposed change in the Specifications.
<b>CM</b>	Configuration Management
<b>Completion Date</b>	End date for the Contract.
<b>Computer Adaptive Test Engine (CAT)</b>	A software system with the ability to automatically adjust the difficulty level of test questions based on student responses. An adaptive test engine has the ability to automatically determine which questions should be delivered next based on the previous response.
<b>Confidential Information</b>	Information required to be kept Confidential from unauthorized disclosure under the Contract.
<b>Contract</b>	This Agreement between the State of New Hampshire and a AIR, which creates binding obligations for each party to perform as specified in the Contract Documents.
<b>Contract Conclusion</b>	Refers to the conclusion of the Contract, for any reason, including but not limited to, the successful Contract completion, termination for convenience, or termination for default.
<b>Contract Documents</b>	Documents that comprise this Contract (See Contract Agreement, Section 1.1).
<b>Contract Managers</b>	The persons identified by the State and AIR who shall be responsible for all contractual authorization and administration of the Contract. These responsibilities shall include but not be limited to processing Contract Documentation, obtaining executive

79

**STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION**  
**NEW ENGLAND ASSESSMENT CONSORTIUM:**  
**A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE**  
**SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS**  
**IN GRADES 3 THROUGH 8 AND 11**  
**CONTRACT 2014-018**  
**CONTRACT AGREEMENT –PART 2**

	approvals, tracking costs and payments, and representing the parties in all Contract administrative activities. (See Section 4: <i>Contract Management</i> )
<b>Contractor</b>	AIR whose proposal or quote was awarded the Contract with the State and who is responsible for the Services and Deliverables of the Contract.
<b>Conversion Test</b>	A test to ensure that a Data conversion process correctly takes Data from a legacy system and successfully converts it to a form that can be used by the new System.
<b>COTS</b>	Commercial Off-The-Shelf Software
<b>CR</b>	Change Request
<b>Cure Period</b>	The thirty (30) day period following written notification of a default within which a AIR must cure the default identified.
<b>Custom Code</b>	Code developed by AIR specifically for this project for .
<b>Custom Software</b>	Software developed by AIR specifically for this project for the State of New Hampshire.
<b>Data</b>	State's records, files, forms, Data and other documents or information, in either electronic or paper form, that will be used /converted by AIR during the Contract Term.
<b>DBA</b>	Database Administrator
<b>Deficiencies/Defects</b>	<p>A failure, deficiency or defect in a Deliverable resulting in a Deliverable, the Software, or the System, not conforming to its Specifications.</p> <p><b>Class A Deficiency</b> – <i>Students cannot test or Deliverables or Services</i> –are missing significant portions of information or unintelligible to State or were otherwise inadequate and require re-performance of the Service.</p> <p><b>Class B Deficiency</b> – <i>Although almost all students can test and reports are available, issues impact a few students or Deliverables or Services require minimal, cosmetic, preferential or low priority changes or minor reworking.</i></p>
<b>Deliverable</b>	A Deliverable is a product or service provided by AIR to the State or under the terms of a Contract requirement. but expressly excludes

FD

**STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
 NEW ENGLAND ASSESSMENT CONSORTIUM:  
 A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
 SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
 IN GRADES 3 THROUGH 8 AND 11  
 CONTRACT 2014-018  
 CONTRACT AGREEMENT –PART 2**

	any and all computer programs and documentation relating thereto (“Software”). Under no circumstances shall any Software be deemed a deliverable or work for hire under this Contract.
<b>Department</b>	An agency of the State of New Hampshire.
<b>Department of Information Technology (DoIT)</b>	The Department of Information Technology established under RSA 21-R by the Legislature effective September 5, 2008.
<b>Digital Signature</b>	Guarantees the unaltered state of a file
<b>Documentation</b>	All information that describes the installation, operation, and use of the Software, either in printed or electronic format.
<b>Effective Date</b>	The Contract and all obligations of the parties hereunder shall become effective on the date the Governor and the Executive Council of the State of New Hampshire approves the Contract.
<b>Encryption</b>	Supports the encoding of data for security purposes.
<b>Firm Fixed Price Contract</b>	A Firm-Fixed-Price Contract provides a price that is not subject to increase, i.e., adjustment on the basis of AIR’s cost experience in performing the Contract.
<b>Fully Loaded</b>	Rates are inclusive of all allowable expenses, including, but not limited to: meals, hotel/housing, airfare, car rentals, car mileage, and out of pocket expenses
<b>GAAP</b>	Generally Accepted Accounting Principles
<b>Governor and Executive Council</b>	The New Hampshire Governor and Executive Council.
<b>Identification and Authentication</b>	Supports obtaining information about those parties attempting to log on to a system or application for security purposes and the validation of those users.
<b>Implementation</b>	The process for making the System fully operational for processing the Data.
<b>Implementation Plan</b>	Sets forth the transition from development of the System to full operation, and includes without limitation, training, business and technical procedures.
<b>Information Technology (IT)</b>	Refers to the tools and processes used for the gathering, storing, manipulating, transmitting, sharing, and sensing of information

**STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION**  
**NEW ENGLAND ASSESSMENT CONSORTIUM:**  
**A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE**  
**SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS**  
**IN GRADES 3 THROUGH 8 AND 11**  
**CONTRACT 2014-018**  
**CONTRACT AGREEMENT –PART 2**

	including, but not limited to, Data processing, computing, information systems, telecommunications, and various audio and video technologies.
<b>Input Validation</b>	Ensure the application is protected from buffer overflow, cross-site scripting, SQL injection, and canonicalization.
<b>Interim Assessment</b>	Assessments provided by Smarter Balanced that provide educators with actionable information about student progress at locally determined intervals throughout the school year. Like summative assessments, the interim assessments described in this RFP will be computer adaptive and will include performance tasks.
<b>Intrusion Detection</b>	Supports the detection of illegal entrance into a computer system.
<b>Invoking Party</b>	In a dispute, the party believing itself aggrieved
<b>IT Testing</b>	The process of testing the System and its components to ensure that they are all operating according to System Documentation and the Specifications of the Contract.
<b>Key Project Staff</b>	Personnel identified by the State and by AIR as essential to work on the Project.
<b>2014-018 NEAC RFP</b>	The Request for Proposal issued by the State of New Hampshire: 2014-018 New England Assessment Consortium: A Three-State Procurement Collaborative for the Implementation of the Smarter Balanced English Language Arts and Mathematics Assessments in Grades 3 through 8 and 11
<b>New England Assessment Consortium” (NEAC)</b>	The New England states in this procurement collaborative that are requesting the services described in this request for proposals.
<b>New England Secondary School Consortium (NESSC)</b>	A regional partnership made up of Connecticut, Maine, New Hampshire, Rhode Island and Vermont, that are working together to close persistent <u>achievement gaps</u> and promote greater educational <u>equity</u> and opportunity for secondary school students. Working through its host organization, the Great Schools Partnership, NESSC will provide a single point of contact for receiving AIR questions, and other supports critical to the development and release of this rfp. NESSC will NOT play a role in screening applicants or awarding the contract
<b>Non Exclusive Contract</b>	A contract executed by the State that does not restrict the State from seeking alternative sources for the Deliverables or Services

19

**STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
 NEW ENGLAND ASSESSMENT CONSORTIUM:  
 A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
 SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
 IN GRADES 3 THROUGH 8 AND 11  
 CONTRACT 2014-018  
 CONTRACT AGREEMENT –PART 2**

	provided under the Contract.
<b>Normal Business Hours</b>	Normal Business Hours – 8:00 a.m. to 5:00 p.m. EST, Monday through Friday excluding State of New Hampshire holidays. State holidays are: New Year’s Day, Martin Luther King Day, President’s Day, Memorial Day, July 4 <sup>th</sup> , Labor Day, Veterans Day, Thanksgiving Day, the day after Thanksgiving Day, and Christmas Day. Specific dates will be provided.
<b>Notice to Proceed (NTP)</b>	The State Contract Manager’s written direction to AIR to begin work on the Contract on a given date and time.
<b>Open Data Formats</b>	A data format based on an underlying Open Standard.
<b>Open Source Software</b>	Software that guarantees the user unrestricted use of the Software as defined in RSA 21-R:10 and RSA 21-R:11.
<b>Open Standards</b>	Specifications for the encoding and transfer of computer data that is defined in RSA 21-R:10 and RSA 21-R:13.
<b>Operating System</b>	System is fully functional, all Data has been loaded into the System, is available for use by the State in its daily operations.
<b>Operational</b>	Operational means that the System is operating and fully functional, all Data has been loaded; the System is available for use by the State in its daily operations, and the State has issued an Acceptance Letter.
<b>Order of Precedence</b>	The order in which Contract/Documents control in the event of a conflict or ambiguity. A term or condition in a document controls over a conflicting or ambiguous term or condition in a document that is lower in the Order of Precedence
<b>Performance Task</b>	A goal-directed assessment exercise that consists of an activity that is completed by the student.
<b>Project</b>	The planned undertaking regarding the entire subject matter of an RFP and Contract and the activities of the parties related hereto.
<b>Project Management Plan</b>	A document that describes the processes and methodology to be employed by AIR to ensure a successful Project.
<b>Project Managers</b>	The persons identified who shall function as the State’s and AIR’s representative with regard to Review and Acceptance of Contract Deliverables, invoice sign off, and review and approval of Change

*J*

**STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
 NEW ENGLAND ASSESSMENT CONSORTIUM:  
 A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
 SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
 IN GRADES 3 THROUGH 8 AND 11  
 CONTRACT 2014-018  
 CONTRACT AGREEMENT –PART 2**

	Requests (CR) utilizing the Change Control Procedures (CCP)
<b>Project Staff</b>	State personnel assigned to work with AIR on the Project.
<b>Project Team</b>	The group of State employees and AIR's personnel responsible for managing the processes and mechanisms required such that the Services are procured in accordance with the Work Plan on time, on budget and to the required specifications and quality
<b>Proposal</b>	The submission from a AIR in response to the Request for a Proposal or Statement of Work
<b>Regression Test Plan</b>	A plan integrated into the Work Plan used to ascertain whether fixes to Defects have caused errors elsewhere in the application/process.
<b>Review</b>	The process of reviewing Deliverables for Acceptance.
<b>Review Period</b>	The period set for review of a Deliverable. If none is specified then the Review Period is five (5) business days.
<b>RFP (Request for Proposal)</b>	A Request For Proposal solicits Proposals to satisfy State functional requirements by supplying data processing product and/or Service resources according to specific terms and conditions.
<b>Role/Privilege Management</b>	Supports the granting of abilities to users or groups of users of a computer, application or network.
<b>Schedule</b>	The dates described in the Work Plan for deadlines for performance of Services and other Project events and activities under the Contract.
<b>Service Level Agreement (SLA)</b>	A signed agreement between AIR and the State specifying the level of Service that is expected of, and provided by, AIR during the term of the Contract.
<b>Services</b>	The work or labor to be performed by AIR on the Project as described in the Contract to produce Deliverables.
<b>Smarter Balanced</b>	Smarter Balanced Assessment Consortium
<b>Smarter Balanced Assessment Consortium</b>	The partnership of 24 states and 1 affiliate that have joined forces to manage the design, development, and delivery of the Smarter Balanced assessment system.

*HO*

STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
 NEW ENGLAND ASSESSMENT CONSORTIUM:  
 A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
 SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
 IN GRADES 3 THROUGH 8 AND 11  
 CONTRACT 2014-018  
 CONTRACT AGREEMENT –PART 2

<b>Smarter Balanced Staff</b>	The staff employed by the Smarter Balanced Assessment Consortium who provide leadership and management regarding the design and development of the assessment system.
<b>Software</b>	All Software used by AIR to provide the services under the Contract.
<b>Software as a Service</b>	The use of Software by AIR and the State to deliver the Services and produce Deliverables.
<b>Software Deliverables</b>	
<b>Software License</b>	AIR hereby grants to the State a nonexclusive, royalty-free, license to access and use all AIR-proprietary Software Items during the Contract as required for AIR to provide the Deliverables and Services herein.
<b>Solution</b>	The Solution consists of the total Solution, which includes, without limitation, Software and Services, addressing the requirements and terms of the Specifications. The off-the-shelf Software and configured Software customized for the State provided by AIR in response to this RFP.
<b>Specifications</b>	The written Specifications that set forth the requirements which include, without limitation, this RFP, the Proposal, the Contract, any performance standards, Documentation, applicable State and federal policies, laws and regulations, applicable State technical standards, subsequent State-approved Deliverables, and other Specifications and requirements described in the Contract Documents. The Specifications are, by this reference, made a part of the Contract as though completely set forth herein.
<b>State</b>	STATE is defined as: State of New Hampshire Department of Education 101 Pleasant Street Concord, NH 03301 Reference to the term “State” shall include applicable agencies.
<b>State Data</b>	Any information contained within State systems in electronic or paper format.
<b>State Fiscal Year (SFY)</b>	The New Hampshire State Fiscal Year extends from July 1 <sup>st</sup> through June 30 <sup>th</sup> of the following calendar year.
<b>State Project Leader</b>	State’s representative with regard to Project oversight
<b>State’s Confidential Records</b>	State’s information regardless of its form that is not subject to public disclosure under applicable state and federal laws and

*J*

**STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
 NEW ENGLAND ASSESSMENT CONSORTIUM:  
 A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
 SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
 IN GRADES 3 THROUGH 8 AND 11  
 CONTRACT 2014-018  
 CONTRACT AGREEMENT –PART 2**

	regulations, including but not limited to <u>RSA Chapter 91-A</u> .
<b>State's Project Manager (PM)</b>	State's representative with regard to Project management and technical matters. Agency Project Managers are responsible for review and Acceptance of specific Contract Deliverables, invoice sign off, and Review and approval of a Change Proposal (CP).
<b>Statement of Work (SOW)</b>	A Statement of Work clearly defines the basic requirements and objectives of a Project. The Statement of Work also defines a high level view of the architecture, performance and design requirements, the roles and responsibilities of the State and AIR. The Contract Agreement SOW defines the results that AIR remains responsible and accountable for achieving.
<b>Subcontractor</b>	A person, partnership, or company not in the employment of, or owned by, AIR, which is performing Services under this Contract under a separate Contract with or on behalf of AIR. This definition specifically excludes relatively standard commercial services and supplies such as but not limited to printing, reproduction, shipping (UPS and Federal Express), conference calls, temporary agencies to pay temporary scorers and other temporary employees, independent consultants, computers, and office supplies.
<b>Summative Assessment</b>	A test used primarily to evaluate student competency at the end of comprehensive and integrated period or unit of learning, typically at the end of a school year. Summative assessments are commonly aligned with state standards and are typically used for purposes of determining school accountability.
<b>System</b>	The array of hardware/software-based services provided by AIR necessary to provide a Web-Based Computer-Adaptive Testing System. The System is the sum of the services, developments, contractor intellectual property, software, COTS software, hardware and documentation described in the scope of work that comprise the system the contractor will deliver configure, and implement; all integrated and functioning together in accordance the Specifications of this Contract.
<b>TBD</b>	To Be Determined
<b>Technical Authorization</b>	Direction to a AIR, which fills in details, clarifies, interprets, or specifies technical requirements. It must be: (1) consistent with Statement of Work within statement of Services; (2) not constitute a new assignment; and (3) not change the terms, documents of specifications of the Contract Agreement.

STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
 NEW ENGLAND ASSESSMENT CONSORTIUM:  
 A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
 SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
 IN GRADES 3 THROUGH 8 AND 11  
 CONTRACT 2014-018  
 CONTRACT AGREEMENT –PART 2

<b>Term</b>	Period of the Contract from the Effective Date through termination.
<b>Test Plan</b>	A plan, integrated in the Work Plan, to verify the code (new or changed) works to fulfill the requirements of the Project. It may consist of a timeline, a series of tests and test data, test scripts and reports for the test results as well as a tracking mechanism.
<b>Transition Services</b>	Services and support provided when AIR is supporting System changes.
<b>UAT</b>	User Acceptance Test
<b>Unit Test</b>	Developers create their own test data and test scenarios to verify the code they have created or changed functions properly as defined.
<b>User Acceptance Testing</b>	Tests done by knowledgeable business users who are familiar with the scope of the Project. They create/develop test cases to confirm the System was developed according to specific user requirements. The test cases and scripts/scenarios should be mapped to business requirements outlined in the user requirements documents.
<b>User Management</b>	Supports the administration of computer, application and network accounts within an organization.
<b>Vendor</b>	AIR, whose proposal or quote was awarded the Contract with the State and who is responsible for the Services and Deliverables of the Contract.
<b>Verification</b>	Supports the confirmation of authority to enter a computer system, application or network.
<b>Walk Through</b>	A step-by-step review of a Specification, usability features or design before it is handed off to the technical team for development.
<b>Work Hours</b>	Between 8:00 am and 5:00 pm, eight (8) hour days, forty (40) hour weeks, excluding State of New Hampshire holidays.
<b>Work Plan</b>	The overall plan of activities for the Project created in accordance with the Contract. The plan and delineation of tasks, activities and events to be performed and Deliverables to be produced under the Project as specified in Appendix C. The Work Plan shall include a detailed description of the Schedule, tasks/activities, Deliverables,

**STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
NEW ENGLAND ASSESSMENT CONSORTIUM:  
A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
IN GRADES 3 THROUGH 8 AND 11  
CONTRACT 2014-018  
CONTRACT AGREEMENT -PART 2**

	critical events, task dependencies, and the resources that would lead and/or participate on each task.

FD

**STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
NEW ENGLAND ASSESSMENT CONSORTIUM:  
A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
IN GRADES 3 THROUGH 8 AND 11  
CONTRACT 2014-018  
CONTRACT AGREEMENT –PART 2**

**INTRODUCTION**

This Contract is by and between the State of New Hampshire, acting through Department of Education, and American Institutes for Research, (“AIR”), having its principal place of business at 1000 Thomas Jefferson Street, Washington, DC 20007-3835.

Through the New England Assessment Consortium (“NEAC”) states, New Hampshire Department Of Education seeks a Contractor experienced in web-based student assessment test delivery, scoring methodology, and related services to deliver Smarter Balanced Summative and Interim assessments and provide results using a web-based computer-adaptive testing System that must be compliant and certified (pending certification process) for specifications of the Smarter Balanced Assessment Consortium’s common assessment for Grades 3 through 8 and Grade 11 in mathematics and English language arts. The resulting System to provide the Services shall be hosted on the Contractor’s site or a site managed by the Contractor or its subcontractor. The System shall become available for operational testing by January 2015.

**RECITALS**

The New Hampshire Department of Education desires to have American Institutes for Research provide a Software and associated Services, for the purpose of administering, scoring, and reporting results the Smarter Balanced English Language Arts and Mathematics Assessments in grades 3 through 8 and 11.

American Institutes for Research wishes to provide a Software as a Service, and associated Services, for the purpose of administering, scoring, and reporting results the Smarter Balanced English Language Arts and Mathematics Assessments in grades 3 through 8 and 11 to the New Hampshire Department of Education

The parties therefore agree as follows:

**1. CONTRACT DOCUMENTS**

**1.1 Contract Documents**

This Contract is comprised of the following documents (Contract Documents):

- A.** Part 1 – State Terms and Conditions contained in the Form P-37
- B.** Part 2 – The Contract Agreement
- C.** Part 3 – Consolidated Exhibits
  - Exhibit A- Contract Deliverables
  - Exhibit B- Price and Payment Schedule
  - Exhibit C- Special Provisions
  - Exhibit D- Administrative Services
  - Exhibit E- Implementation Services
  - Exhibit F- Testing Services
  - Exhibit G- Hosting, Maintenance, and Support Services
  - Exhibit H- Requirement Responses

D

**STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
NEW ENGLAND ASSESSMENT CONSORTIUM:  
A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
IN GRADES 3 THROUGH 8 AND 11  
CONTRACT 2014-018  
CONTRACT AGREEMENT –PART 2**

Exhibit I- Work Plan  
Exhibit J- Software License and related Terms  
Exhibit K- Warranty and Warranty Services  
Exhibit L- Training Services  
Exhibit M – NEAC RFP with Addendums, by reference  
Exhibit N - AIR Proposal, by reference  
Exhibit O- Certificates and Attachments

## **1.2 Order of Precedence**

In the event of conflict or ambiguity among any of the text of the Contract Documents, the following Order of Precedence shall govern:

- a. *The State of New Hampshire Terms and Conditions*, Form P-37-Contract Agreement Part 1
- b. State of New Hampshire, Department of Education Contract 2014-018
- c. RFP 2014-018 NEAC RFP, issued April 28, 2014, with addendum(s) 1 -3 incorporated; then and the AIR Proposal, dated June, 6, 2014, read together to determine the intent at the time of contracting. If these documents are irrevocably in conflict, the RFP with addendum 1-3 shall take precedence.
- d. The AIR Proposal, dated June 6, 2014.

## **1.3 Contract Term**

The Contract and all obligations of the parties hereunder shall become effective after full execution by the parties, and the receipt of required governmental approvals, including, but not limited to, Governor and Executive Council of the State of New Hampshire approval (“Effective Date”).

The Contract shall begin on the Effective Date and extend through June 30, 2015. The Term may be extended annually for one-year extensions (“Extended Term”) at the sole option of the State at the fees included herein, for each extended term, up to but not beyond June 30, 2017.

American Institutes for Research shall commence work upon issuance of a Notice to Proceed by the State.

The State does not require AIR to commence work prior to the Effective Date; however, if AIR commences work prior to the Effective Date and a Notice to Proceed, such work shall be performed at the sole risk of AIR. In the event that the Contract does not become effective, the State shall be under no obligation to pay AIR for any costs incurred or Services performed; however, if the Contract becomes effective, all costs incurred prior to the Effective Date shall be paid under the terms of the Contract.

**Time is of the essence in the performance of American Institutes for Research’s obligations under the Contract.**

70

**STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
NEW ENGLAND ASSESSMENT CONSORTIUM:  
A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
IN GRADES 3 THROUGH 8 AND 11  
CONTRACT 2014-018  
CONTRACT AGREEMENT –PART 2**

## **2. COMPENSATION**

### **2.1 Contract Price**

The Contract price, method of payment, and terms of payment are identified and more particularly described in Contract Exhibit B: *Price and Payment Schedule*.

### **2.2 Non-Exclusive Contract**

This is a Non-Exclusive, Not to Exceed (“NTE”) Contract with price and term limitations as set forth in the Contract.

The State reserves the right, at its discretion, to retain other contractors to provide any of the Services or Deliverables identified under this procurement or make an award by item, part or portion of an item, group of items, or total Proposal. AIR shall not be responsible for any delay, act, or omission of such other contractors, except that AIR shall be responsible for any delay, act, or omission of the other contractors if such delay, act, or omission is caused by or due to the fault of AIR.

Notwithstanding any other provision of the Contract to the contrary, in no event shall total payments under the Contract exceed \$2,108,551.00, New Hampshire’s portion of the full cost to the New England Assessment Consortium of \$8,007,268.00 for 2015.

## **3. CONTRACT MANAGEMENT**

The Project shall require the coordinated efforts of a Project Team consisting of both AIR and State personnel. AIR shall provide all necessary resources to perform its obligations under the Contract. AIR shall be responsible for managing the Project to its successful completion.

### **3.1 AIR’s Contract Manager**

AIR shall assign a Contract Manager who shall be responsible for all Contract authorization and administration. AIR’s Contract Manager is:

Thomas Jesulaitis  
Chief Contracts Officer  
1000 Thomas Jefferson Street NW, Washington, DC 20007-3835  
Tel: 202-403-5000  
Fax: 202-403-5303  
Email:

### **3.2 AIR’s Project Manager**

#### **3.2.1 Contract Project Manager**

AIR shall assign a Project Manager who meets the requirements of the Contract, including but not limited to, the requirements set forth in the RFP. AIR’s selection of the AIR Project Manager shall be subject to the prior written approval of the State. The State’s approval process may include, without limitation, at the State’s discretion, review of the proposed AIR Project Manager’s resume, qualifications, references, and background checks, and an interview. The State may require removal or reassignment of

*J*

**STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
NEW ENGLAND ASSESSMENT CONSORTIUM:  
A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
IN GRADES 3 THROUGH 8 AND 11  
CONTRACT 2014-018  
CONTRACT AGREEMENT –PART 2**

AIR's Project Manager who, in the sole judgment of the State, is found unacceptable or is not performing to the State's satisfaction.

- 3.2.2** AIR Project Manager must be qualified to perform the obligations required of the position under the Contract, shall have full authority to make binding decisions under the Contract, and shall function as AIR's representative for all administrative and management matters. AIR's Project Manager shall perform the duties required under the Contract, including, but not limited to, those set forth in Contract Exhibit I, Section 2. AIR's Project Manager must be available to promptly respond during Normal Business Hours within two (2) hours to inquiries from the State, and be at the site as needed. AIR's Project Manager must work diligently and use his/ her best efforts on the Project.
- 3.2.3** AIR shall not change its assignment of AIR Project Manager without providing the State written justification and obtaining the prior written approval of the State. State approvals for replacement of AIR's Project Manager shall not be unreasonably withheld. The replacement Project Manager shall have comparable or greater skills than AIR Project Manager being replaced; meet the requirements of the Contract, (including but not limited to, the requirements set forth in RFP); and be subject to reference and background checks described above in Contract Agreement Part 2, Section 3.2.1: *Contract Project Manager*, and in Contract Agreement Part 2, Section 3.6: *Reference and Background Checks*, below. AIR shall assign a replacement AIR Project Manager within ten (10) business days of the departure of the prior AIR Project Manager, and AIR shall continue during the ten (10) business day period to provide competent Project management Services through the assignment of a qualified interim AIR Project Manager.
- 3.2.4** Notwithstanding any other provision of the Contract, the State shall have the option, at its discretion, to terminate the Contract, declare AIR in default and pursue its remedies at law and in equity, if AIR fails to assign a AIR Project Manager meeting the requirements and terms of the Contract.
- 3.2.5** AIR Project Manager is:  
Jennifer Chou  
Senior Project Director  
1000 Thomas Jefferson Street NW  
Washington, DC 20007-3835  
Tel: 202-403-5000  
Fax: 202-403-5303  
Email:

**3.3 AIR Key Project Staff**

- 3.3.1** AIR shall assign Key Project Staff who meet the requirements of the Contract, and can implement the Software Solution and provide the Services and Deliverables meeting the requirements set forth in RFP Appendix C: *System Requirements and Deliverables*, Table C.1: *System Requirements and Deliverables-AIR Response Checklist*. The State may

78

**STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
NEW ENGLAND ASSESSMENT CONSORTIUM:  
A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
IN GRADES 3 THROUGH 8 AND 11  
CONTRACT 2014-018  
CONTRACT AGREEMENT –PART 2**

conduct reference and background checks on AIR Key Project Staff. The State reserves the right to require removal or reassignment of AIR's Key Project Staff who are found unacceptable to the State. Any background checks shall be performed in accordance with the Contract Agreement Section 4.10: *Background Checks*.

**3.3.2** AIR shall not change any AIR Key Project Staff commitments without providing the State written justification and obtaining the prior written approval of the State. State approvals for replacement of AIR Key Project Staff shall not be unreasonably withheld. The replacement AIR Key Project Staff shall have comparable or greater skills than AIR Key Project Staff being replaced; meet the requirements of the Contract, including but not limited to the requirements set forth in RFP Appendix C: *System Requirements and Deliverables* and be subject to reference and background checks described in Contract Agreement-Part 2, Section 3.6: *Reference and Background Checks*,

**3.3.3** Notwithstanding any other provision of the Contract to the contrary, the State shall have the option to terminate the Contract, declare AIR in default and to pursue its remedies at law and in equity, if AIR fails to assign Key Project Staff meeting the requirements and terms of the Contract or if it is dissatisfied with AIR's replacement Project staff.

**3.3.3.1** AIR Key Project Staff shall consist of the following individuals in the roles identified below:

**AIR's Key Project Staff:**

**Key Member(s)**

Selena Tolosa, M.B.A.

**Title**

Director, Computer & Statistical  
Sciences Center

**3.4 State Contract Manager**

The State shall assign a Contract Manager who shall function as the State's representative with regard to Contract administration. The State Contract Manager is:

Scott J. Mantie, PhD  
Department of Education  
101 Pleasant Street  
Tel: (603) 271-3844  
Fax: (603) 271-7381  
Email: Scott.Mantie@doe.nh.gov

**STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
NEW ENGLAND ASSESSMENT CONSORTIUM:  
A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
IN GRADES 3 THROUGH 8 AND 11  
CONTRACT 2014-018  
CONTRACT AGREEMENT -PART 2**

**3.5 State Project Manager**

The State shall assign a Project Manager. The State Project Manager's duties shall include the following:

- a. Leading the Project;
- b. Engaging and managing all AIRs;
- c. Managing significant issues and risks.
- d. Reviewing and accepting Contract Deliverables;
- e. Invoice sign-offs;
- f. Review and approval of change proposals; and
- g. Managing stakeholders' concerns.

The State Project Manager is:

Scott J. Mantie, PhD  
Department of Education  
101 Pleasant Street  
Tel: (603) 271-3844  
Fax: (603) 271-7381  
Email: Scott.Mantie@doe.nh.gov

**3.6 Reference and Background Checks**

The State may, at its sole expense, conduct reference and background screening of the AIR Project Manager and AIR Key Project Staff. The State shall maintain the confidentiality of background screening results in accordance with the Contract Agreement, Part 2-Section 11: *Use of State's Information, Confidentiality*.

**4. DELIVERABLES**

**4.1 AIR Responsibilities**

AIR shall be solely responsible for meeting all requirements, and terms and conditions specified in this Contract, regardless of whether or not a Subcontractor is used.

AIR may subcontract Services subject to the provisions of the Contract. AIR must submit all information and documentation relating to the Subcontractor, including terms and conditions consistent with this Contract. The State shall consider AIR to be wholly responsible for the performance of the Contract and the sole point of contact with regard to all contractual matters, including payment of any and all charges resulting from the Contract.

AIR agrees to address all requirements of current and future New Hampshire laws including:

"All of our systems protect individual privacy and confidentiality in a manner consistent with New Hampshire's privacy laws (in particular, RSA Sections 193-C:11 and 193-E:5), Family

**STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
NEW ENGLAND ASSESSMENT CONSORTIUM:  
A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
IN GRADES 3 THROUGH 8 AND 11  
CONTRACT 2014-018  
CONTRACT AGREEMENT –PART 2**

Educational Rights and Privacy Act (FERPA), and other federal laws. AIR will protect student information in accordance with New Hampshire statutes on student privacy.”

Such protections will include but not be limited to the following items:

1. Use of an annual student assessment identifier generated by the NH DOE rather than the state assigned student ID (SASID)
2. Removal of requirement to submit actual student demographics such as English language learner status, socio-economic status and race.
3. Deletion of identifiable information, such as student name, from all databases including scanned images held by vendor after the conclusion of the test administration. NH DOE understand it may require the complete deletion of all data in certain cases. It is anticipated that test administration will conclude when individual student reports are delivered to the local school districts.
4. Deletion of backup tapes containing student names at conclusion of test administration.
5. Shredding of paper tests or return of tests to NH DOE.

#### **4.2 Deliverables and Services**

AIR shall provide the State with the Deliverables and Services in accordance with the time frames in the Work Plan for this Contract, and as more particularly described in Contract Exhibit A: *Contract Deliverables*.

Upon its submission of a Deliverable or Service, AIR represents that it has performed its obligations under the Contract associated with the Deliverable or Service.

#### **4.3 Deliverables Review and Acceptance**

After receiving written Certification from AIR that a Deliverable is final, complete, and ready for Review, the State shall Review the Deliverable to determine whether it meets the specifications outlined in the contract. The State shall notify AIR in writing of its Acceptance or rejection of the Deliverable within five (5) business days of the State’s receipt of AIR’s written Certification. If the State rejects the Deliverable, the State shall notify AIR of the nature and class of the Deficiency and AIR shall correct the Deficiency within the period identified in the Work Plan. If no period for AIR’s correction of the Deliverable is identified, AIR shall correct the Deficiency in the Deliverable within five (5) business days. Upon receipt of the corrected Deliverable, the State shall have five (5) business days to review the Deliverable and notify AIR of its Acceptance or rejection thereof, with the option to extend the Review Period up to five (5) additional business days. If AIR fails to correct the Deficiency within the allotted period of time, the State may, at its option, continue reviewing the Deliverable and require AIR to continue until the Deficiency is corrected, or immediately terminate the Contract, declare AIR in default, and pursue its remedies at law and in equity.



**STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
NEW ENGLAND ASSESSMENT CONSORTIUM:  
A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
IN GRADES 3 THROUGH 8 AND 11  
CONTRACT 2014-018  
CONTRACT AGREEMENT –PART 2**

**6. WARRANTY**

AIR shall provide the Warranty and Warranty Services set forth in the Contract, and particularly described in Exhibit K: *Warranty and Warranty Services*.

**7. SERVICES**

AIR shall provide the Services required under the Contract Documents. All Services shall meet, and be performed, in accordance with the Specifications.

**7.1 Administrative Services**

AIR shall provide the State with the administrative Services set forth in the Contract, and particularly described in Exhibit D: *Administrative Services*.

**7.2 Implementation Services**

AIR shall provide the State with the Implementation Services set forth in the Contract, and particularly described in Exhibit E: *Implementation Services*.

**7.3 Testing Services**

AIR shall perform testing Services for the State set forth in the Contract, and particularly described in Exhibit F: *Testing Services*.

**7.4 Training Services**

AIR shall provide the State with training Services set forth in the Contract, and particularly described in Exhibit L: *Training Services*.

**7.5 Maintenance and Support Services**

AIR shall provide the State with and support for the Software as a Service set forth in the Contract, and particularly described in Exhibit G: *System Maintenance and Support*.

**8. WORK PLAN DELIVERABLE**

AIR shall provide the State with a Work Plan that shall include, without limitation, a detailed description of the Schedule, tasks, Deliverables, major milestones, task dependencies, and payment Schedule.

The initial Work Plan shall be a separate Deliverable and is set forth in Contract Exhibit I: *Work Plan*. AIR shall update the Work Plan as necessary, but no less than weekly, to accurately reflect the status of the Project, including without limitation, the Schedule, tasks, Deliverables, major milestones, task dependencies, and payment Schedule. Any such updates to the Work Plan must be approved by the State, in writing, prior to final incorporation into Contract Exhibit I: *Work Plan*. The updated Contract Exhibit I: *Work Plan*, as approved by the State, is incorporated herein by reference.

Unless otherwise agreed in writing by the State, changes to the Contract Exhibit I: *Work Plan* shall not relieve AIR from liability to the State for damages resulting from AIR's failure to perform its

**STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
NEW ENGLAND ASSESSMENT CONSORTIUM:  
A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
IN GRADES 3 THROUGH 8 AND 11  
CONTRACT 2014-018  
CONTRACT AGREEMENT –PART 2**

obligations under the Contract, including, without limitation, performance in accordance with the Schedule.

In the event of any delay in the Schedule, AIR must immediately notify the State in writing, identifying the nature of the delay, i.e., specific actions or inactions of AIR or the State causing the problem; its estimated duration period to reconciliation; specific actions that need to be taken to correct the problem; and the expected Schedule impact on the Project.

In the event additional time is required by AIR to correct Deficiencies, the Schedule shall not change unless previously agreed in writing by the State, except that the Schedule shall automatically extend on a day-to-day basis to the extent that the delay does not result from AIR's failure to fulfill its obligations under the Contract. To the extent that the State's execution of its major tasks takes longer than described in the Work Plan, the Schedule shall automatically extend on a day-to-day basis.

Notwithstanding anything to the contrary, the State shall have the option to terminate the Contract for default, at its discretion, if it is dissatisfied with AIR's Work Plan or elements within the Work Plan.

## **9. CHANGE ORDERS**

The State may make changes or revisions at any time by written Change Order. The State originated changes or revisions shall be approved by the Department of Information Technology. Within five (5) business days of AIR's receipt of a Change Order, AIR shall advise the State, in detail, of any impact on cost (e.g., increase or decrease), the Schedule, or the Work Plan.

AIR may request a change within the scope of the Contract by written Change Order, identifying any impact on cost, the Schedule, or the Work Plan. The State shall attempt to respond to AIR's requested Change Order within five (5) business days. The Department of Education, as well as the Department of Information Technology, must approve all Change Orders in writing. The State shall be deemed to have rejected the Change Order if the parties are unable to reach an agreement in writing.

All Change Order requests from AIR to the State, and the State acceptance of AIR's estimate for a State requested change, shall be acknowledged and responded to, either acceptance or rejection, in writing. If accepted, the Change Order(s) shall be subject to the Contract amendment process, as determined to apply by the State.

## **10. INTELLECTUAL PROPERTY**

The American Institutes for Research own the copyrights, trademarks, and related intellectual property covered under this agreement. This agreement does not convey any exclusive rights, title, or interest in or to intellectual property to New Hampshire. New Hampshire shall not take any actions that would limit or restrict access to the materials by other states or otherwise adversely affect the proprietary nature of the software or other intellectual property.







**STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
NEW ENGLAND ASSESSMENT CONSORTIUM:  
A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
IN GRADES 3 THROUGH 8 AND 11  
CONTRACT 2014-018  
CONTRACT AGREEMENT -PART 2**

**12.3 State's Immunity**

Notwithstanding the foregoing, nothing herein contained shall be deemed to constitute a waiver of the sovereign immunity of the State, which immunity is hereby reserved to the State. This covenant shall survive termination or Contract conclusion.

**12.4 Survival**

This *Contract Agreement- Part 2-Section 12: Limitation of Liability* shall survive termination or Contract conclusion.





**STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
NEW ENGLAND ASSESSMENT CONSORTIUM:  
A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
IN GRADES 3 THROUGH 8 AND 11  
CONTRACT 2014-018  
CONTRACT AGREEMENT –PART 2**

- a. Stop work under the Contract on the date, and to the extent specified, in the notice;
- b. Promptly, but in no event longer than thirty (30) days after termination, terminate its orders and subcontracts related to the work which has been terminated and settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts, with the approval or ratification of the State to the extent required, which approval or ratification shall be final for the purpose of this Section;
- c. Take such action as the State directs, or as necessary to preserve and protect the property related to the Contract which is in the possession of AIR and in which the State has an interest;
- d. Transfer title to the State and deliver in the manner, at the times, and to the extent directed by the State, any property which is required to be furnished to the State and which has been accepted or requested by the State; and
- e. Provide written Certification to the State that AIR has surrendered to the State all said property.
- f. Assist in Transition Services, as reasonably requested by the State at no additional cost.

**14. CHANGE OF OWNERSHIP**

In the event that AIR should change ownership for any reason whatsoever, the State shall have the option of continuing under the Contract with AIR, its successors or assigns for the full remaining term of the Contract; continuing under the Contract with AIR, its successors or assigns for such period of time as determined necessary by the State; or immediately terminate the Contract without liability to AIR, its successors or assigns.

**15. ASSIGNMENT, DELEGATION AND SUBCONTRACTS**

**15.1** AIR shall not assign, delegate, subcontract, or otherwise transfer any of its interest, rights, or duties under the Contract without the prior written consent of the State. Such consent shall not be unreasonably withheld. Any attempted transfer, assignment, delegation, or other transfer made without the State's prior written consent shall be null and void, and may constitute an event of default at the sole discretion of the State.

**15.2** AIR shall remain wholly responsible for performance of the entire Contract even if assignees, delegates, Subcontractors, or other transferees ("Assigns") are used, unless otherwise agreed to in writing by the State, and the Assigns fully assumes in writing any and all obligations and liabilities under the Contract from the Effective Date. In the absence of a written assumption of full obligations and liabilities of the Contract, any permitted assignment, delegation, subcontract, or other transfer shall neither relieve AIR of any of its obligations under the

**STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
 NEW ENGLAND ASSESSMENT CONSORTIUM:  
 A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
 SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
 IN GRADES 3 THROUGH 8 AND 11  
 CONTRACT 2014-018  
 CONTRACT AGREEMENT -PART 2**

Contract nor affect any remedies available to the State against AIR that may arise from any event of default of the provisions of the contract. The State shall consider AIR to be the sole point of contact with regard to all contractual matters, including payment of any and all charges resulting from the Contract.

**15.3** Notwithstanding the foregoing, nothing herein shall prohibit AIR from assigning the Contract to the successor of all or substantially all of the assets or business of AIR provided that the successor fully assumes in writing all obligations and responsibilities under the Contract. In the event that AIR should change ownership, as permitted under this Contract Agreement Part 2, Section 14: *Change of Ownership*, the State shall have the option to continue under the Contract with AIR, its successors or assigns for the full remaining term of the Contract; continue under the Contract with AIR, its successors or assigns for such period of time as determined necessary by the State; or immediately terminating the Contract without liability to AIR, its successors or assigns.

**16. DISPUTE RESOLUTION**

Prior to the filing of any formal proceedings with respect to a dispute (other than an action seeking injunctive relief with respect to intellectual property rights or Confidential Information), the party believing itself aggrieved (the "Invoking Party") shall call for progressive management involvement in the dispute negotiation by written notice to the other party. Such notice shall be without prejudice to the Invoking Party's right to any other remedy permitted under the Contract.

The parties shall use reasonable efforts to arrange personal meetings and/or telephone conferences as needed, at mutually convenient times and places, between negotiators for the parties at the following successive management levels, each of which shall have a period of allotted time as specified below in which to attempt to resolve the dispute:

**Dispute Resolution Responsibility and Schedule Table**

<b>LEVEL</b>	<b>CONTRACTOR</b>	<b>STATE</b>	<b><u>CUMULATIVE ALLOTTED TIME</u></b>
<b>Primary</b>	Jennifer Chou, EdM Senior Project Director	Scott J. Mantie, PhD State Project Manager (PM)	5 Business Days
<b>First</b>	Heather Hayes, J.D. Director	Scott J. Mantie, PhD State Project Management Team (PMT)	10 Business Days
<b>Second</b>	Jon Cohen, PhD President, AIR	Commissioner V. Berry	15 Business Days

The allotted time for the first level negotiations shall begin on the date the Invoking Party's notice is received by the other party. Subsequent allotted time is days from the date that the original Invoking Party's notice is received by the other party.

STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
NEW ENGLAND ASSESSMENT CONSORTIUM:  
A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
IN GRADES 3 THROUGH 8 AND 11  
CONTRACT 2014-018  
CONTRACT AGREEMENT -PART 2

**18. GENERAL PROVISIONS**

**18.1 Travel Expenses**

The State shall not be responsible for any travel or out of pocket expenses incurred in the performance of the Services.

AIR must assume all travel and related expenses by “fully loading” the proposed labor rates to include, but not limited to: meals, hotel/housing, airfare, car rentals, car mileage, and out of pocket expenses.

**18.2 Shipping and Delivery Fee Exemption**

The State shall not pay for any shipping or delivery fees unless specifically itemized in the Contract.

**18.3 Project Workspace and Office Equipment**

The State agency shall work with AIR to determine the requirements for providing all necessary workspace and office equipment, including desktop computers for AIR’s staff.

**18.4 Access/Cooperation**

As applicable, and reasonably necessary, and subject to the applicable State and federal laws and regulations and restrictions imposed by third parties upon the State, the State shall provide AIR with access to all program files, libraries, personal computer-based systems, software packages, network systems, security systems, and hardware as required to complete contracted services.

The State shall use reasonable efforts to provide approvals, authorizations, and decisions reasonably necessary to allow AIR to perform its obligations under the Contract.

**18.5 Required Work Procedures**

All work done must conform to standards and procedures established by the Department of Information Technology and the State included herein.

**18.6 Computer Use**

In consideration for receiving access to and use of the computer facilities, network, licensed or developed software, software maintained or operated by any of the State entities, systems, equipment, Documentation, information, reports, or data of any kind (hereinafter “Information”), AIR understands and agrees to the following rules:

- a. Every Authorized User has the responsibility to assure the protection of information from unauthorized access, misuse, theft, damage, destruction, modification, or disclosure.
- b. That information shall be used solely for conducting official State business, and all other use or access is strictly forbidden including, but not limited to, personal, or other private and non-State use and that at no time shall AIR access or attempt to access any information without having the express authority to do so.

**STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
NEW ENGLAND ASSESSMENT CONSORTIUM:  
A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
IN GRADES 3 THROUGH 8 AND 11  
CONTRACT 2014-018  
CONTRACT AGREEMENT -PART 2**

- c. That at no time shall AIR access or attempt to access any information in a manner inconsistent with the approved policies, procedures, and /or agreements relating to system entry/access.
- d. That all software licensed, developed, or being evaluated by the State cannot be copied, shared, distributed, sub-licensed, modified, reverse engineered, rented, or sold, and that at all times AIR must use utmost care to protect and keep such software strictly confidential in accordance with the license or any other Agreement executed by the State. Only equipment or software owned, licensed, or being evaluated by the State, can be used by AIR. Personal software (including but not limited to palmtop sync software) shall not be installed on any equipment.
- e. That if AIR is found to be in violation of any of the above-stated rules, the User may face removal from the State Contract, and/or criminal or civil prosecution, if the act constitutes a violation of law.

**18.7 Email Use**

Mail and other electronic communication messaging systems are State of New Hampshire property and are to be used for business purposes only. Email is defined as "internal Email systems" or "State-funded Email systems". AIR understand and agree that use of email shall follow State standard policy (available upon request).

**18.8 Internet/Intranet Use**

The Internet/Intranet is to be used for access to and distribution of information in direct support of the business of the State of New Hampshire according to State standard policy (available upon request).

**18.9 Regulatory Government Approvals**

AIR shall obtain all necessary and applicable regulatory or other governmental approvals necessary to perform its obligations under the Contract.

**18.10 Force Majeure**

Neither AIR nor the State shall be responsible for delays or failures in performance resulting from events beyond the control of such party and without fault or negligence of such party. Such events shall include, but not be limited to, acts of God, strikes, lock outs, riots, and acts of War, epidemics, acts of Government, fire, power failures, nuclear accidents, earthquakes, and unusually severe weather.

Except in the event of the foregoing, Force Majeure events shall not include AIR's inability to hire or provide personnel needed for AIR's performance under the Contract.

**18.11 Insurance**

**18.11.1 AIR Insurance Requirement**

See Contract Agreement Part 1-Form P-37 Section 14.

**STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
NEW ENGLAND ASSESSMENT CONSORTIUM:  
A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
IN GRADES 3 THROUGH 8 AND 11  
CONTRACT 2014-018  
CONTRACT AGREEMENT –PART 2**

**18.11.2** The ACORD Insurance Certificate should note the Certificate Holder in the lower left hand block including State of New Hampshire, Department Name, name of the individual responsible for the funding of the contracts and his/her address.

**18.12 Exhibits**

The Exhibits referred to, in and attached to the Contract are incorporated by reference as if fully included in the text.

**18.13 Venue and Jurisdiction**

Any action on the Contract may only be brought in the State of New Hampshire Merrimack County Superior Court.

**18.14 Survival**

The terms, conditions and warranties contained in the Contract that by their context are intended to survive the completion of the performance, cancellation or termination of the Contract shall so survive, including, but not limited to, the terms of the *Contract Agreement Exhibit D Section 3: Records Retention and Access Requirements*, *Contract Agreement Exhibit D Section 4: Accounting Requirements*, and *Contract Agreement Part 2-Section 11: Use of State's Information, Confidentiality* and *Contract Agreement Part 1- Section 13: Indemnification* which shall all survive the termination of the Contract.



**STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
NEW ENGLAND ASSESSMENT CONSORTIUM:  
A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
IN GRADES 3 THROUGH 8 AND 11  
CONTRACT 2014-018  
CONTRACT AGREEMENT –PART3  
EXHIBIT A - CONTRACT DELIVERABLES**

**1. DELIVERABLES, MILESTONES AND ACTIVITIES**

AIR shall provide the State with services for web-based student assessment test delivery, scoring methodology, and related services using a web-based computer-adaptive Assessment Testing System that must be compliant and certified (pending certification process) for specifications of the Smarter Balanced Assessment Consortium’s common assessment for Grades 3 through 8 and Grade 11 in mathematics and English language arts, as described more fully in RFP 2014-018 New England Assessment Consortium: A Three-State Procurement Collaborative for the Implementation of the Smarter Balanced English Language Arts and Mathematics Assessments in Grades 3 through 8 and 11. The resulting shall be hosted by AIR or at a site managed by the AIR or its Subcontractor. The Assessment System will become available for operational testing by January 2015 which will meet and perform in accordance with the Specifications and Deliverables that are in accordance with the time frames in the Work Plan.

The Deliverables are set forth in the Schedule described below in Section 2. By unconditionally accepting a Deliverable, the State reserves the right to reject any and all Deliverables in the event the State detects any Deficiency in the System, in whole or in part, through completion of all Acceptance Testing and any extensions thereof.

Pricing for Deliverables set forth in Exhibit B: *Price and Payment Schedule*. Pricing will be effective for the Term of this Contract, and any extensions thereof.

**2. DELIVERABLES, MILESTONES, AND ACTIVITIES SCHEDULE**

<b>Deliverables: Task Name</b>	<b>Due Date</b>	<b>Evidence of Completion</b>
<b>Project Management and Planning</b>		
Kickoff/Planning Meeting	Within 2 weeks of Contract Award	Meeting Notes
Project Plan and Project Schedule	Within 2 weeks of Contract Award	Plan
Management Meetings/WebEx Conference Calls	As Scheduled	Meeting Notes
Monthly Status Report	As Scheduled	Meeting Notes
TAC Meeting	As Scheduled	Reimbursement Summary
Smarter Balanced Assessment Consortium Meetings	As Scheduled	Attendance Confirmation
<b>Management and Online Test Delivery Systems</b>		
Portal	Within 2 weeks of Contract Award	Completion of UAT
Secure Browser	Within 4 weeks of Contract Award	Completion of UAT

**STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
NEW ENGLAND ASSESSMENT CONSORTIUM:  
A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
IN GRADES 3 THROUGH 8 AND 11  
CONTRACT 2014-018  
CONTRACT AGREEMENT -PART3  
EXHIBIT A - CONTRACT DELIVERABLES**

Test Registration System	Within 4 weeks of Contract Award	Completion of UAT
TDS		Completion of UAT
Test Delivery System (Interim)	12/15/2014	Approval to Open Test Window
Test Delivery System (Summative)	3/9/2015	Approval to Open Test Window
Online Reporting System (ORS)	3/9/2015	Completion of UAT
<b>Creation of Paper-based Tests</b>		
Development of Paper Tests	1/2/2014	Approval to Print
Printing/Shipping of Test Materials.	2/24/2015	Evidence of Delivery
Return of Paper Test Materials.	6/15/2015	Missing Materials Report
<b>Training Materials</b>		
Brochures	Within 4 weeks of Contract Award	Approval to Post
Webinars/Tutorials	1/29/2015	Approval to Post
Online Test Administrator Certification Course	11/12/2014	Approval to Post
Regional Seminars	1/16/2015	Report
<b>Manuals</b>		
User Guides and Technical Documents	12/30/2014	Approval to Post
<b>Scoring</b>		
Delivery of Student Scores	7/2/2015	Results in ORS

See Attachment 1: Project Schedule

Deliverables in future years will follow similar schedule and require similar approvals.

### 3. TRAINING DELIVERABLES

Training will be in accordance with the requirements set forth in Contract Exhibit L: *Training Services* and the Schedule established by the *Work Plan*, Contract Exhibit I. All pricing has been established in Contract Exhibit B: *Price and Payment Schedule*.

STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
 NEW ENGLAND ASSESSMENT CONSORTIUM:  
 A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
 SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
 IN GRADES 3 THROUGH 8 AND 11  
 CONTRACT 2014-018 PART 3  
 EXHIBIT B - PRICE AND PAYMENT SCHEDULE

**1. DELIVERABLE PAYMENT SCHEDULE**

**1.1 Not to Exceed**

This is Not to Exceed (NTE) Contract totaling \$2,108,551.00, Effective Date through June 30, 2015. AIR shall be responsible for performing its obligations in accordance with the Contract. This Contract will allow AIR to invoice the State for the following activities, Deliverables, or milestones appearing in the price and payment tables below.

See Attachment 1: Project Schedule  
 See Attachment 4: NEAC and NH Budgets

FY2014-15 Academic Testing Year (July 1, 2014 – June 30, 2015)		Estimated Amount
First Payment upon NH Governor and Council Approval of Contact	35% of Total NH Annual Amount	\$737,992.85
Second Payment January 1, 2015	35% of Total NH Annual Amount	\$737,992.85
Final Payment upon conclusion of the end-of-year assessment as described below.	30% of Total NH Annual Amount	\$632,565.30

**2. TOTAL CONTRACT PRICE**

Notwithstanding any provision in the Contract to the contrary, and notwithstanding unexpected circumstances, in no event shall the total of all payments made by the State exceed \$2,108,551 (duration of contract). The payment by the State of the total Contract price shall be the only, and the complete reimbursement to AIR for all fees and expenses, of whatever nature, incurred by AIR in the performance hereof.

The State will not be responsible for any travel or out of pocket expenses incurred in the performance of the Services performed under this Contract.

**3. INVOICING**

AIR shall submit correct invoices to the State for all amounts to be paid by the State. All invoices submitted shall be subject to the State's prior written approval, which shall not be unreasonably withheld. AIR shall only submit invoices for Services or Deliverables as permitted by the Contract. Invoices must be in a format as determined by the State and contain detailed information, including without limitation: itemization of each Deliverable and identification of the Deliverable for which payment is sought, and the Acceptance date triggering such payment; date of delivery and/or installation; monthly maintenance charges; any other Project costs or retention amounts if applicable.

**STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
NEW ENGLAND ASSESSMENT CONSORTIUM:  
A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
IN GRADES 3 THROUGH 8 AND 11  
CONTRACT 2014-018 PART 3  
EXHIBIT B - PRICE AND PAYMENT SCHEDULE**

Upon Acceptance of a Deliverable, and a properly documented and undisputed invoice, the State will pay the correct and undisputed invoice within thirty (30) days of invoice receipt. Invoices will not be backdated and shall be promptly dispatched.

Invoices shall be sent to:  
New Hampshire Department Of Education  
Office of Business Management  
101 Pleasant Street  
Concord, NH 03301

**4. PAYMENT ADDRESS**

All payments shall be sent to the following address:  
American Institutes for Research  
1000 Thomas Jefferson Street NW,  
Washington, DC 20007-3835

**5. OVERPAYMENTS TO AMERICAN INSTITUTES FOR RESEARCH**

AIR shall promptly, but no later than fifteen (15) business days, return to the State the full amount of any overpayment or erroneous payment upon discovery or notice from the State.

**6. CREDITS**

The State may apply credits due to the State arising out of this Contract, against AIR's invoices with appropriate information attached.

STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
NEW ENGLAND ASSESSMENT CONSORTIUM:  
A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
IN GRADES 3 THROUGH 8 AND 11  
CONTRACT 2014-018 PART 3  
EXHIBIT D - ADMINISTRATIVE SERVICES

## 1. STATE MEETINGS AND REPORTS

The State believes that effective communication and reporting are essential to Project success.

The AIR Key Project Staff shall participate in meetings as requested by the State, in accordance with the requirements and terms of this Contract.

- a. **Management and Planning Meetings:** Participants will include the AIR Key Project Staff and State Project leaders from both Department Of Education and the Department of Information Technology. The initial meeting will enable leaders to become acquainted and establish any preliminary Project procedures. Future meetings will track Project status and will include discussions on issues, risks, and planning.
- b. **WebEx Conference Calls:** AIR will host monthly WebEx conference calls. In addition to sharing presentations slides, participating in live video and recording events, attendees can interact with each other regardless of the size of the meeting using a live Q&A.
- c. **Management Reports:** This report will summarize, on a weekly basis, the current status of the program, including status on milestones and critical tasks, change management, risk management, and a review of the current issues log.
- d. **Annual Project Plan:** Our standard management process includes an overall project schedule, as well as an enumerated list of plan and specification documents. Together, these documents comprise the project plan.
- e. **Monthly Management Reports:** In addition to meeting minutes, three standard documents make up the monthly Management Reports. These include the issues log, priority list, and risk register. These documents, which we usually update weekly rather than monthly, provide a complete overview of the status of the project.
- f. **Technical Advisory Committee (TAC) Meetings:** AIR is prepared to present any data arising in the normal conduct of this contract to the TAC. Such presentations may include information about testing times, test completion, score distributions, and other state-specific data that may be of technical or policy interest.
- g. **Smarter Balanced Meetings:** Two AIR staff will attend two, two-day Smarter Balanced meetings on behalf of NEAC.

The State expects AIR to prepare agendas and background for and minutes of meetings. Background for each Management Meeting must include an updated Work Plan. Drafting of formal presentations, such as a presentation for the kickoff meeting, will also be AIR's responsibility.

The AIR Project Manager or AIR Key Project Staff shall submit weekly Management Reports in accordance with the Schedule and terms of this Contract. All Management Reports shall be prepared in formats approved by the State. The AIR's Project Manager shall assist the State's Project Manager, or

**STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
NEW ENGLAND ASSESSMENT CONSORTIUM:  
A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
IN GRADES 3 THROUGH 8 AND 11  
CONTRACT 2014-018 PART 3  
EXHIBIT D - ADMINISTRATIVE SERVICES**

itself produce reports related to Project Management as reasonably requested by the State, all at no additional cost to the State. AIR shall produce Project Management Reports, which shall contain, at a minimum, the following:

1. Project status related to the Work Plan;
2. Deliverable status;
3. Accomplishments during weeks being reported;
4. Planned activities for the upcoming two (2) week period;
5. Future activities; and
6. Issues and concerns requiring resolution.
7. Report and remedies in case of falling behind Schedule

As reasonably requested by the State, AIR shall provide the State with information or reports regarding the Project. AIR shall prepare special reports and presentations relating to Project Management, and shall assist the State in preparing reports and presentations, as reasonably requested by the State, all at no additional cost to the State.

## **2. STATE-OWNED DOCUMENTS AND DATA**

AIR shall provide the State access to all documents, State Data, materials, reports, and other work in progress relating to the Contract ("State Owned Documents"). Upon expiration or termination of the Contract with the State, AIR shall turn over all State-owned documents, material, reports, and work in progress relating to the Contract to the State at no additional cost to the State. State-owned Documents must be provided in both printed and electronic format.

## **3. RECORDS RETENTION AND ACCESS REQUIREMENTS**

AIR shall agree to the conditions of all applicable State and federal laws and regulations, which are incorporated herein by reference, regarding retention and access requirements, including without limitation, retention policies consistent with the Federal Acquisition Regulations (FAR) Subpart 4.7 *AIR Records Retention*.

AIR and its Subcontractors shall maintain books, records, documents, and other evidence of accounting procedures and practices, which properly and sufficiently reflect all direct and indirect costs invoiced in the performance of their respective obligations under the Contract. AIR and its Subcontractors shall retain all such records for three (3) years following termination of the Contract, including any extensions. Records relating to any litigation matters regarding the Contract shall be kept for one (1) year following the termination of all litigation, including the termination of all appeals or the expiration of the appeal period.

Upon prior notice and subject to reasonable time frames, all such records shall be subject to inspection, examination, audit and copying by personnel so authorized by the State and federal officials so authorized by law, rule, regulation or Contract, as applicable. Access to these items shall be provided within Merrimack County of the State of New Hampshire, unless otherwise agreed by the State. Delivery of and access to such records shall be at no cost to the State during the three (3) year period following termination of the Contract and one (1) year term following litigation relating to the Contract, including all appeals or the expiration of the appeal period. AIR shall include the record retention and review requirements of this section in any of its subcontracts.

**STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
NEW ENGLAND ASSESSMENT CONSORTIUM:  
A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
IN GRADES 3 THROUGH 8 AND 11  
CONTRACT 2014-018 PART 3  
EXHIBIT D - ADMINISTRATIVE SERVICES**

The State agrees that books, records, documents, and other evidence of accounting procedures and practices related to AIR's cost structure and profit factors shall be excluded from the State's review unless the cost of any other Services or Deliverables provided under the Contract is calculated or derived from the cost structure or profit factors.

**4. ACCOUNTING REQUIREMENTS**

AIR shall maintain an accounting system in accordance with generally accepted accounting principles. The costs applicable to the Contract shall be ascertainable from the accounting system and AIR shall maintain records pertaining to the Services and all other costs and expenditures.

**STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
NEW ENGLAND ASSESSMENT CONSORTIUM:  
A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
IN GRADES 3 THROUGH 8 AND 11  
CONTRACT 2014-018 PART3  
EXHIBIT E - IMPLEMENTATION SERVICES**

AIR shall provide the State with the following services set forth in Contract Exhibit A.

## **1. IMPLEMENTATION STRATEGY**

### **1.1 Key Components**

- A.** AIR shall employ an Implementation strategy with a timeline set forth in accordance with the Work Plan:

At the Program level, AIR shall produce the overall Program Schedule. The Program Schedule documents work-start and completion/delivery dates for key activities, milestones, and deliverables. AIR shall maintain the Program Schedule in Microsoft Project. AIR shall prepare a detailed Microsoft Project Schedule upon award.

At the next level, AIR shall maintain internal "team schedules." For example, Project manager and software team shall work with the NEAC Project Management Team, and individual state DOE staff, to schedule user acceptance testing. The Psychometrics and Statistics team develops an analysis schedule, which identifies milestones in the data receipt, analysis, and delivery schedules. Some of these schedules are entirely internal, designed to enable AIR to meet the milestones on the Project schedule. Other schedules, such as the quality control of scoring data, include tasks that require interaction with the NEAC, and these schedules shall be developed in collaboration with the appropriate staff from the participating states.

See Attachment 5: Project Implementation & Management

- B.** AIR and the State shall adopt a change management approach to identify and plan key strategies and communication initiatives.
- C.** The AIR team shall provide training templates as defined in the Training Plan, which shall be customized to address the State's specific requirements.

NEAC, in collaboration with AIR, shall determine all training topics, the audience, frequency, and the mode of delivery for the training sessions. Attachment 7 is a preliminary annual training plan based on existing Smarter Balanced training modules, which has proved successful in training Smarter Balanced member states for the field test. The preliminary plan includes a series of interactive presentations on each online Assessment Systems to be delivered through a combination of webinars, self-guided and self-paced online tutorials, and train-the-trainer sessions, as well as optional face-to-face training sessions. The content of the webinar presentations will be would be similar to the face-to-face training presentations and shall form the basis for the online tutorials. AIR's online tutorials shall be designed to teach both sophisticated technology users and users new to the system their roles and responsibilities in context of the new online Assessment Systems. The bulk of these preparations shall be AIR's

**STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
NEW ENGLAND ASSESSMENT CONSORTIUM:  
A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
IN GRADES 3 THROUGH 8 AND 11  
CONTRACT 2014-018 PART3  
EXHIBIT E - IMPLEMENTATION SERVICES**

adaptation of the Smarter Balanced standard materials.

The AIR Annual Training Plan (Attachment 7) more fully describes the training activities.

- D. Decisions regarding format, content, style, and presentation shall be made early on in the process, by the State, providing sufficient time for development of material as functionality is defined and configured.
- E. AIR shall utilize an approach that fosters and requires the participation of State resources, uses their business expertise to assist with the configuration of the applications, and prepares the State to assume responsibility for and ownership of the new Assessment System. A focus on technology transition shall be deemed a priority.
- F. AIR shall manage Project execution and provide the tools needed to create and manage the Project's Work Plan and tasks, manage and schedule Project staff, track and manage issues, manage changing requirements, maintain communication within the Project Team, and report status.
- G. AIR shall adopt an Implementation time-line aligned with the State's required time-line.

## **1.2 Timeline**

The timeline is set forth in the Work Plan. During the initial planning period Project task and resource plans will be established for: the preliminary training plan, the change management plan, communication approaches, Project standards and procedures finalized, and team training initiated.

### **1.2.1 Implementation**

Timing will be structured to recognize interdependencies between applications and structure a cost effective and timely execution.

Processes will be documented, training established, and the application will be ready for Implementation in accordance with the State's schedule.

### **1.2.2 Change Management and Training**

AIR's change management and training services shall be focused on developing change management and training strategies and plans. Its approach relies on State resources for the execution of the change management and end user training.

**STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
NEW ENGLAND ASSESSMENT CONSORTIUM:  
A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
IN GRADES 3 THROUGH 8 AND 11  
CONTRACT 2014-018 PART3  
EXHIBIT E - IMPLEMENTATION SERVICES**

**2. IMPLEMENTATION METHODOLOGY**

The AIR team shall provide the consulting Services for the Contract. Its approach includes but is not limited to the following:

AIR shall utilize a system of specification and planning documents that capture decisions about each System and process. These documents shall facilitate communication among the numerous internal teams, between the AIR teams and the NEAC management, and with the participating states. The specifications documents shall capture decisions systematically and shall ensure that the technical experts whose work they may affect review those decisions. AIR shall utilize their toolset that enables the Project directors and managers to analyze the Project requirements. These AIR tools shall form the basis for clear, open, and accessible communication about the Project Schedule, Deliverables, and specific requirements. The suite includes four types of tools that program directors use to orchestrate the work on the Project:

1. Schedules
2. Planning documents
3. Tracking documents
4. Specification documents

AIR shall work directly with the NEAC Project Management Team to manage the daily operation of NEAC's joint activities. In parallel, AIR shall work with the individual NEAC states on issues unique to each state. AIR program managers shall function as coordinators among the technical experts in the functional areas to ensure a successful Implementation. The AIR Project Team Organizational Chart is included as Attachment 6.

**STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
NEW ENGLAND ASSESSMENT CONSORTIUM:  
A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
IN GRADES 3 THROUGH 8 AND 11  
CONTRACT 2014-018 PART 3  
EXHIBIT E-1 - SECURITY AND INFRASTRUCTURE**

**1. SECURITY**

AIR shall ensure that appropriate levels of security are implemented and maintained in order to protect the integrity and reliability of the State's Information Technology resources, information, and services. Security requirements are defined in Appendix 2 – NH Specific Requirements. AIR shall provide the State resources, information, and Services on an ongoing basis, with the appropriate infrastructure and security controls to ensure business continuity and to safeguard the confidentiality and integrity of State networks, Systems and Data.

**STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
NEW ENGLAND ASSESSMENT CONSORTIUM:  
A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
IN GRADES 3 THROUGH 8 AND 11  
CONTRACT 2014-018 PART 3  
EXHIBIT F – IT TESTING SERVICES**

AIR shall provide the following Products and Services described in this Exhibit F, including but not limited to:

**1.0 IT TESTING AND ACCEPTANCE**

AIR shall bear all responsibilities for IT Test Planning and preparation for the System throughout the Project. AIR will also provide training as necessary to the State staff responsible for User Acceptance Testing activities. AIR shall be responsible for all aspects of IT Testing contained in the Acceptance Test Plan including support, at no additional cost, during User Acceptance Test conducted by the State and the of the training materials.

**1.1 User Acceptance Testing (UAT)**

UAT begins upon completion of the Software configuration as required and user training according to the Work Plan. Testing ends upon issuance of a letter of UAT Acceptance by the State.

The Vendor's Project Manager must certify in writing, that the Vendor's own staff has successfully executed all prerequisite Vendor testing prior to the start of any UAT executed by State staff.

The State shall commence IT Testing within five (5) business days of receiving Certification, in writing, from AIR that the system is installed, configured, complete and ready for State testing. The State shall conduct the UAT utilizing scripts developed as identified in the Acceptance Test Plan to validate the functionality of the System and the interfaces, and verify Implementation readiness. UAT is performed in a copy of the production environment and can serve as a performance and stress test of the System. The User Acceptance Test may cover any aspect of the System, including administrative procedures (such as backup and recovery).

The User Acceptance Test verifies System functionality against predefined Acceptance criteria that support the successful execution of approved business processes.

UAT will also serve as a performance and stress test of the System. The results of the UAT provide evidence that the new System meets the User Acceptance criteria as defined in the Work Plan.

Upon successful conclusion of UAT and successful System deployment, the State will issue a letter of UAT Acceptance

**1.10 Successful UAT Completion**

Upon successful completion of UAT, the State will issue a Letter of UAT Acceptance. Upon issuance of the Letter of UAT Acceptance by the State, the respective Warranty Period shall commence as set forth in Contract Exhibit K: *Warranty and Warranty Services*.

**STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
NEW ENGLAND ASSESSMENT CONSORTIUM:  
A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
IN GRADES 3 THROUGH 8 AND 11  
CONTRACT 2014-018 PART 3  
EXHIBIT F – IT TESTING SERVICES**

**1.11 System Acceptance**

Upon completion of the Warranty Period, the State shall issue a Letter of Final System Acceptance.

**STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
NEW ENGLAND ASSESSMENT CONSORTIUM:  
A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
IN GRADES 3 THROUGH 8 AND 11  
CONTRACT 2014-018 PART 3  
EXHIBIT G – HOSTING, MAINTENANCE, AND SUPPORT SERVICES**

**1. SYSTEM MAINTENANCE**

AIR shall host, maintain, and support the System in all material respects as described in the applicable program Documentation after User Acceptance and Deployment for the duration of the Contract.

**1.1 AIR Responsibility**

AIR shall deliver services using the System in accordance with the Contract. Deficiencies in the Deliverables or Services shall be responded to according to the following:

**a. Class A Deficiencies** – If Students cannot test, the Vendor shall have available to the State on-call telephone assistance, with issue tracking available to the State, Monday through Friday, between the hours of 6AM ET to 6 PM ET with an email / telephone response within one (1) hour of the request; If Deliverables or Services require re-performance, the Vendor shall respond within the timeframes specified in Section 3.0.

**b. Class B Deficiencies** –The State shall notify the Vendor of such Deficiencies during regular business hours and the Vendor shall respond back within twenty-four (24) hours of notification of planned corrective action;

**3. SUPPORT OBLIGATIONS AND TERM**

- 3.1** AIR shall ensure the System operates in accordance with the Specifications and terms and requirements of the Contract;
- 3.2** AIR shall provide customer support line, chat., and e-mail for State users, educators, and administrators Monday through Friday from 8:00 am to 5:00 pm Eastern Time outside of the academic testing windows, and between 7:00 am and 7:00 pm during the academic testing window.
- 3.5** If AIR fails to correct a Deficiency within the allotted period of time stated above, AIR shall be deemed to have committed an Event of Default, and the State shall have the right, at its option, to pursue the remedies in Part 2 Section 13.1.1.2, as well as to return AIR's product and receive a refund for all amounts paid to AIR, including but not limited to, applicable license fees, within ninety (90) days of notification to AIR of the State's refund request
- 3.6** If AIR fails to correct a Deficiency within the allotted period of time Stated above, AIR shall be deemed to have committed an Event of Default, and the State shall have the right, at its option, to pursue the remedies in Part 2 Section 13.1.1.2.



**STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
NEW ENGLAND ASSESSMENT CONSORTIUM:  
A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
IN GRADES 3 THROUGH 8 AND 11  
CONTRACT 2014-018 PART 3  
EXHIBIT I - WORK PLAN**

AIR's Project Manager and the State Project manager shall finalize the Work Plan within 14 calendar days of the Effective Date and further refine the tasks required to implement the Project. The elements of the preliminary Work Plan are documented in accordance with AIR's plan to implement the Application Software. Continued development and management of the Work Plan is a joint effort on the part of AIR and State Project Managers.

The preliminary Work Plan created by AIR and the State is set forth at the end of this Exhibit.

In conjunction with AIR's Project Management methodology, which shall be used to manage the Project's life cycle, the AIR team and the State shall finalize the Work Plan at the onset of the Project. This plan shall identify the **tasks, Deliverables, major milestones, task dependencies, and a payment Schedule** required to implement the Project. It shall also address intra-task dependencies, resource allocations (both State and AIR team members), refine the Project's scope, and establish the Project's Schedule. The Plan is documented in accordance with AIR's Work Plan and shall utilize Smarter Balanced Assessment Consortium to support the ongoing management of the Project.

See Attachment 1: Project Schedule.xlsx

## **1. ASSUMPTIONS**

### **A. General**

- The State shall provide team members with decision-making authority to support the Implementation efforts, at the level outlined in the Request for Proposal Document State Staffing
- All State tasks must be performed in accordance with the revised Work Plan.
- All key decisions will be resolved within five (5) business days. Issues not resolved within this initial period will be escalated to the State Project Manager for resolution.
- Any activities, decisions or issues taken on by the State that affect the mutually agreed upon Work Plan timeline, scope, resources, and costs shall be subject to the identified Change Control process.

### **B. Logistics**

- The AIR Team may perform that work at a facility other than that furnished by the State, when practical, at their own expense.
- The AIR Team shall honor all holidays observed by AIR or the State, although with permission, may choose to work on holidays and weekends.

### **C. Project Management**

- The State shall provide the Project Team with reasonable access to the State personnel as needed to complete Project tasks.
- AIR assumes that an Alternate Project Manager may be appointed from time to time to handle reasonable and ordinary absences of the Project Manager.
- AIR will be responsible for managing the project documents.

### **D. Technical Environment and Management**



**STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
NEW ENGLAND ASSESSMENT CONSORTIUM:  
A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
IN GRADES 3 THROUGH 8 AND 11  
CONTRACT 2014-018 PART 3  
EXHIBIT I - WORK PLAN**

- Maintain communications with the State's Project Manager;
- Work with the State in planning and conducting a kick-off meeting;
- Create and maintain the Work Plan;
- Assign AIR Team consultants to tasks in the Implementation Project according to the scheduled staffing requirements;
- Define roles and responsibilities of all AIR Team members;
- Provide required update progress reports to the State Project Manager;
- Notify the State Project Manager of requirements for State resources in order to provide sufficient lead time for resources to be made available;
- Review task progress for time, quality, and accuracy in order to achieve progress;
- Review requirements and scheduling changes and identify the impact on the Project in order to identify whether the changes may require a change of scope;
- Implement scope and Schedule changes as authorized by the State Project Manager and with appropriate Change Control approvals as identified in the Implementation Plan;
- Inform the State Project Manager and staff of any urgent issues if and when they arise;
- Provide the State completed Project Deliverables and obtain sign-off from the State's Project Manager.

**3) Other AIR Team Members**

The roles of other AIR Team Members are described in the Contractor's Proposal.

**B. State Roles and Responsibilities**

The following State resources have been identified for the Project. The time demands on the individual State team members will vary depending on the phase and specific tasks of the Implementation. The demands on the Subject Matter Experts' time will vary based on the need determined by the State Leads and the phase of the Implementation.

**1) State Project Manager**

The State Project Manager shall work with the AIR Project Manager. The role of the State Project Manager is to manage State resources, facilitate completion of all tasks assigned to State staff, and communicate Project status on a regular basis. The State Project Manager represents the State in all decisions on Implementation Project matters, provides all necessary support in the conduct of the Implementation Project, and provides necessary State resources, as defined by the Work Plan and as otherwise identified throughout the course of the Project. The State Project Manager has the following responsibilities:

- Plan and conduct a kick-off meeting with assistance from the AIR team;
- Assist the AIR Project Manager in the development of a detailed Work Plan;
- Identify and secure the State Project Team members in accordance with the Work Plan;
- Define roles and responsibilities of all State Project Team members assigned to the Project;
- Identify and secure access to additional State end-user staff as needed to support specific areas of knowledge if and when required to perform certain Implementation tasks;
- Communicate issues to State management as necessary to secure resolution of any matter that cannot be addressed at the Project level;
- Inform the AIR Project Manager of any urgent issues if and when they arise; and

**STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
NEW ENGLAND ASSESSMENT CONSORTIUM:  
A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
IN GRADES 3 THROUGH 8 AND 11  
CONTRACT 2014-018 PART 3  
EXHIBIT I - WORK PLAN**

- Assist the AIR team staff to obtain requested information if and when required to perform certain Project tasks.

**2) Other State Staff**

The role of other State staff is to provide review, input and guidance to help AIR deliver the required Services.

**3) State Technical Lead**

The State's Technical Lead reports to the State's Project Manager and is responsible for leading and managing the State's technical tasks. Responsibilities include:

- Attend technical training as necessary to support the Project;
- Assist the State and AIR Team Project Managers to establish the detailed Work Plan;
- Manage the day-to-day activities of the State's technical resources assigned to the Project;
- Work with State IT management to obtain State technical resources in accordance with the Work Plan;

**3. CONVERSIONS**

Conversions will be identified as part of the project planning.

**4. INTERFACES**

Software interfaces are not required under this contract however the RFP has specified several data exchange requirements.

**5. PRELIMINARY WORK PLAN**

The following Table 7.1 provides the preliminary agreed upon Work Plan for the Contract.

**Table 7.1: High Level Preliminary NH Project Plan**

<b>Task Name</b>	<b>Duration</b>	<b>Start</b>	<b>Finish</b>
------------------	-----------------	--------------	---------------

See Attachment 8: NEAC Common SOW





STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
NEW ENGLAND ASSESSMENT CONSORTIUM:  
A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
IN GRADES 3 THROUGH 8 AND 11  
CONTRACT 2014-018 PART 3  
EXHIBIT K - WARRANTY AND WARRANTY SERVICES

**1. WARRANTIES**

**1.1 Services**

AIR warrants that all Services to be provided under the Contract will be provided expediently, in a professional manner, in accordance with industry standards and that Services will comply with performance standards, Specifications, and terms of the Contract.

**1.2 Non-Infringement**

AIR warrants that it has good title to, or the right to allow the State to use, all Services, equipment, and Software ("Material") provided under this Contract, and that such Services, equipment, and Software do not violate or infringe any patent, trademark, copyright, trade name or other intellectual property rights or misappropriate a trade secret of any third party.

**1.3 Viruses; Destructive Programming**

AIR warrants that the Software shall not contain any viruses, destructive programming, or mechanisms designed to disrupt the performance of the Software in accordance with the Specifications.

**1.4 Reserved**

**1.7 Personnel**

AIR warrants that all personnel engaged in the Services shall be qualified to perform the Services, and shall be properly licensed and otherwise authorized to do so under all applicable laws.

**1.5 Breach of Data**

The Vendor shall be solely liable for costs associated with any breach of Personally Identifiable Information State data housed at their location(s) including but not limited to notification and any damages assessed by the courts.

**2. WARRANTY TERM**

The Warranty Term shall extend through the duration of the Contract and any extension, with the exception or the Warranty for Infringement, which shall survive the termination of this Agreement.

**STATE OF NEW HAMPSHIRE  
DEPARTMENT OF EDUCATION  
NEW ENGLAND ASSESSMENT CONSORTIUM:  
A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
IN GRADES 3 THROUGH 8 AND 11  
CONTRACT 2014-018  
AGREEMENT- PART 1**

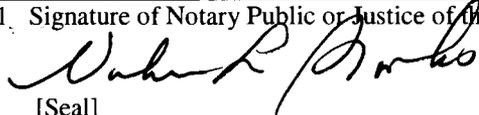
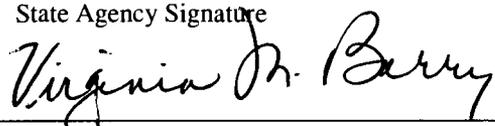
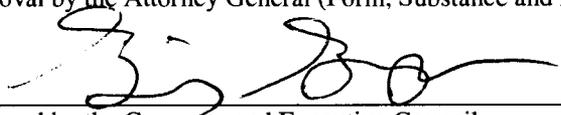
Subject: Contract for the implementation of the Smarter Balanced Assessment Testing

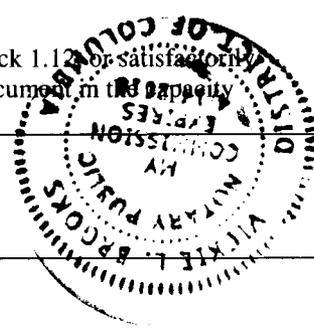
**AGREEMENT**

The State of New Hampshire and the Contractor hereby mutually agree as follows:

**GENERAL PROVISIONS**

**1. IDENTIFICATION.**

1.1 State Agency Name Department of Education		1.2 State Agency Address 101 Pleasant Street, Concord, NH 03301	
1.3 Contractor Name American Institutes for Research (AIR)		1.4 Contractor Address 1000 Thomas Jefferson Street, NW Washington, DC 20007	
1.5 Contractor Phone Number 202-403-5420	1.6 Account Number Federal: 6422 State: 3260	1.7 Completion Date June 30, 2015	1.8 Price Limitation \$2,108,551
1.9 Contracting Officer for State Agency		1.10 State Agency Telephone Number	
1.11 Contractor Signature 		1.11 Name and Title of Contractor Signatory Thomas Jesulaitis, Chief Contracts Officer	
1.13 Acknowledgement: State of <u>DC</u> , County of <u>District of Columbia</u> On <u>JAN. 12, 2015</u> , before the undersigned officer, personally appeared the person identified in block 1.12 or satisfactory proof has been provided to the undersigned officer that the person is the person whose name is signed in block 1.11, and acknowledged that s/he executed this document in the capacity indicated in block 1.12.			
1.13.1 Signature of Notary Public or Justice of the Peace  [Seal]			
1.13.2 Name and Title of Notary or Justice of the Peace <u>Vickie L. Brooks</u>			
1.14 State Agency Signature 		1.15 Name and Title of State Agency Signatory <u>VIRGINIA M. BARRY</u> <u>Commissioner of Education</u>	
1.16 Approval by the N.H. Department of Administration, Division of Personnel (if applicable)  By: _____ Director, On: _____			
1.17 Approval by the Attorney General (Form, Substance and Execution)  By:  On: <u>1/13/15</u>			
1.18 Approval by the Governor and Executive Council  By: _____ On: _____			



**2. EMPLOYMENT OF CONTRACTOR/SERVICES TO BE PERFORMED.** The State of New Hampshire, acting through the agency identified in block 1.1 ("State"), engages contractor identified in block 1.3 ("Contractor") to perform, and the Contractor shall perform, the work or sale of goods, or both, identified and more particularly described in the attached EXHIBIT A which is incorporated herein by reference ("Services").

**3. EFFECTIVE DATE/COMPLETION OF SERVICES.**

3.1 Notwithstanding any provision of this Agreement to the contrary, and subject to the approval of the Governor and Executive Council of the State of New Hampshire, this Agreement, and all obligations of the parties hereunder, shall not become effective until the date the Governor and Executive Council approve this Agreement ("Effective Date").

3.2 If the Contractor commences the Services prior to the Effective Date, all Services performed by the Contractor prior to the Effective Date shall be performed at the sole risk of the Contractor, and in the event that this Agreement does not become effective, the State shall have no liability to the Contractor, including without limitation, any obligation to pay the Contractor for any costs incurred or Services performed. Contractor must complete all Services by the Completion Date specified in block 1.7.

**4. CONDITIONAL NATURE OF AGREEMENT.**

Notwithstanding any provision of this Agreement to the contrary, all obligations of the State hereunder, including, without limitation, the continuance of payments hereunder, are contingent upon the availability and continued appropriation of funds, and in no event shall the State be liable for any payments hereunder in excess of such available appropriated funds. ~~On the event of a reduction or termination of appropriated funds, the State shall have the right to withhold payment until such funds become available, if ever, and shall have the right to terminate this Agreement immediately upon giving the Contractor notice of such termination. The State shall not be required to transfer funds from any other account to the Account identified in block 1.6 in the event funds in that Account are reduced or unavailable.~~

**5. CONTRACT PRICE/PRICE LIMITATION/PAYMENT.**

5.1 The contract price, method of payment, and terms of payment are identified and more particularly described in EXHIBIT B which is incorporated herein by reference.

5.2 The payment by the State of the contract price shall be the only and the complete reimbursement to the Contractor for all expenses, of whatever nature incurred by the Contractor in the performance hereof, and shall be the only and the complete compensation to the Contractor for the Services. The State shall have no liability to the Contractor other than the contract price.

5.3 The State reserves the right to offset from any amounts otherwise payable to the Contractor under this Agreement

those liquidated amounts required or permitted by N.H. RSA 80:7 through RSA 80:7-c or any other provision of law.

5.4 Notwithstanding any provision in this Agreement to the contrary, and notwithstanding unexpected circumstances, in no event shall the total of all payments authorized, or actually made hereunder, exceed the Price Limitation set forth in block 1.8.

**6. COMPLIANCE BY CONTRACTOR WITH LAWS AND REGULATIONS/ EQUAL EMPLOYMENT OPPORTUNITY.**

6.1 In connection with the performance of the Services, the Contractor shall comply with all statutes, laws, regulations, and orders of federal, state, county or municipal authorities which impose any obligation or duty upon the Contractor, including, but not limited to, civil rights and equal opportunity laws. In addition, the Contractor shall comply with all applicable copyright laws.

6.2 During the term of this Agreement, the Contractor shall not discriminate against employees or applicants for employment because of race, color, religion, creed, age, sex, handicap, sexual orientation, or national origin and will take affirmative action to prevent such discrimination.

6.3 If this Agreement is funded in any part by monies of the United States, the Contractor shall comply with all the provisions of Executive Order No. 11246 ("Equal Employment Opportunity"), as supplemented by the regulations of the United States Department of Labor (41 C.F.R. Part 60), and with any rules, regulations and guidelines as the State of New Hampshire or the United States issue to implement these regulations. The Contractor further agrees to permit the State or United States access to any of the Contractor's books, records and accounts for the purpose of ascertaining compliance with all rules, regulations and orders, and the covenants, terms and conditions of this Agreement.

**7. PERSONNEL.**

7.1 The Contractor shall at its own expense provide all personnel necessary to perform the Services. The Contractor warrants that all personnel engaged in the Services shall be qualified to perform the Services, and shall be properly licensed and otherwise authorized to do so under all applicable laws.

7.2 Unless otherwise authorized in writing, during the term of this Agreement, and for a period of six (6) months after the Completion Date in block 1.7, the Contractor shall not hire, and shall not permit any subcontractor or other person, firm or corporation with whom it is engaged in a combined effort to perform the Services to hire, any person who is a State employee or official, who is materially involved in the procurement, administration or performance of this Agreement. This provision shall survive termination of this Agreement.

7.3 The Contracting Officer specified in block 1.9, or his or her successor, shall be the State's representative. In the event of any dispute concerning the interpretation of this Agreement, the Contracting Officer's decision shall be final for the State.

**STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
NEW ENGLAND ASSESSMENT CONSORTIUM:  
A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
IN GRADES 3 THROUGH 8 AND 11  
CONTRACT 2014-018 PART 3  
EXHIBIT L - TRAINING SERVICES**

AIR shall provide the Training Services identified in the Contractor's Proposal and excerpted in Attachment 7.

NEAC, in collaboration with AIR, shall determine all training topics, the audience, frequency, and the mode of delivery for the training sessions. Training shall be based upon existing Smarter Balanced training modules that have been previously utilized in training Smarter Balanced member states for the field test. Training shall be delivered through a series of interactive presentations on each of our online systems to be distributed through a combination of webinars, self-guided and self-paced online tutorials, and train-the-trainer sessions, as well as optional face-to-face training sessions. The content of the webinar presentations, as described below in Table, shall be virtually the same as the face-to-face training presentations and will form the basis for the online tutorials. AIR's online tutorials shall be designed to teach both sophisticated technology users and users new to the system their roles and responsibilities in context of the new online systems. AIR shall adapt the Smarter Balanced standard materials to meet the needs of the NEAC states.

**STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
NEW ENGLAND ASSESSMENT CONSORTIUM:  
A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
IN GRADES 3 THROUGH 8 AND 11  
CONTRACT 2014-018 PART 3  
EXHIBIT M  
NH DOE NEAC RFP 2014-018 (WITH ADDENDA) INCORPORATED**

NH Department of Education **RFP 2014-018 New England Assessment Consortium: A Three-State Procurement Collaborative For The Implementation Of The Smarter Balanced English Language Arts And Mathematics Assessments In Grades 3 Through 8 And 11** with all included addenda, is included by reference as binding Deliverables to this Contract.

**STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
NEW ENGLAND ASSESSMENT CONSORTIUM:  
A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
IN GRADES 3 THROUGH 8 AND 11  
CONTRACT 2014-018 PART 3  
EXHIBIT N - VENDOR PROPOSAL BY REFERENCE**

American Institutes for Research Proposal to the Department of Education is incorporated herein by reference.

**STATE OF NEW HAMPSHIRE DEPARTMENT OF EDUCATION  
NEW ENGLAND ASSESSMENT CONSORTIUM:  
A THREE-STATE PROCUREMENT COLLABORATIVE FOR THE IMPLEMENTATION OF THE  
SMARTER BALANCED ENGLISH LANGUAGE ARTS AND MATHEMATICS ASSESSMENTS  
IN GRADES 3 THROUGH 8 AND 11  
CONTRACT 2014-018 PART 3  
EXHIBIT O - SPECIAL EXHIBITS, ATTACHMENTS, AND CERTIFICATES**

Attached are:

- A. AIR Certificate of Vote/Authority**
- B. AIR Certificate of Good Standing**
- C. AIR Certificate of Insurance**
- D. Contract Attachments**
  - Attachment 1 - Project Schedule**
  - Attachment 2 – NH Specific Requirements**
  - Attachment 3 – Smarter Balanced Hosting Requirements**
  - Attachment 4 – NEAC and NH Budgets**
  - Attachment 5 – Project Implementation & Management**
  - Attachment 6 – AIR Organizational Structure**
  - Attachment 7 – AIR Training Plan**
  - Attachment 8 – NEAC Common SOW**

**CERTIFICATE**

(Corporation With Seal)

I Dona M. Kilpatrick, Secretary of the American Institutes for Research in the Behavioral Sciences, do hereby certify that: (1) I am the duly elected and acting Secretary of the American Institutes for Research in the Behavioral Sciences, a Pennsylvania corporation (the "Corporation"); (2) I maintain and have custody and am familiar with the seal and minute books of the Corporation; (3) I am duly authorized to issue certificates; (4) the following are true, accurate and complete copies of the resolutions adopted by the Board of Directors of the Corporation at a meeting of the said Board of Directors held on the 30th day of October, 2006, which meeting was duly held in accordance with Pennsylvania law and the by-laws of the Corporation:  
(State of incorporation)

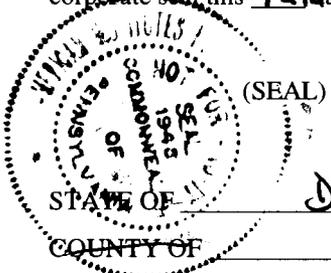
RESOLVED: That this Corporation enter into a contract with the State of New Hampshire, acting by and through the Department of Education, providing for the performance by the Corporation of certain services, and that the President (and Secretary) (and Contract Officer) (or any of them acting singly) be and hereby (is) (are) authorized and directed for and on behalf of this Corporation to enter into the said contract with the State and to take any and all such actions and to execute, seal, acknowledge and deliver for and on behalf of this Corporation any and all documents, agreements and other instruments (and any amendments, revisions or modifications thereto) and (she) (he) (any of them) may deem necessary, desirable or appropriate to accomplish the same;

RESOLVED: That the signature of any officer of this corporation affixed to any instrument or document in or contemplated by these resolutions shall be conclusive evidence of the authority of said officer to bind this Corporation thereby;

(5) the foregoing resolutions have not been revoked, annulled, or amended in any manner whatsoever, and remain in full force and effect as of the date hereof; (6) the following person(s) (has) (have) been duly elected to and now occupy the office(s) indicated below.

\_\_\_\_\_ David Myers \_\_\_\_\_ President  
\_\_\_\_\_ Thomas Jesulaitis \_\_\_\_\_ Contract Officer  
\_\_\_\_\_ Dona Kilpatrick \_\_\_\_\_ Secretary

IN WITNESS WHEREOF, I have hereunto set my hand as the Secretary of the Corporation and have affixed its corporate seal this 12th day of January, 2015.



District of Columbia  
COUNTY OF \_\_\_\_\_

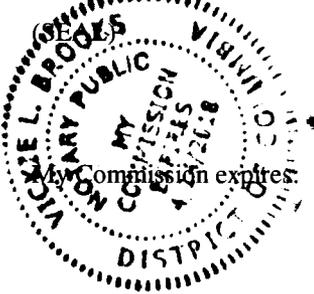
\_\_\_\_\_  
Dona Kilpatrick  
Secretary

On this the 12th day of January, 2015, before me, Vickie L. Brooks, the undersigned,

personally appeared Dona M. Kilpatrick, who acknowledged her/himself to be the

Secretary of American Institutes for Research in the Behavioral Sciences, a corporation, and that she/he as such Secretary being authorized to do so, executed the foregoing instrument for the purposes therein contained, by signing the name of the corporation by her/himself as Secretary.

IN WITNESS WHEREOF I hereunto set my hand and official seal.



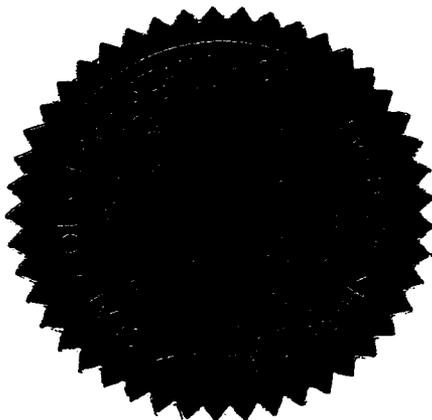
April 14, 2018

\_\_\_\_\_  
Vickie L. Brooks  
Notary Public/Justice of the Peace

# State of New Hampshire Department of State

## CERTIFICATE

I, William M. Gardner, Secretary of State of the State of New Hampshire, do hereby certify that American Institutes for Research in the Behavioral Sciences, a(n) Pennsylvania nonprofit corporation, registered to do business in New Hampshire on October 31, 2014. I further certify that it is in good standing as far as this office is concerned, having paid the fees required by law.



In TESTIMONY WHEREOF, I hereto  
set my hand and cause to be affixed  
the Seal of the State of New Hampshire,  
this 5<sup>th</sup> day of December, A.D. 2014

A handwritten signature in cursive script, appearing to read "William M. Gardner".

William M. Gardner  
Secretary of State



# CERTIFICATE OF LIABILITY INSURANCE

AMERINS-01

CDIXON

DATE (MM/DD/YYYY)  
12/3/2014

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<b>PRODUCER</b> Ames & Gough 8300 Greensboro Drive Suite 980 McLean, VA 22102	<b>CONTACT NAME:</b> PHONE (A/C, No, Ext): (703) 827-2277		FAX (A/C, No): (703) 827-2279	
	<b>E-MAIL ADDRESS:</b>			
<b>INSURED</b>  American Institutes for Research 1000 Thomas Jefferson Street NW Washington, DC 20007-3835	<b>INSURER(S) AFFORDING COVERAGE</b>		<b>NAIC #</b>	
	<b>INSURER A:</b> Hartford Underwriters Insurance Company		30104	
	<b>INSURER B:</b> Hartford Accident and Indemnity Company		22357	
	<b>INSURER C:</b>			
	<b>INSURER D:</b>			
	<b>INSURER E:</b>			

**COVERAGES**                      **CERTIFICATE NUMBER:**                      **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR  GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input checked="" type="checkbox"/> LOC OTHER:			[REDACTED]	09/30/2014	09/30/2015	EACH OCCURRENCE	\$ 1,000,000
							DAMAGE TO RENTED PREMISES (Ea occurrence)	\$ 1,000,000
							MED EXP (Any one person)	\$ 10,000
							PERSONAL & ADV INJURY	\$ 1,000,000
							GENERAL AGGREGATE	\$ 2,000,000
							PRODUCTS - COM/POP AGG	\$ 2,000,000
								\$
								\$
								\$
								\$
	<b>AUTOMOBILE LIABILITY</b>  <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> HIRED AUTOS  <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> NON-OWNED AUTOS						COMBINED SINGLE LIMIT (Ea accident)	\$
							BODILY INJURY (Per person)	\$
							BODILY INJURY (Per accident)	\$
							PROPERTY DAMAGE (Per accident)	\$
								\$
	<b>UMBRELLA LIAB</b> <input type="checkbox"/> OCCUR <b>EXCESS LIAB</b> <input type="checkbox"/> CLAIMS-MADE DED    RETENTION \$						EACH OCCURRENCE	\$
							AGGREGATE	\$
								\$
B	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) if yes, describe under DESCRIPTION OF OPERATIONS below			[REDACTED]	09/30/2014	09/30/2015	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER	
							E.L. EACH ACCIDENT	\$ 1,000,000
							E.L. DISEASE - EA EMPLOYEE	\$ 1,000,000
							E.L. DISEASE - POLICY LIMIT	\$ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)  
 General Liability, and Worker's Compensation policies include waiver of subrogation in favor of the additional insureds where permissible by state law and when required by written contract.

<b>CERTIFICATE HOLDER</b>  The State of New Hampshire Department of Education	<b>CANCELLATION</b>  SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE  

## **AIR Board Members**

<b>Patricia Gurin</b>	<b>Board Member and Board Chair</b>
<b>Greg Baroni</b>	<b>Board Member and Board Committee Chair</b>
<b>Lawrence Bobo</b>	<b>Board Member and Board Vice Chair &amp; Board Committee Chair</b>
<b>Sara B. Kiesler</b>	<b>Board Member and Board Committee Chair</b>
<b>Kathy McKinless</b>	<b>Board Member and Board Committee Chair</b>
<b>Robert F. Boruch</b>	<b>Board Member</b>
<b>Nancy Cantor</b>	<b>Board Member</b>
<b>Delano Lewis</b>	<b>Board Member</b>
<b>Richard A. Smith</b>	<b>Board Member (Retired on 12/31/10)</b>
<b>Edward Hamburg</b>	<b>Board Member</b>
<b>Andrew Liakopoulos</b>	<b>Board Member</b>
<b>Sol Pelavin</b>	<b>Board Member</b>
<b>David Myers</b>	<b>Board Member, President, CEO</b>

**AMERICAN INSTITUTES FOR RESEARCH  
IN THE BEHAVIORAL SCIENCES, INC.**

**BYLAWS**

**ADOPTED AS AMENDED AND RESTATED, June 22, 2005**

**ARTICLE I**

**Offices; Members**

**Section 1.1.** The principal office of the American Institutes for Research in the Behavioral Sciences, Inc. (the "Corporation") shall be located in Washington, District of Columbia. The Corporation also may have offices at such other places, both within and without the District of Columbia, as the Board of Directors may from time to time determine or the business of the Corporation may require.

**Section 1.2.** The Corporation shall have no members.

**ARTICLE II**

**Board of Directors**

**Section 2.1. Number and Election.** The business and affairs of the Corporation shall be managed under the direction of the Board of Directors (the "Board"), which may exercise all such powers of the Corporation and do all such lawful acts and things as are not prohibited by statute, by the Articles of Incorporation of the Corporation or these Bylaws. The Board shall be composed of that number of Directors, not less than nine (9) nor more than fifteen (15), determined by the Board from time to time. Directors shall be elected at each annual meeting of the Board and may be elected at any regular or special meeting of the Board. The Board shall be divided into three groups of approximately equal size, and shall be so arranged with respect to tenure of office that at each annual meeting one group shall be elected for a term of three years and until their successors are elected and qualified. Directors also may be elected for a one or two year term in order to effectively stagger the terms of the members of the Board. If a vacancy occurs in a Board from any cause, including an increase in the size of the Board, the remaining Directors, even if less than a quorum, shall have the power to elect a Director to fill the vacancy. No reduction in the number of Directors shall have the effect of terminating the office of any Director until his/her regular term of office shall expire.

**Section 2.8. Waiver of Notice.** The giving of any notice required to be given under these Bylaws or the laws of the Commonwealth of Pennsylvania may be waived by waiver in writing signed by the person or persons entitled to such notice, whether before or after the time or event referred to in said notice, which waiver shall be deemed equivalent to such notice. Attendance of a person at any meeting shall constitute a waiver of notice of the meeting except where the person attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting was not lawfully called or convened.

**Section 2.9. Removal and Resignation.** Any Director may be removed, with or without cause, by the affirmative vote of a majority of the Board of Directors. Any Director may resign at any time by delivering a written resignation to the Board of Directors, the President or the Secretary.

**Section 2.10. Presiding Officer.** The meetings of the Board shall be presided over by the Chairperson or in his/her absence, by the Vice Chairperson.

### **ARTICLE III**

#### **Committees**

**Section 3.1. Audit and Finance Committees: Selection of Auditors.** The Board shall appoint two committees of two or more directors each to be one known as the Audit and one to be known as the Finance Committee. The Audit Committee shall choose, subject to approval of the Board, the firm of certified public accountants to make the audit. An audit of the balance sheet and income accounts of the Corporation shall be prepared at least once in each fiscal year by a competent and independent firm of certified public accountants.

**Section 3.2. Other Committees.** The Board may from time to time appoint such other committees as it may deem appropriate to advise and assist the Board in the management of the affairs of the Corporation. These committees shall have such authority and perform such duties as the Board may from time to time determine; except that no such committees shall have or exercise the authority of the Board of Directors in the management of the Corporation. The Board may appoint to these committees members of the Board and persons who are not members of the Board.

**Section 3.3. Procedures.** All committees established by the Board of Directors shall follow such procedures as the Board of Directors may determine and shall report any actions taken to the Chairperson or the President.

**Section 4.5. Secretary.** The Secretary or his/her designee shall keep records of the meetings of the Board of Directors, shall give notice of all meetings of the Board of Directors, and shall affix the seal of the Corporation to documents when so required.

**Section 4.6. Other Officers.** The Vice-Chairperson, Vice Presidents, Assistant Treasurers and Assistant Secretaries shall have and perform such duties as the Board or the President may from time to time prescribe.

## **ARTICLE V**

### **Miscellaneous**

**Section 5.1. Fiscal Year.** As of January 1, 2005, the fiscal year of the Corporation shall begin on January 1<sup>st</sup> and end on December 31<sup>st</sup> of each year.

**Section 5.2. Seal.** The Corporation may have a seal. Any seal of the Corporation shall contain the name of the Corporation and shall be in such form as the Board of Directors may from time to time determine.

## **ARTICLE VI**

### **Indemnification, Insurance and Liability**

**Section 6.1. Persons and Matters Covered.** Any person who is or was a representative of the Corporation, or of any other corporation, partnership, joint venture, trust or other enterprise which he/she serves or served as such at the request of the Corporation, shall, in accordance with Section 6.2, be indemnified by the Corporation against any and all liability and expenses (including, but not limited to, counsel fees and disbursements and amounts paid in settlement or in satisfaction of judgments or as fines or penalties) actually and reasonably paid or incurred by him/her in connection with or resulting from any action, suit or proceeding (whether brought by or in the right of the Corporation or such other corporation, partnership, joint venture, trust or other enterprise or otherwise, and whether civil, criminal, administrative or investigative), including any appeal related thereto, in which he/she may be involved or threatened to be involved, as a party or otherwise, by reasons of his/her being or having been a representative of the Corporation or of such other corporation, partnership, joint venture, trust or other enterprise or by reason of any action taken or not taken in the course of his/her employment as such representative, provided that there shall be no such indemnification unless such representative acted in good faith and in a manner which he/she reasonably believed to be in or not opposed to the best interests of the Corporation or such other corporation, partnership, joint venture, trust or other enterprise and, with respect to any criminal action or proceeding, had no

rights provided under the terms of this Article shall inure to his/her heirs and legal representatives.

**Section 6.5. Insurance.** The Corporation shall have the power to purchase and maintain insurance on behalf of any person who is or was a representative of the Corporation, or is or was serving at the request of the Corporation as a representative of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against him/her and incurred by him/her in any such capacity or arising out of his/her status as such whether the Corporation would have the power to indemnify him/her against such liability under the provisions of these Bylaws.

**Section 6.6. Personal Liability of Directors.** No director shall be personally liable, as such, for mandatory damages for any action taken unless (1) the director has breached or failed to perform the duties of his/her or her office under the Pennsylvania Nonprofit Corporation Law of 1988 (as it may, from time to time, be amended); and (2) the breach or failure to perform constitutes self-dealing, willful misconduct or recklessness. However, the preceding sentence shall not apply to (1) the responsibility or liability of a director pursuant to any criminal statute; or (2) the liability of a director for the payment of taxes or related penalties pursuant to Federal, State or local law.

## **ARTICLE VII**

### **Dissolution**

**Section 7.1.** In the event of dissolution of the Corporation, all assets remaining after the satisfaction of claims against the Corporation, shall be delivered to such educational or scientific organizations, exempt under Section 501(c)(3) of the Internal Revenue Code of 1986, as amended (or the corresponding provision of any future United States Internal Revenue law) as the Board directs. The selection of the organization or organizations by the Board shall be made in its discretion from nonprofit corporations then qualified under such Section 501(c)(3) whose aims are closely related to those of the Corporation.

## **ARTICLE VIII**

### **Amendments**

**Section 8.1.** These Bylaws may be amended or repealed and new Bylaws may be adopted on the affirmative vote of a majority of the all of the members of the Board then in office at any annual, regular or special meeting, duly called and at which a

**INDEPENDENT AUDITORS' REPORT**

To the Board of Directors  
American Institutes for Research in the Behavioral Sciences

We have audited the accompanying consolidated financial statements of American Institutes for Research in the Behavioral Sciences, which comprise the consolidated balance sheets as of December 31, 2013 and 2012, and the related consolidated statements of activities and cash flows for the years then ended, and the related notes to the financial statements.

***Management's Responsibility for the Financial Statements***

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

***Auditors' Responsibility***

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

RUBINO & COMPANY  
CHARTERED

6903 ROCKLEDGE DRIVE  
SUITE 1200  
BETHESDA, MARYLAND  
20817-1818  
PHONE: 301 564 3636  
FAX: 301 564 2994  
www.rubino.com

*Opinion*

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of American Institutes for Research in the Behavioral Sciences as of December 31, 2013 and 2012, and the changes in its net assets and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

*Rubins & Company*

Bethesda, Maryland  
June 18, 2014

**AMERICAN INSTITUTES FOR RESEARCH IN THE BEHAVIORAL SCIENCES  
CONSOLIDATED BALANCE SHEETS**

	<b>December 31,</b>	
<b>ASSETS</b>	<b><u>2013</u></b>	<b><u>2012</u></b>
Current assets		
Cash and cash equivalents	\$ 30,456,259	\$ 20,322,714
Accounts receivable, net	66,828,986	72,513,464
Prepaid expenses and other current assets	4,651,366	5,392,515
Short-term investments	26,500,000	26,500,000
Total current assets	128,436,611	124,728,693
Long-term investments	119,233,713	95,623,020
Property and equipment, net	10,630,556	10,754,532
Goodwill	1,715,191	1,715,191
Other assets	616,915	646,114
Total assets	\$ 260,632,986	\$ 233,467,550
<b>LIABILITIES AND NET ASSETS</b>		
Current liabilities		
Accounts payable and accrued expenses	\$ 27,150,505	\$ 28,972,852
Accrued payroll and related expenses	23,922,525	21,331,436
Deferred revenue	24,564,345	24,017,437
Total current liabilities	75,637,375	74,321,725
Deferred rent, net of current portion	10,178,504	9,702,045
Deferred compensation, net of current portion	3,458,928	2,334,438
Total liabilities	89,274,807	86,358,208
Net assets, unrestricted	171,358,179	147,109,342
Total liabilities and net assets	\$ 260,632,986	\$ 233,467,550

The accompanying notes are an integral part of these consolidated financial statements.

**AMERICAN INSTITUTES FOR RESEARCH IN THE BEHAVIORAL SCIENCES**  
**CONSOLIDATED STATEMENTS OF ACTIVITIES**

	<b>Years Ended December 31,</b>	
	<b><u>2013</u></b>	<b><u>2012</u></b>
Changes in unrestricted net assets		
Contract and grant revenue	\$ <u>356,310,620</u>	\$ <u>326,532,045</u>
Program expenses		
Direct contract and grant costs	236,893,858	215,494,170
Overhead and administrative expenses	<u>105,671,745</u>	<u>98,376,026</u>
Total program expenses	<u>342,565,603</u>	<u>313,870,196</u>
Excess of revenue over program expenses	13,745,017	12,661,849
Other income (expense)		
Excess of assets acquired over liabilities assumed in affiliations	11,457	494,996
Investment income, net	11,072,589	9,705,342
Other, net	<u>(580,226)</u>	<u>(387,299)</u>
Increase in net assets	24,248,837	22,474,888
Net assets, beginning of year	<u>147,109,342</u>	<u>124,634,454</u>
Net assets, end of year	<u>\$ 171,358,179</u>	<u>\$ 147,109,342</u>

The accompanying notes are an integral part of these consolidated financial statements.

**AMERICAN INSTITUTES FOR RESEARCH IN THE BEHAVIORAL SCIENCES**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**

	<b>Years Ended December 31,</b>	
	<b><u>2013</u></b>	<b><u>2012</u></b>
Cash flows from operating activities		
Increase in net assets	\$ 24,248,837	\$ 22,474,888
Reconciling adjustments:		
Net assets acquired in affiliations	(11,457)	(494,996)
Depreciation and amortization	2,267,068	4,172,744
Bond discount amortization	360,058	256,818
Realized and unrealized gains on investments	(8,532,601)	(6,934,324)
Changes in operating assets and liabilities:		
Accounts receivable, net	5,684,765	(7,857,845)
Prepaid expenses and other current assets	745,710	(2,504,484)
Other noncurrent assets	44,449	(73,650)
Accounts payable and accrued expenses	(1,944,961)	4,665,609
Accrued payroll and related expenses	2,581,389	504,753
Deferred revenue	546,908	6,269,542
Deferred rent	563,809	696,922
Deferred compensation	1,124,490	870,553
Net cash provided by operating activities	<u>27,678,464</u>	<u>22,046,530</u>
Cash flows from investing activities		
Cash acquired in affiliation		
with The National Center on Family Homelessness	-	178,190
Purchases of marketable securities	(144,561,730)	(79,507,830)
Proceeds from sales of marketable securities	129,123,580	65,925,901
Purchase of property and equipment	<u>(2,106,769)</u>	<u>(3,822,319)</u>
Net cash used by investing activities	<u>(17,544,919)</u>	<u>(17,226,058)</u>
Net change in cash and cash equivalents	10,133,545	4,820,472
Cash and cash equivalents, beginning of year	<u>20,322,714</u>	<u>15,502,242</u>
Cash and cash equivalents, end of year	<u>\$ 30,456,259</u>	<u>\$ 20,322,714</u>

The accompanying notes are an integral part of these consolidated financial statements.

ID	Task Name	Duration	Start	Finish	Predecessors	Successors
1	<b>Project Management and Planning</b>	<b>233 days</b>	<b>Thu 7/17/14</b>	<b>Fri 6/19/15</b>		
2	Kickoff/Planning Meeting	1 day	Thu 7/17/14	Thu 7/17/14		
3	Project Plan and Project Schedule Due	1 day	Fri 8/1/14	Fri 8/1/14		
4	<b>Management Meetings</b>	<b>191 days</b>	<b>Tue 8/5/14</b>	<b>Fri 5/8/15</b>		
5	Meeting #1	1 day	Tue 8/5/14	Tue 8/5/14		
6	Meeting Minutes	1 day	Fri 8/8/14	Fri 8/8/14		
7	Meeting #2	1 day	Wed 9/3/14	Wed 9/3/14		
8	Meeting Minutes	1 day	Fri 9/5/14	Fri 9/5/14		
9	Meeting #3	1 day	Tue 10/7/14	Tue 10/7/14		
10	Meeting Minutes	1 day	Fri 10/10/14	Fri 10/10/14		
11	Meeting #4	1 day	Tue 11/4/14	Tue 11/4/14		
12	Meeting Minutes	1 day	Fri 11/7/14	Fri 11/7/14		
13	Meeting #5	1 day	Tue 12/2/14	Tue 12/2/14		
14	Meeting Minutes	1 day	Fri 12/5/14	Fri 12/5/14		
15	Meeting #6	1 day	Tue 1/6/15	Tue 1/6/15		
16	Meeting Minutes	1 day	Fri 1/9/15	Fri 1/9/15		
17	Meeting #7	1 day	Tue 2/3/15	Tue 2/3/15		
18	Meeting Minutes	1 day	Fri 2/6/15	Fri 2/6/15		
19	Meeting #8	1 day	Tue 3/3/15	Tue 3/3/15		
20	Meeting Minutes	1 day	Fri 3/6/15	Fri 3/6/15		
21	Meeting #9	1 day	Tue 4/7/15	Tue 4/7/15		
22	Meeting Minutes	1 day	Fri 4/10/15	Fri 4/10/15		
23	Meeting #10	1 day	Wed 5/6/15	Wed 5/6/15		
24	Meeting Minutes	1 day	Fri 5/8/15	Fri 5/8/15		
25	<b>Web Ex Conference Call</b>	<b>210 days</b>	<b>Tue 8/19/14</b>	<b>Fri 6/19/15</b>		
26	Conference Call #1	1 day	Tue 8/19/14	Tue 8/19/14		
27	Meeting Minutes	1 day	Fri 8/22/14	Fri 8/22/14		
28	Conference Call #2	1 day	Tue 9/16/14	Tue 9/16/14		
29	Meeting Minutes	1 day	Fri 9/19/14	Fri 9/19/14		
30	Conference Call #3	1 day	Tue 10/14/14	Tue 10/14/14		
31	Meeting Minutes	1 day	Fri 10/17/14	Fri 10/17/14		
32	Conference Call #4	1 day	Tue 11/18/14	Tue 11/18/14		
33	Meeting Minutes	1 day	Mon 11/24/14	Mon 11/24/14		
34	Conference Call #5	1 day	Tue 12/23/14	Tue 12/23/14		
35	Meeting Minutes	1 day	Mon 12/29/14	Mon 12/29/14		
36	Conference Call #6	1 day	Tue 1/20/15	Tue 1/20/15		
37	Meeting Minutes	1 day	Fri 1/23/15	Fri 1/23/15		
38	Conference Call #7	1 day	Tue 2/17/15	Tue 2/17/15		
39	Meeting Minutes	1 day	Fri 2/20/15	Fri 2/20/15		
40	Conference Call #9	1 day	Tue 3/17/15	Tue 3/17/15		
41	Meeting Minutes	1 day	Fri 3/20/15	Fri 3/20/15		

ID	Task Name	Duration	Start	Finish	Predecessors	Successors
42	Conference Call #10	1 day	Tue 4/21/15	Tue 4/21/15		
43	Meeting Minutes	1 day	Fri 4/24/15	Fri 4/24/15		
44	Conference Call #11	1 day	Tue 5/19/15	Tue 5/19/15		
45	Meeting Minutes	1 day	Fri 5/22/15	Fri 5/22/15		
46	Conference Call #12	1 day	Tue 6/16/15	Tue 6/16/15		
47	Meeting Minutes	1 day	Fri 6/19/15	Fri 6/19/15		
48	<b>Monthly Status Report</b>	<b>207 days</b>	<b>Wed 8/6/14</b>	<b>Wed 6/3/15</b>		
49	Monthly Status Report 1	1 day	Wed 8/6/14	Wed 8/6/14		
50	Monthly Status Report 2	1 day	Wed 9/3/14	Wed 9/3/14		
51	Monthly Status Report 3	1 day	Wed 10/1/14	Wed 10/1/14		
52	Monthly Status Report 4	1 day	Wed 11/5/14	Wed 11/5/14		
53	Monthly Status Report 5	1 day	Wed 12/3/14	Wed 12/3/14		
54	Monthly Status Report 6	1 day	Wed 1/7/15	Wed 1/7/15		
55	Monthly Status Report 7	1 day	Wed 2/4/15	Wed 2/4/15		
56	Monthly Status Report 8	1 day	Wed 3/4/15	Wed 3/4/15		
57	Monthly Status Report 9	1 day	Wed 4/1/15	Wed 4/1/15		
58	Monthly Status Report 10	1 day	Wed 5/6/15	Wed 5/6/15		
59	Monthly Status Report 11	1 day	Wed 6/3/15	Wed 6/3/15		
60	<b>TAC Meeting</b>	<b>131 days</b>	<b>Mon 8/4/14</b>	<b>Wed 2/11/15</b>		
61	Recruit/Invite TAC members	10 days	Mon 8/4/14	Fri 8/15/14		
62	TAC meeting (Exact Dates TBD)	2 days	Tue 10/14/14	Wed 10/15/14		
63	TAC meeting (Exact Dates TBD)	2 days	Tue 2/10/15	Wed 2/11/15		
64	<b>Smarter Balanced Assessment Consortium Meetings</b>	<b>130 days</b>	<b>Wed 9/10/14</b>	<b>Fri 3/20/15</b>		
65	Meeting #1	3 days	Wed 9/10/14	Fri 9/12/14		
66	Meeting #2	3 days	Wed 3/18/15	Fri 3/20/15		
67	<b>Test Windows, UATs, and Downtimes</b>	<b>215 days</b>	<b>Wed 10/15/14</b>	<b>Mon 8/24/15</b>		
68	<b>Test Windows</b>	<b>215 days</b>	<b>Wed 10/15/14</b>	<b>Mon 8/24/15</b>		
69	<b>Smarter Balanced Interim Assessment Test Window</b>	<b>95 days</b>	<b>Mon 12/15/14</b>	<b>Fri 5/1/15</b>		
70	Interim Assessment test window	95 days	Mon 12/15/14	Fri 5/1/15		
71	<b>Training Test Window</b>	<b>215 days</b>	<b>Wed 10/15/14</b>	<b>Mon 8/24/15</b>		
72	Training Test Window	215 days	Wed 10/15/14	Mon 8/24/15		
73	<b>Practice Test Window</b>	<b>215 days</b>	<b>Wed 10/15/14</b>	<b>Mon 8/24/15</b>		
74	Practice Test Window	215 days	Wed 10/15/14	Mon 8/24/15		
75	<b>Spring Administration Test Windows</b>	<b>64 days</b>	<b>Mon 3/9/15</b>	<b>Fri 6/5/15</b>		117SS+2 days
76	Smarter Balanced Math/ELA Grades 3-8 and 11	64 days	Mon 3/9/15	Fri 6/5/15		
77	<b>Systems Requirements/Development/Deployment</b>	<b>158 days</b>	<b>Mon 7/21/14</b>	<b>Mon 3/9/15</b>		
78	<b>Portal</b>	<b>26 days</b>	<b>Mon 7/21/14</b>	<b>Mon 8/25/14</b>		
79	Design	10 days	Mon 7/21/14	Fri 8/1/14		80
80	Build	10 days	Mon 8/4/14	Fri 8/15/14	79	81
81	Client conducts Portal UAT	5 days	Mon 8/18/14	Fri 8/22/14	80	82
82	Go Live for Portal	1 day	Mon 8/25/14	Mon 8/25/14	81	

ID	Task Name	Duration	Start	Finish	Predecessors	Successors
83	<b>Secure Browser</b>	<b>33 days</b>	<b>Mon 7/21/14</b>	<b>Wed 9/3/14</b>		
84	Configure	10 days	Mon 7/21/14	Fri 8/1/14		85
85	Build and Test	10 days	Mon 8/4/14	Fri 8/15/14	84	86
86	Test	5 days	Mon 8/18/14	Fri 8/22/14	85	87
87	Client conducts Secure Browser UAT	5 days	Mon 8/25/14	Fri 8/29/14	86	
88	Go Live for Secure Browser	1 day	Wed 9/3/14	Wed 9/3/14		
89	<b>Test Registration System</b>	<b>73 days</b>	<b>Fri 8/1/14</b>	<b>Wed 11/12/14</b>		
90	Gather Test Registration Requirements	30 days	Fri 8/1/14	Thu 9/1/14		91
91	Developing/Configuring Test Registration System based on requirements	36 days	Fri 9/12/14	Fri 10/31/14	90	92
92	Client conducts Test Registration UAT	5 days	Mon 11/3/14	Fri 11/7/14	91	
93	Test Registration System Go Live	1 day	Wed 11/12/14	Wed 11/12/14		
94	<b>Test Delivery System (Interim)</b>	<b>83 days</b>	<b>Mon 8/18/14</b>	<b>Mon 12/15/14</b>		
95	Gather Interim Assessment Requirements	30 days	Mon 8/18/14	Fri 9/26/14		96
96	Developing/Configuring Interim Assessment System based on requirements	35 days	Mon 9/29/14	Mon 11/17/14	95	97
97	Client conducts Interim Assessment UAT	10 days	Tue 11/18/14	Wed 12/3/14	96	98
98	Interim Assessment System Go Live	1 day	Mon 12/15/14	Mon 12/15/14	97	
99	<b>Test Delivery System (Summative)</b>	<b>123 days</b>	<b>Mon 9/8/14</b>	<b>Mon 3/9/15</b>		
100	Gather Test Delivery System Requirements	30 days	Mon 9/8/14	Fri 10/17/14		101
101	Developing/Configuring Test Delivery System based on requirements	50 days	Mon 10/20/14	Mon 1/5/15	100	
102	Client conducts Test Delivery System UAT	10 days	Mon 2/9/15	Mon 2/23/15		
103	Test Delivery System Go Live	1 day	Mon 3/9/15	Mon 3/9/15		
104	<b>Online Reporting System (ORS) UAT and Downtime</b>	<b>123 days</b>	<b>Mon 9/8/14</b>	<b>Mon 3/9/15</b>		
105	Gather ORS Requirements	30 days	Mon 9/8/14	Fri 10/17/14		106
106	Developing/Configuring ORS based on requirements	60 days	Mon 10/20/14	Tue 1/20/15	105	
107	Client conducts ORS UAT	10 days	Mon 2/9/15	Mon 2/23/15		
108	ORS Go Live	1 day	Mon 3/9/15	Mon 3/9/15		
109	<b>Creation of Paper-based Tests</b>	<b>135 days</b>	<b>Mon 12/1/14</b>	<b>Mon 6/15/15</b>		
110	<b>Development of Paper Tests</b>	<b>22 days</b>	<b>Mon 12/1/14</b>	<b>Fri 1/2/15</b>		
111	AIR sends forms to print vendor for blueines	10 days	Mon 12/1/14	Fri 12/12/14		112
112	AIR reviews and approves blueines.	12 days	Mon 12/15/14	Fri 1/2/15	111	114
113	<b>Printing/Shipping of Test Materials.</b>	<b>35 days</b>	<b>Mon 1/5/15</b>	<b>Tue 2/24/15</b>		
114	Paper tests are printed	20 days	Mon 1/5/15	Mon 2/2/15	112	115
115	Paper tests shipped to districts	15 days	Tue 2/3/15	Tue 2/24/15	114	
116	<b>Return of Paper Test Materials.</b>	<b>68 days</b>	<b>Wed 3/11/15</b>	<b>Mon 6/15/15</b>		
117	Districts ship materials	66 days	Wed 3/11/15	Thu 6/11/15	116	118SS+2 days
118	Paper Materials Processed and Scanned	66 days	Fri 3/13/15	Mon 6/15/15	117	
119	<b>Training Materials</b>	<b>145 days</b>	<b>Mon 8/4/14</b>	<b>Wed 3/4/15</b>		
120	<b>Brochures</b>	<b>60 days</b>	<b>Mon 8/4/14</b>	<b>Fri 10/24/14</b>		
121	AIR drafts Educator/Test Administrator Brochure	5 days	Mon 8/4/14	Fri 8/8/14		122
122	AIR/Client review and update brochure until finalized	5 days	Mon 8/11/14	Fri 8/15/14	121	123
123	AIR drafts Parent/Student Brochure	5 days	Mon 8/18/14	Fri 8/22/14	122	124

ID	Task Name	Duration	Start	Finish	Predecessors	Successors
124	AIR/Client review and update brochure until finalized	5 days	Mon 8/25/14	Fri 8/29/14	123	125
125	AIR drafts District/School Administrator Brochure	5 days	Mon 9/1/14	Fri 9/5/14	124	126
126	AIR/Client review and update brochure until finalized	5 days	Mon 9/8/14	Fri 9/12/14	125	127
127	AIR drafts Technology Coordinator Brochure	5 days	Mon 9/15/14	Fri 9/19/14	126	128
128	AIR/Client review and update brochure until finalized	5 days	Mon 9/22/14	Fri 9/26/14	127	129
129	AIR drafts District Data Coordinator Brochure	5 days	Mon 9/29/14	Fri 10/3/14	128	130
130	AIR/Client review and update brochure until finalized	5 days	Mon 10/6/14	Fri 10/10/14	129	131
131	AIR drafts User Roles Brochure	5 days	Mon 10/13/14	Fri 10/17/14	130	132
132	AIR/Client review and update brochure until finalized	5 days	Mon 10/20/14	Fri 10/24/14	131	133
133	<b>Webinars/Tutorials</b>	<b>110 days</b>	<b>Wed 8/20/14</b>	<b>Thu 1/29/15</b>		
134	User Role/District/Technology Coordinator Webinar	1 day	Wed 8/20/14	Wed 8/20/14		
135	Online Test Administrator Certification Webinar	1 day	Tue 11/4/14	Tue 11/4/14		
136	Test Administrator Webinar	1 day	Wed 1/7/15	Wed 1/7/15		
137	Online Reporting System Webinar	1 day	Wed 1/14/15	Wed 1/14/15		
138	TIDE Tutorial	1 day	Tue 10/21/14	Tue 10/21/14		
139	Online Testing System Tutorial	1 day	Tue 1/27/15	Tue 1/27/15		
140	ORS Tutorial	1 day	Thu 1/29/15	Thu 1/29/15		
141	<b>Online Test Administrator Certification Course</b>	<b>42 days</b>	<b>Mon 9/15/14</b>	<b>Wed 11/12/14</b>		
142	Design Certification Course	20 days	Mon 9/15/14	Fri 10/10/14		143
143	Certification Course LAIT	10 days	Mon 10/13/14	Fri 10/24/14	142	
144	<New Task>	1 day	Wed 11/12/14	Wed 11/12/14		
145	<b>Regional Seminars</b>	<b>4 days</b>	<b>Tue 1/13/15</b>	<b>Fri 1/16/15</b>		
146	Regional Training #1	1 day	Tue 1/13/15	Tue 1/13/15		147
147	Regional Training #2	1 day	Wed 1/14/15	Wed 1/14/15	146	148
148	Regional Training #3	1 day	Thu 1/15/15	Thu 1/15/15	147	149
149	Regional Training #4	1 day	Fri 1/16/15	Fri 1/16/15	148	
150	<b>Manuals</b>	<b>34 days</b>	<b>Mon 9/8/14</b>	<b>Thu 10/23/14</b>		
151	AIR/Client discuss changes required on the Smarter Balanced TAM	15 days	Mon 9/8/14	Fri 9/26/14		152
152	AIR delivers TAM draft to Client	0 days	Fri 9/26/14	Fri 9/26/14	151	153
153	Client reviews TAM draft	5 days	Mon 9/29/14	Fri 10/3/14	152	154
154	AIR implements edits and sends revised manual for review.	9 days	Mon 10/6/14	Thu 10/16/14	153	155
155	Client reviews and approves manuals.	5 days	Fri 10/17/14	Thu 10/23/14	154	
156	<b>User Guides and Technical Documents</b>	<b>102 days</b>	<b>Mon 8/4/14</b>	<b>Tue 12/30/14</b>		
157	<b>Technical Specifications Manual for Online Testing</b>	<b>20 days</b>	<b>Mon 8/11/14</b>	<b>Fri 9/5/14</b>		
158	AIR creates draft of Tech Specs Manual (including Accessibility preparation)	5 days	Mon 8/11/14	Fri 8/15/14		159
159	AIR delivers Tech Specs draft manual to Client	0 days	Fri 8/15/14	Fri 8/15/14	158	160
160	Client reviews Tech Specs draft	5 days	Mon 8/18/14	Fri 8/22/14	159	161
161	AIR implements edits and sends revised manual for review.	5 days	Mon 8/25/14	Fri 8/29/14	160	162
162	Client reviews and approves manual.	5 days	Mon 9/1/14	Fri 9/5/14	161	
163	<b>Test Registration System User Guide</b>	<b>12 days</b>	<b>Mon 10/27/14</b>	<b>Wed 11/12/14</b>		
164	AIR creates draft of Test Registration User Guide	5 days	Mon 10/27/14	Fri 10/31/14		165, 166

ID	Task Name	Duration	Start	Finish	Predecessors	Successors
165	AIIR delivers Test Registration draft manual to Client	1 day	Mon 11/3/14	Mon 11/3/14 164		
166	Client reviews Test Registration draft	5 days	Mon 11/3/14	Fri 11/7/14 164		167
167	AIIR implements edits and sends revised manual for review.	2 days	Mon 11/10/14	Wed 11/12/14 166		168SS+1 day
168	Client reviews and approves manual.	1 day	Wed 11/12/14	Wed 11/12/14 167SS+1 day		
169	<b>Interim System User Guide</b>	<b>27 days</b>	<b>Mon 11/3/14</b>	<b>Fri 12/12/14</b>		
170	AIIR creates draft of Interim Assessment User Guide	9 days	Mon 11/3/14	Fri 11/14/14		171
171	AIIR delivers Interim Assessment draft manual to Client	1 day	Mon 11/17/14	Mon 11/17/14 170		172
172	Client reviews Interim Assessment Manual draft	10 days	Tue 11/18/14	Wed 12/3/14 171		173
173	AIIR implements edits and sends revised manual for review.	5 days	Thu 12/4/14	Wed 12/10/14 172		174
174	Client reviews and approves manual.	2 days	Thu 12/11/14	Fri 12/12/14 173		
175	<b>Test Delivery System User Guide</b>	<b>31 days</b>	<b>Tue 1/20/15</b>	<b>Wed 3/4/15</b>		
176	AIIR creates draft of Test Delivery System User Guide	14 days	Tue 1/20/15	Fri 2/6/15		177
177	AIIR delivers Test Delivery System draft manual to Client	1 day	Mon 2/9/15	Mon 2/9/15 176		178
178	Client reviews Test Delivery System Manual draft	10 days	Tue 2/10/15	Tue 2/24/15 177		179
179	AIIR implements edits and sends revised manual for review.	4 days	Wed 2/25/15	Mon 3/2/15 178		180
180	Client reviews and approves manuals.	2 days	Tue 3/3/15	Wed 3/4/15 179		
181	<b>Scoring</b>	<b>43 days</b>	<b>Mon 5/4/15</b>	<b>Thu 7/2/15</b>		
182	Handscoring Activities	37 days	Mon 5/4/15	Wed 6/24/15		183
183	Tests Scored	5 days	Thu 6/25/15	Wed 7/1/15 182		184
184	Data File results sent to client	1 day	Thu 7/2/15	Thu 7/2/15 183		185SS
185	Online Reports Go Live	1 day	Thu 7/2/15	Thu 7/2/15 184SS		

## ATTACHMENT 2 - NH SPECIFIC REQUIREMENTS

### Vendor Instructions

**Vendor Response Column:**

Place a "Yes" if the current release of the software can fully support **ALL** the functionality described in the row, without special customization. A "Yes" can **only** be used if the delivery method is Standard (see delivery method instructions below). Otherwise, enter a "No"; A "No" can only be used with delivery method Future, Custom, or Not Available/Not Proposing (see delivery method instructions below).

**Delivery Method Column:**

Complete the delivery method using a Standard, Future, Custom, or Not Available/Not Proposing (as defined below) that indicates how the requirement will be delivered.

**Standard** - Feature/Function is included in the proposed system and available in the current software release.

**Future** - Feature/Function will be available in a future release. (Provide anticipated delivery date, version, and service release in the comment area.)

**Custom** - Feature/Function can be provided with custom modifications. (Respondent must provide estimated hours and average billing rate or flat cost for the software modification in the comment area. These cost estimates should add up to the total cost for software modifications found in the cost summary table in Section X of the RFP).

**Not Available/Not Proposing** - Feature/Function has not been proposed by the Vendor. (Provide brief description of why this functionality was not proposed.)

**Comments Column:**

For all Delivery Method responses other than standard (Future, Custom, or Not Available/Not Proposing) vendors must provide a brief explanation. Free form text can be entered into this column.

ATTACHMENT 2 - NH SPECIFIC REQUIREMENTS

APPLICATION REQUIREMENTS						
State Requirements						
Req #	Requirement Description	Criticality	Yes and No	Standard and not proposed.		
SUBHEAD						
A1.1	The system software adheres to open standards and is not proprietary.	M	Yes and No	Standard and not proposed.	The system adheres to open standards. In particular, we adhere to open standards, and will adhere to the Smarter standards as they are published. The system itself is proprietary—that is, the software itself.	
A1.2	The database platform adheres to open standards.	M	Yes	Standard	The database adheres to the SQL standard.	
A1.3	The Solution must comply with Open Standards as specified in RSA 21-R:10and 21-R:13, including but not limited to Open Data Formats.	M	Yes/No	Standard	System adheres to open data formats and standards; however, software is proprietary.	
A1.4	Web-based compatible and in conformance with the following W3C standards:	M	Yes	Standard		
A1.5	XHTML 1.0	M	Yes	Standard		
A1.6	CSS 2.1	M	Yes	Standard		
A1.7	XML 1.0 (fourth edition)	M	Yes	Standard		
SUBHEAD						
A2.1	Verify the identity or authenticate all of the system client applications before allowing use of the system to prevent access to inappropriate or confidential data or services.	M	Yes	Standard		
A2.2	Verify the identity or authenticate all of the system's human users before allowing them to use its capabilities to prevent access to inappropriate or confidential data or services.	M	Yes	Standard		
A2.3	Enforce unique user names.	M	Yes	Standard		
A2.4	Enforce complex passwords for Administrator Accounts of ten characters or more in accordance with DoIT's statewide <i>User Account and Password Policy</i>	M	Yes	Standard		
A2.5	Enforce the use of complex passwords for general users using capital letters, numbers and special characters	M	Yes	Standard		
A2.6	Encrypt passwords in transmission and at rest within the database.	M	Yes	Standard		
A2.7	Expire passwords after 90-days.	M	No	Future	Password expiration will be available starting August 2014.	

ATTACHMENT 2 - NH SPECIFIC REQUIREMENTS

State Requirements		APPLICATION REQUIREMENTS	
Req #	Requirement Description	Criticality	Standard
A2.8	Authorize users and client applications to prevent access to inappropriate or confidential data or services.	M	Yes Standard
A2.9	Provide ability to limit the number of people that can grant or change authorizations	M	Yes Standard
A2.10	Establish ability to enforce session timeouts during periods of inactivity.	M	Yes Standard
A2.11	Ensure application has been tested and hardened to prevent critical application security flaws. (At a minimum, the application shall be tested against all flaws outlined in the Open Web Application Security Project (OWASP) Top Ten( <a href="http://www.owasp.org/index.php/OWASP_Top_Ten_Project">http://www.owasp.org/index.php/OWASP Top Ten Project</a> ))	M	Yes Standard
A2.12	The application shall not store authentication credentials or sensitive Data in its code.	M	Yes Standard
A2.13	Audit all attempted accesses that fail identification, authentication and authorization requirements	M	Yes Standard
A2.14	The application shall log all activities to a central server to prevent parties to application transactions from denying that they have taken place. The logs must be kept for (XX- days, weeks, or months)	M	Yes Standard
A2.15	The application must allow a user to explicitly terminate a session. No remnants of the prior session should then remain.	M	Yes Standard
A2.16	Use only the Software and System Services designed for use	M	Yes Standard
A2.17	The application Data shall be protected from unauthorized use when at rest	M	Yes Standard
A2.18	Keep any sensitive Data or communications private from unauthorized individuals and programs.	M	Yes Standard
A2.19	Subsequent application enhancements or upgrades shall not remove or degrade security requirements	M	Yes Standard
A2.20	Create change management documentation and procedures	M	Yes Standard
<b>SUBHEAD</b>			
A3.1			
A3.2			
A3.3			
A3.4			

ATTACHMENT 2 - NH SPECIFIC REQUIREMENTS

State Requirements		HARDWARE REQUIREMENTS			
Req #	Requirement Description	Criticality	Hardware	Software	Vendor Comments
<b>SUBHEAD</b>					
E1.1					
E1.2					
E1.3					
E1.4					
E1.5					
E1.6					
E1.7					
E1.8					
E1.9					
E1.10					
<b>SUBHEAD</b>					
E2.1					
E2.2					
E2.3					
E2.4					
E2.5					
E2.6					
E2.7					
E2.8					
E2.9					
E2.10					
E2.11					
E2.12					
E2.13					
E2.14					
E2.15					
E2.16					

ATTACHMENT 2 - NH SPECIFIC REQUIREMENTS

State Requirements		HARDWARE REQUIREMENTS			
Req #	Requirement Description	Criticality			
E2.17					
E2.18					
E2.19					
E2.20					
<b>SUBHEAD</b>					
E3.1					
E3.2					
E3.3					
E3.4					
E3.5					
E3.6					
E3.7					
E3.8					
E3.9					
E3.10					
<b>SUBHEAD</b>					
E4.1					
E4.2					
E4.3					
E4.4					
E4.5					
E4.6					
E4.7					

## ATTACHMENT 2 - NH SPECIFIC REQUIREMENTS

State Requirements		TESTING			
Req #	Requirement Description	Criticality	S/N	C/N	C/N
<b>APPLICATION SECURITY TESTING</b>					
T1.1	All components of the Software shall be reviewed and tested to ensure they protect the State's web site and its related Data assets.	M	Yes	Standard	
T1.2	The Vendor shall be responsible for security testing, as appropriate. Tests shall focus on the technical, administrative and physical security controls that have been designed into the System architecture in order to provide the necessary confidentiality, integrity and availability.	M	Yes	Standard	
T1.3	Test for Identification and Authentication: supports obtaining information about those parties attempting to log onto a system or application for security purposes and the validation of users	M	Yes	Standard	
T1.4	Test for Access Control; supports the management of permissions for logging onto a computer or network	M	Yes	Standard	
T1.5	Test for encryption; supports the encoding of data for security purposes	M	Yes	Standard	
T1.6	Test the Intrusion Detection; supports the detection of illegal entrance into a computer system	M	Yes	Standard	
T1.7	Test the Verification feature; supports the confirmation of authority to enter a computer system, application or network	M	Yes	Standard	
T1.8	Test the Digital Signature; guarantees the unaltered state of a file	M	Yes	Standard	
T1.9	Test the User Management feature; supports the administration of computer, application and network accounts within an organization	M	Yes	Standard	
T1.10	Test Role/Privilege Management; supports the granting of abilities to users or groups of users of a computer, application or network	M	Yes	Standard	
T1.11	Test Audit Trail Capture and Analysis; supports the identification and monitoring of activities within an application or system	M	Yes	Standard	
T1.12	Test Input Validation; ensures the application is protected from buffer overflow, cross-site scripting, SQL injection, and unauthorized access of files and/or directories on the server.	M	Yes	Standard	
T1.13	Prior to the System being moved into production, the Vendor shall provide results of all security testing to the Department of Information Technology for review and acceptance.	M	Yes	Standard	We can provide this information, though it is not part of our standard process to provide it.

ATTACHMENT 2 - NH SPECIFIC REQUIREMENTS

State Requirements		TESTING			
Req #	Requirement Description	Criticality	Yes/No	Standard/Custom	
<b>STANDARD TESTING</b>					
T2.1	The Vendor must perform application testing using an industry standard and State approved testing methodology.	M	Yes/No	Standard/Custom	We use industry standard testing methods. State-dictated custom methods may be added for additional cost.
T2.2	The Vendor must perform application stress testing and tuning.	M	Yes	Standard	

ATTACHMENT 2 - NH SPECIFIC REQUIREMENTS

HOSTING-CLOUD REQUIREMENTS

State Requirements							
Req #	Requirement Description	Criticality					
<b>OPERATIONS</b>							
H1.1	Vendor shall maintain a secure hosting environment providing all necessary hardware, software, and Internet bandwidth to manage the application and support users with permission based logins.	M	Yes	Standard			
H1.2	State access will be via Internet Browser	M	Yes	Standard			
H1.3	At the State's option, authorized third parties may be given limited access by the Vendor to certain levels of the State's system through the VPN or through a separate network connection that meets the Vendor's specifications.	M	No	Not proposed	All necessary access can be obtained through the web. We restrict access to production code.		
H1.4	At a minimum, the System should support this client configuration; Pentium4, 630/3.0GHz PC, Microsoft Windows XP Professional Version 2002, Internet Explorer 6, and 128 bit encryption.	M	Yes/No	Standard		Some systems do not support IE prior to version 8 or 9.	
H1.5	The State will be responsible for equipment, labor, and/or services necessary to set-up and maintain the Internet connectivity at the State and/or other third party sites.	M	Yes	Standard			
H1.6	Vendor will not be responsible for network connection issues, problems or conditions arising from or related to circumstances outside the control of the Vendor, ex: bandwidth, network outages and /or any other conditions arising on the State's internal network or, more generally, outside the Vendor's firewall or any issues that are the responsibility of the State Internet Service Provider.	M	Yes	Standard			
H1.7	Vendor shall provide a secure Class A Data Center providing equipment (including dedicated servers), an on-site 24/7 system operator, managed firewall services, and managed backup services.	M	Yes	Standard			
H1.8	Data Center Air Conditioning – used to control temperature and humidity in the Data Center. Temperature ranges shall be between 68 and 75 °F.	M	Yes	Standard			
H1.9	Data Center Humidity shall be non-condensing and be maintained between 40-55% with a maximum dew point of 62 °F.	M	Yes	Standard			
H1.10	Data Center Backup Power – uninterruptible power supplies shall be sized to sustain computer systems and associated components for, at a minimum, the amount of time it takes for a backup generator to take over providing power. Where possible, servers shall contain redundant power supplies connected to commercial power via separate feeds.	M	Yes	Standard			

ATTACHMENT 2 - NH SPECIFIC REQUIREMENTS

HOSTING-CLOUD REQUIREMENTS

State Requirements					
Req #	Requirement Description	Criticality			
H1.11	Data Center Generator – shall be sufficient to sustain computer systems and associated components for, at a minimum, the amount of time it takes for commercial power to return. Fuel tanks shall be large enough to support the generator at -full load for a period not less than 1 ½ days of operation.	M	Yes	Standard	
H1.12	Data Center Floor – A raised floor is required for more uniform air circulation in the form of a plenum for cold air as well as to provide space for power cabling and wetness monitoring.	M	Yes	Standard	
H1.13	Data Center Fire Protection System – fire detectors in conjunction with suppression gaseous systems must be installed to reduce the risk of loss due to fire.	M	Yes	Standard	
H1.14	The Data Center must be physically secured – restricted access to the site to personnel with controls such as biometric, badge, and others security solutions. Policies for granting access must be in place and followed. Access shall only be granted to those with a need to perform tasks in the Data Center.	M	Yes	Standard	
H1.15	Vendor must monitor the application and all servers.	M	Yes	Standard	
H1.16	Vendor shall manage the databases and services on all servers located at the Vendor's facility.	M	Yes	Standard	
H1.17	Vendor shall install and update all server patches, updates, and other utilities within 60 days of release from the manufacturer.	M	Yes	Standard	
H1.18	Vendor shall monitor System, security, and application logs.	M	Yes	Standard	
H1.19	Vendor shall manage the sharing of data resources.	M	Yes	Standard	
H1.20	Vendor shall manage daily backups, off-site data storage, and restore operations.	M	Yes	Standard	
H1.21	The Vendor shall monitor physical hardware.	M	Yes	Standard	
H1.22	The Vendor shall immediately report any breach in security to the State of New Hampshire.	M	Yes	Standard	

ATTACHMENT 2 - NH SPECIFIC REQUIREMENTS

HOSTING-CLOUD REQUIREMENTS						
State Requirements						
Req #	Requirement Description	Criticality				
<b>DISASTER RECOVERY</b>						
H2.1	Vendor shall conform to adequate disaster recovery procedures as defined by the State of New Hampshire.	M	Yes/No	Standard/Custom		We maintain standard data recovery procedures. Requirements for the state are not specified and may require custom procedures, which may carry custom costs not included here.
H2.2	Vendor shall have documented disaster recovery plans that address the recovery of lost State data as well as their own. Systems shall be architected to meet the defined recovery needs.	M	Yes	Standard		
H2.3	The disaster recovery plan shall identify appropriate methods for procuring additional hardware in the event of a component failure. In most instances, systems shall offer a level of redundancy so the loss of a drive or power supply will not be sufficient to terminate services however, these failed components will have to be replaced.	M	Yes	Standard		
H2.4	Vendor shall adhere to a defined and documented back-up schedule and procedure.	M	Yes	Standard		
H2.5	Back-up copies of data are made for the purpose of facilitating a restore of the data in the event of data loss or System failure.	M	Yes	Standard		
H2.6	Scheduled backups of all servers must be completed regularly. At a minimum, Blue host servers shall be backed up nightly, with one daily, one weekly, and one monthly backup stored in a secure location to assure data recovery in the event of disaster.	M	Yes	Standard		
H2.7	The minimum acceptable frequency is differential backup daily, and complete backup weekly.	M	Yes	Standard		
H2.8	Tapes or other back-up media tapes must be securely transferred from the site to another secure location to avoid complete data loss with the loss of a facility.	M	Yes	Standard		
H2.9	If State data is personally identifiable, data must be encrypted in the operation environment and on back up tapes.	M	Yes/No	Standard		Any data transmitted outside of our trusted network is encrypted. Data stored in our databases are behind a back-end network and are secure.

ATTACHMENT 2 - NH SPECIFIC REQUIREMENTS

HOSTING-CLOUD REQUIREMENTS						
State Requirements						
Req #	Requirement Description	Criticality				
H2.10	Data recovery – In the event that recovery back to the last backup is not sufficient to recover State Data, the Vendor shall employ the use of database logs in addition to backup media in the restoration of the database(s) to afford a much closer to real-time recovery. To do this, logs must be moved off the volume containing the database with a frequency to match the business needs	M	Yes	Standard		
<b>NETWORK ARCHITECTURE</b>						
H3.1	The Vendor must operate hosting Services on a network offering adequate performance to meet the business requirements for the State application. For the purpose of this RFP, adequate performance is defined as 99.99% uptime, exclusive of the regularly scheduled maintenance window.	M	Yes	Standard		
H3.2	The Vendor shall provide network redundancy deemed adequate by the State by assuring redundant connections provided by multiple Internet Vendors, so that a failure of one Internet connection will not interrupt access to the State application.	M	Yes	Standard		We assume that the redundancy that we have in place and described in the proposal will be deemed adequate.
H3.3	Where redundant connections are not provided, then the Internet Vendor who provides the Internet service to the Vendor must have their service supplied by a provider(s) that has multiple feeds to ensure that a failure in one of the larger carriers will not cause a failure of the State's Service.	M	Yes	Standard		
H3.4	The Vendor' network architecture must include redundancy of routers and switches in the Data Center.	M	Yes	Standard		
H3.5	Remote access shall be customized to the State's business application. In instances where the State requires access to the application or server - resources not in the DMZ, the Vendor shall provide remote desktop connection to the server through secure protocols such as a Virtual Private Network (VPN).	N/A	No	Not proposed		We restrict access to our production servers for reliability and security reasons.

ATTACHMENT 2 - NH SPECIFIC REQUIREMENTS

HOSTING-CLOUD REQUIREMENTS						
State Requirements						
Req #	Requirement Description	Criticality				
<b>HOSTING SECURITY</b>						
H4.1	The Vendor shall employ security measures ensure that the State's application and data is protected.	M	Yes	Standard		
H4.2	If State data is hosted on multiple servers, data exchanges between and among servers must be encrypted.	M	No	Standard	All data exchanges between and among servers occur behind a back end network. We encrypt if data leaves our trusted location; such as, the Internet for example.	
H4.3	All servers and devices must have currently-supported and hardened operating systems, the latest anti-viral, anti-hacker, anti-spam, anti-spyware, and anti-malware utilities. The environment, as a whole, shall have aggressive intrusion-detection and firewall protection.	M	Yes	Standard		
H4.4	All components of the infrastructure shall be reviewed and tested to ensure they protect the State's hardware, software, and its related data assets. Tests shall focus on the technical, administrative and physical security controls that have been designed into the System architecture in order to provide confidentiality, integrity and availability.	M	Yes	Standard		
H4.5	In the development or maintenance of any code, the Vendor shall ensure that the Software is independently verified and validated using a methodology determined appropriate by the State. All software and hardware shall be free of malicious code.	M	Yes/No	Standard/ Custom	Allr uses standard testing methods to validate software. Requirements beyond this may incur additional costs.	
H4.6	The Vendor shall notify the State's Project Manager of any security breaches within two (2) hours of the time that the Vendor learns of their occurrence.	M	Yes	Standard		
H4.7	The Vendor shall ensure its complete cooperation with the State's Chief Information Officer in the detection of any security vulnerability of the Vendor' hosting infrastructure and/or the application.	M	Yes	Standard		
H4.8	The Vendor shall be solely liable for costs associated with any breach of State data housed at their location(s) including but not limited to notification and any damages assessed by the courts.	M	Yes	Standard		
H4.9	The Vendor shall authorize the State to perform scheduled and random security audits, including vulnerability assessments, of the Vendor' hosting infrastructure and/or the application upon request.	M	Yes	Standard		

ATTACHMENT 2 - NH SPECIFIC REQUIREMENTS

<b>HOSTING-CLOUD REQUIREMENTS</b>					
<b>State Requirements</b>					
<b>Req #</b>	<b>Requirement Description</b>	<b>Criticality</b>			
H4.10	The Vendor shall provide fire detection and suppression system, physical security of and infrastructure security of the proposed hosting facility. The environmental support equipment of the Vendor website hosting facility: power conditioning; HVAC; UPS; generator must be acceptable to the State.	M	Yes	Standard	
<b>SERVICE LEVEL AGREEMENT</b>					
H5.1	The Vendor's System support and maintenance shall commence upon the Effective Date and extend through the end of the Contract term, and any extensions thereof.	M	Yes	Standard	
H5.2	Maintain the hardware and Software in accordance with the Specifications, terms, and requirements of the Contract, including providing, upgrades and fixes as required.	M	Yes	Standard	
H5.3	Repair or replace the hardware or Software, or any portion thereof, so that the System operates in accordance with the Specifications, terms, and requirements of the Contract.	M	Yes	Standard	
H5.4	The State shall have unlimited access, via phone or Email, to the Vendor technical support staff between the hours of 8:30am to 5:00pm- Monday thru Friday EST;	M	Yes	Standard	
H5.5	deficiency class as described below: <ul style="list-style-type: none"> <li>o Class A Deficiency - Software - Critical, does not allow System to operate, no work around, demands immediate action; Written Documentation - missing significant portions of information or unintelligible to State; Non Software - Services were inadequate and require re-performance of the Service.</li> <li>o Class B Deficiency - Software - important, does not stop operation and/or there is a work around and user can perform tasks; Written Documentation - portions of information are missing but not enough to make the document unintelligible; Non Software - Services were deficient, require reworking, but do not require re-performance of the Service.</li> <li>o Class C Deficiency - Software - minimal, cosmetic in nature, minimal effect on System, low priority and/or user can use System; Written Documentation - minimal changes required and of minor editing nature; Non Software - Services require only minor reworking and do not require re-performance of the Service.</li> </ul>	M	Yes	Standard	We work out service level agreements with each client.

ATTACHMENT 2 - NH SPECIFIC REQUIREMENTS

HOSTING-CLOUD REQUIREMENTS						
State Requirements						
Req #	Requirement Description	Criticality	Yes	Standard	Control	Comments
H5.6	As part of the Software maintenance agreement, ongoing software maintenance and support issues, shall be responded to according to the following: a. Class A Deficiencies - The Vendor shall have available to the State on-call telephone assistance, with issue tracking available to the State, eight (8) hours per day and five (5) days a week with an email / telephone response within two (2) hours of request; or the Vendor shall provide support on-site or with remote diagnostic Services, within four (4) business hours of a request; b. Class B & C Deficiencies –The State shall notify the Vendor of such Deficiencies during regular business hours and the Vendor shall respond back within four (4) hours of notification of planned corrective action; The Vendor shall repair or replace Software, and provide maintenance of the Software in accordance with the Specifications, Terms and Requirements of the Contract;	M	Yes	Standard		
H5.7	The hosting server for the State shall be available twenty-four (24) hours a day, 7 days a week except for during scheduled maintenance.	M	Yes	Standard		Typically, test delivery systems are not available for student testing at night or on weekends. These schedules will be determined in cooperation with the state.
H5.8	The Vendor will guide the State with possible solutions to resolve issues to maintain a fully functioning, hosted System.	M	Yes	Standard		
H5.9	A regularly scheduled maintenance window shall be identified (such as weekly, monthly, or quarterly) at which time all relevant server patches and application upgrades shall be applied.	M	Yes	Standard		
H5.10	The Vendor response time for support shall conform to the specific deficiency class as described in Appendix B Section 6.	M	Yes	Standard		
H5.12	The Vendor will give two-business days prior notification to the State Project Manager of all changes/updates and provide the State with training due to the upgrades and changes.	M	Yes	Standard		All Production changes require a tightly controlled Production Control Board (PCB) process. Approvals include: Project Director/Client, Software Director, and SVP of Assessment.
H5.13	The Vendor shall guarantee 99.99% uptime, exclusive of the regularly scheduled maintenance window	M	Yes	Standard		

ATTACHMENT 2 - NH SPECIFIC REQUIREMENTS

HOSTING-CLOUD REQUIREMENTS

State Requirements		HOSTING-CLOUD REQUIREMENTS			
Req #	Requirement Description	Criticality			
H5.14	If The Vendor is unable to meet the 99.99% uptime requirement, The Vendor shall credit State's account in an amount based upon the following formula: (Total Contract Item Price/365) x Number of Days Contract Item Not Provided. The State must request this credit in writing.	M	Yes	Standard	
H5.15	The Vendor shall use a change management policy for notification and tracking of change requests as well as critical outages.	M	Yes	Standard	
H5.16	A critical outage will be designated when a business function cannot be met by a nonperforming application and there is no work around to the problem.	M	Yes	Standard	
H5.17	All hardware and software components of the Vendor hosting infrastructure shall be fully supported by their respective manufacturers at all times. All critical patches for operating systems, databases, web services, etc, shall be applied within sixty (60) days of release by their respective manufacturers.	M	Yes	Standard	
H5.18	The Vendor shall maintain a record of the activities related to repair or maintenance activities performed for the State and shall report quarterly on the following: Server up-time; All change requests implemented, including operating system patches; All critical outages reported including actual issue and resolution; Number of deficiencies reported by class with initial response time as well as time to close.	M	Yes	Standard	
H5.19	The Vendor shall provide the State with a personal secure FTP site to be used the State for uploading and downloading files.	M	Yes	Standard	

ATTACHMENT 2 - NH SPECIFIC REQUIREMENTS

SUPPORT & MAINTENANCE REQUIREMENTS

Req #	Requirement Description	Criticality			
<b>SUPPORT &amp; MAINTENANCE REQUIREMENTS</b>					
S1.1	The Vendor's System support and maintenance shall commence upon the Effective Date and extend through the end of the Contract term, and any extensions thereof.	M	Yes	Standard	
S1.2	Maintain the hardware and software in accordance with the Specifications, terms, and requirements of the Contract, including providing, upgrades and fixes as required.	M	Yes	Standard	
S1.3	Repair or replace the hardware or Software, or any portion thereof, so that the System operates in accordance with the Specifications, terms, and requirements of the Contract.	M	Yes	Standard	
S1.4	The State shall have unlimited access, via phone or Email, to the Vendor technical support staff between the hours of 8:30am to 5:00pm- Monday thru Friday EST;	M	Yes	Standard	
S1.5	The Vendor response time for support shall conform to the specific deficiency class as described in Appendix B Section 6.	M	Yes	Standard	
S1.6	The Vendor will guide the State with possible solutions to resolve issues to maintain a fully functioning, hosted System.	M	Yes	Standard	
S1.7	The Vendor shall make available to the State the latest program updates, general maintenance releases, selected functionality releases, patches, and Documentation that are generally offered to its customers, at no additional cost.	M	Yes	Standard	
S1.8	The Vendor shall maintain a record of the activities related to warranty repair or maintenance activities performed for the State;	M	Yes	Standard	
S1.9	For all maintenance Services calls, The Vendor shall ensure the following information will be collected and maintained: 1) nature of the Deficiency; 2) current status of the Deficiency; 3) action plans, dates, and times; 4) expected and actual completion time; 5) Deficiency resolution information; 6) Resolved by; 7) Identifying number i.e. work order number, 8) Issue	M	Yes	Standard	

ATTACHMENT 2 - NH SPECIFIC REQUIREMENTS

SUPPORT & MAINTENANCE REQUIREMENTS

State Requirements						
Req #	Requirement Description	Criticality				
S1.10	The Vendor must work with the State to identify and troubleshoot potentially large-scale System failures or Deficiencies by collecting the following information: 1) mean time between reported Deficiencies with the Software; 2) diagnosis of the root cause of the problem; and 3) identification of repeat calls or repeat Software problems.	M	Yes	Standard		
S1.11						
S1.12						
S1.13						
<b>WARRANTY SERVICES</b>						
S2.1	a. Maintain the System Software in accordance with the Specifications and Terms of the Contract;	M	Yes	Standard		
S2.2	b. Repair or replace the System Software or any portion thereof so that the System operates in accordance with the Specifications, terms and requirements of the Contract;	M	Yes	Standard		
S2.3	c. The Vendor shall have available to the State on-call telephone assistance, with issue tracking available to the State, twenty four (24) hours per day and seven (7) days a week with an email / telephone response within two (2) hours of request, with assistance response dependent upon issue severity;	M	No	Not proposed	Hours of support are specified in the proposal.	
S2.4	d. On-site additional Services within four (4) business hours of a request;	M	No	Not proposed	Onsite support may be offered at an additional cost.	
S2.5	e. Maintain a record of the activities related to warranty repair or maintenance activities performed for the State;	M	Yes	Standard		
S2.6	f. For all Warranty Service calls, <VENDOR> shall ensure the following information will be collected and maintained: 1) nature of the Deficiency; 2) current status of the Deficiency; 3) action plans, dates, and times; 4) expected and actual completion time; 5) Deficiency resolution information; 6) resolved by 7) Identifying number i.e. work order number; 8) issue	M	Yes	Standard		

ATTACHMENT 2 - NH SPECIFIC REQUIREMENTS

SUPPORT & MAINTENANCE REQUIREMENTS

State Requirements					
Req #	Requirement Description	Criticality	Yes	Standard	
S2.7	g. The Vendor must work with the State to identify and troubleshoot potentially large-scale Software Failures or Deficiencies by collecting the following information: 1) mean time between reported Deficiencies with the Software; 2) diagnosis of the root cause of the problem; and 3) identification of repeat calls or repeat Software problems; and	M	Yes	Standard	
S2.8	h. All Deficiencies found during the Warranty Period and all Deficiencies found with the Warranty Releases shall be corrected by the Vendor no later than 5 business days, unless specifically extended in writing by the State, and at no additional cost to the State.	M	Yes	Standard	
S2.9					
S2.10					
S2.11					
S2.12					

ATTACHMENT 2 - NH SPECIFIC REQUIREMENTS

State Requirements		PROJECT MANAGEMENT			
Req #	Requirement Description	Criticality			
<b>PROJECT MANAGEMENT</b>					
P1.1	Vendor shall participate in an initial kick-off meeting to initiate the Project.	M	Yes	Standard	
P1.2	Vendor shall provide Project Staff as specified in the RFP.	M	Yes	Standard	
P1.3	Vendor shall submit a finalized Work Plan within ten (10) days after Contract award and approval by Governor and Council. The Work Plan shall include, without limitation, a detailed description of the Schedule, tasks, Deliverables, critical events, task dependencies, and payment Schedule. The plan shall be updated no less than weekly	M	Yes	Standard	
P1.4	Vendor shall provide detailed weekly status reports on the progress of the Project, which will include expenses incurred year to date	M	Yes	Standard	
P1.5	All user, technical, and System Documentation as well as Project Schedules, plans, status reports, and correspondence must be maintained as project documentation. (Define how- WORD format-on-Line, in a common library or on paper)	M	Yes	Standard	
P1.6					
P1.7					
P1.8					
P1.9					
P1.10					



**Hosting Requirements  
Smarter Balanced Assessment Consortium Contract 11 – Test  
Delivery System**

**American Institutes for Research**

Revision History

<b>Revision Description</b>	<b>Author/Modifier</b>	<b>Date</b>
Initial Release	David Lopez de Quintana	October 14, 2013



**Contents**

4

Overview ..... 4

Software..... 5

    /Operation Software Packages ..... 5

    Packages by Component ..... 7

Assumptions .....10

Configurations .....10

    Delivery Unit ..... 11

        Load Balancer ..... 12

        Server Instance Type ..... 12

            of Baseline Web Servers ..... 14

            of On-Demand Web Servers ..... 14

            of Data Served ..... 14

        Server Instance Type ..... 15

        Server Persistent Storage and Provisioned IOPS ..... 15

    Integration and Scoring Deployment Unit ..... 17

    Registration and Administration Deployment Unit ..... 17

        Creation and Management Deployment Unit ..... 18

        and Permissions Deployment Unit ..... 19

        and Alerting Deployment Unit ..... 20

    Services Deployment Unit ..... 20

Deployment Scenario .....21

Calculation Spreadsheet.....23

**Figures**

1. Smarter Balanced Contract 11 .....5

2. Test Delivery Unit ..... 11

3. Alternative Approach Using Vendor-Specific Test Delivery ..... 22

**Tables**

1. Development/Operation Software .....6

2. Component ..... 7



3. Components and Development/Operation Software .....	9
4. Summary of Deployment .....	11
5. EC2 Instance .....	13
6. Test Integration and Scoring Deployment Unit .....	17
7. Test Registration and Administration Deployment Unit .....	18
8. Assessment Creation and Management Deployment Unit .....	19
9. SSO and Permissions Deployment Unit .....	20
10. Monitoring and Alerting Deployment .....	20
11. Shared Services Deployment Unit .....	21
12. Cost Calculation Embedded .....	23
13. Example Cost Summary from .....	24



## Purpose

This document is to assist states, software vendors and systems integrators in planning for delivery of Smarter Balanced assessments. The first year of operational testing will be in the 2014-2015 school year.

The Smarter Balanced interim and summative test system is composed of the following components:

- Assessment Creation & Management
- Assessment Delivery
- Assessment Reporting
- Shared Services

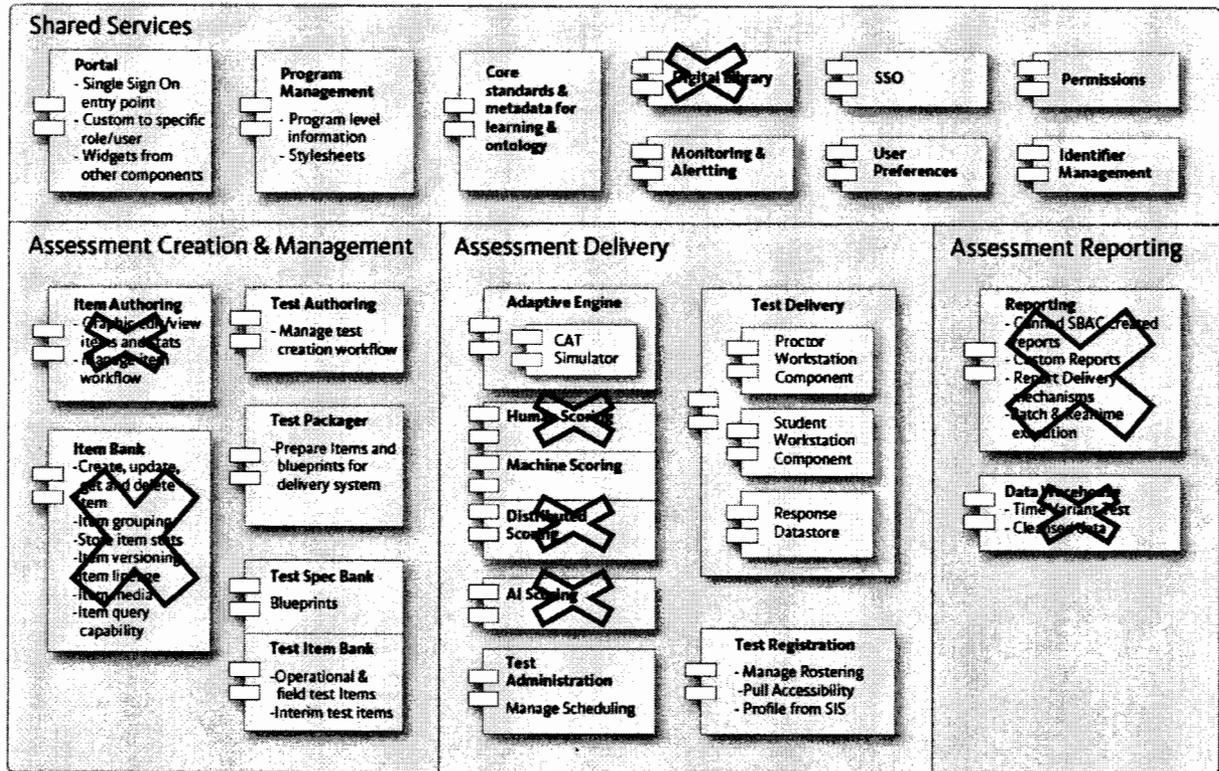
In addition to these components, Smarter Balanced is developing a Digital Library that will support teachers in planning formative assessment activities and in using the results of Smarter Balanced assessments to inform their practice.

The Smarter Balanced Assessment Consortium will host all of the above components with the exception of Assessment Delivery. The consortium will release an open source implementation of the assessment delivery system. States will be responsible for procuring assessment delivery from vendors who are certified to deliver Smarter Balanced assessments or for deploying their own instance of the open source system.

To assist states and potential partners in planning for that deployment, this document describes the hosting requirements of the open source implementation presently under development by the American Institutes for Research under Contract 11 with Smarter Balanced.

## System Overview

The following diagram is Figure 4.2 from the [Smarter Balanced System Architecture and Technology Report](#) dated 21 March 2012. It depicts the components in the Smarter Balanced system. The components marked with an X are not part of Contract 11 and are developed by other Smarter Balanced vendors. Only the Contract 11 components (not marked with an X) will be analyzed in this document.



In addition to the above components, Smarter Balanced may authorize the development of two additional components: Test Integration and Test Scoring. Test Integration is responsible for receiving assessments from Test Delivery once the student completes real-time interactive portion of the assessment. It is responsible for sending items, rubrics and responses to various scoring engines including Hand Scoring and Distributed Scoring, and integrating these item scores with the items scored during the student assessment. The Test Scoring component is responsible for computing final test scores including scale scores.

### Component Software

#### Development/Operation Software Packages

The following table summarizes the software technologies used by each component.

Software	Description
Oracle Java JDK	Software development language/platform
WordPress	WordPress Content Management System
Apache	Web server
Tomcat	Java Application Server
MySQL	Relational database engine

Software	Description
PHP	Software development language/platform
Spring Framework	Java development framework
Javascript	Client side scripting language
MongoDB	Non-relational database engine
Hyperic Server	Enterprise server monitoring
OpenOffice Calc	Open source spreadsheet application
OpenAM	Identity Management
OpenDJ	LDAP directory

Table 1. Development/Operation Software Packages

**Software Packages by Component**

The following table summarizes the component categories as described by Figure 1. Smarter Balanced Contract 1.1 Components. The category identifiers will be used in the table below for brevity.

Category Identifier	Component Category
1	Shared Services
2	Assessment Creation & Management
3	Assessment Delivery

Table 2. Component Categories

The following table summarizes the software components and the software technologies use in the development and operation of each component.

Category	Component	Java	Spring Framework	Javascript	WordPress	MySQL	MongoDB	PHP	OpenOffice Calc	Hyperic Server	Open AM	Open DJ
1	Portal	✓	✓		✓	✓		✓				
1	Program Management	✓	✓				✓					
1	Core Standards	✓	✓			✓			✓			
1	Monitoring and Alerting	✓	✓				✓			✓		
1	Single Sign On	✓	✓								✓	✓
1	Permissions	✓	✓			✓						✓
1	User Preferences	✓	✓				✓					

Category	Component	Java	Spring Framework	Javascript	WordPress	MySQL	MongoDB	PHP	OpenOffice Calc	Hyperic Server	Open AM	Open DJ
1	Identifier Management	✓	✓				✓					
2	Test Authoring	✓	✓									
2	Test Packager	✓	✓			✓						
2	Test Spec Bank	✓	✓			✓						
2	Test Item Bank	✓	✓				✓					
3	Test Delivery	✓	✓			✓						
3	Proctor Application			✓								
3	Student Application			✓								
3	Adaptive Engine	✓	✓			✓						
3	CAT Simulator	✓	✓			✓						
3	Machine Scoring	✓	✓									
3	Test Registration	✓	✓			✓					✓	✓
3	Test Administration	✓	✓			✓						
3	Test Integration	✓	✓			✓						

Category	Component	Java	Spring Framework	Javascript	WordPress	MySQL	MongoDB	PHP	OpenOffice Calc	Hyperic Server	Open AM	Open DJ
3	Test Scoring	✓	✓			✓						

Table 3. Components and Development/Operation Software Packages

### Deployment Assumptions

This document assumes the following:

1. The deployment of the Smarter Balanced open source components being developed as part of various Smarter Balanced contracts, but focuses only on components being developed as part of contract SBAC-11, Test Delivery System.
2. Deployment on Amazon Web Services (AWS), including various AWS services such as Elastic Compute Cloud (EC2) and Amazon Relational Database Service (RDS). AWS is a robust, scalable and ubiquitous cloud infrastructure that provides virtual computing resources of a range of capabilities and prices.

Please note that the use of Amazon’s AWS services is not strictly required, and other cloud infrastructures could be used instead of AWS. This document only analyzes the use of AWS as a reference deployment for pricing purposes.

### Deployment Configurations

The deployment of the Smarter Balanced open source software is divided into several deployment units. Each deployment unit is meant to isolate several components and provide a computing environment tailored to their needs. The following table summarizes the deployment units.

Deployment Unit	Components Deployed	Description
Test Delivery	Test Delivery, Adaptive Engine, Machine Scoring (real-time item scoring only), CAT Simulator	The Test Delivery unit isolates the components that are responsible for interactive real-time management of student test sessions
Test Integration and Scoring	Test Integration, Test Scoring	The Test Integration and Scoring unit works closely with Test Delivery to manage student assessments once the interactive real-time aspect of a student assessment is complete
Test Registration and Administration	Test Registration, Test Administration	The Test Registration and Administration unit manages all aspects of student test registration and administration that are not already managed by the Test Delivery unit
Assessment Creation and Management	Item Authoring, Item Bank, Test Item Bank, Test Authoring, Test Spec Bank, Test Packager (Item Authoring and Item Bank from Smarter Balanced contract 07 should be deployed here)	The Assessment Creation and Management unit provides a computing environment for components that are used to create student assessments
SSO and Permissions	SSO, Permissions	The SSO and Permissions unit isolates components critical to the authentication and authorization function

Deployment Unit	Components Deployed	Description
Monitoring and Alerting	Monitoring and Alerting	The Monitoring and Alerting unit is isolated into its own unit to isolate other components from the significant system logging traffic
Shared Services	Portal, Program Management, Core Standards, User Preferences, Identifier Management	The Shared Services unit houses all remaining Shared Services components

Table 4. Summary of Deployment Groups

### Test Delivery Unit

The following diagram represents the components of the Test Delivery deployment unit. We will use the Test Delivery deployment unit to illustrate features of the Amazon EC2 and RDS services.

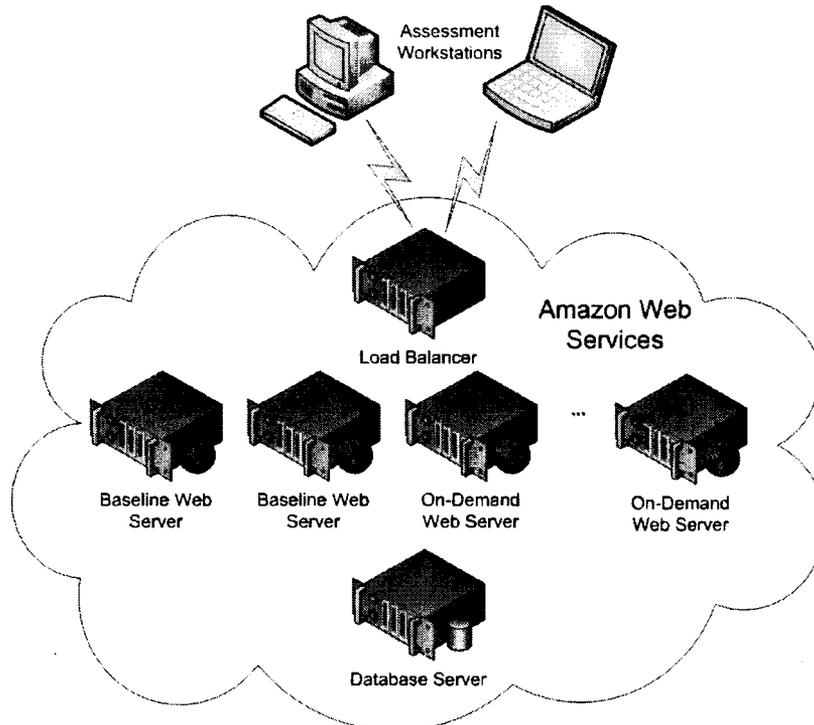


Figure 2. Test Delivery Unit Architecture

The Test Delivery unit assumes the following:

- An Elastic Load Balancer that distributes incoming application traffic across multiple Amazon EC2 instances
- Two baseline web servers – the baseline web server is an always-on application container that provides scalability for Test Delivery applications
- On-demand web servers – at peak load times, additional web server instances are created to handle the additional load

- Database server – an Amazon RDS for MySQL computing instance tailored for high performance database server operation

The following assumptions are made when selecting EC2 and RDS components.

### Elastic Load Balancer

The baseline and on-demand web servers are deployed behind an instance of Elastic Load Balancer. The load balancer distributes incoming requests evenly to all baseline and on-demand web servers, ensuring that the deployment unit scales smoothly with increasing load. For increased fault tolerance, Amazon’s Elastic Load Balancer is capable of detecting unhealthy web server instances and will stop directing incoming requests to them.

Load balancer costs are determined by the hour and by the amount of data served by the web servers through the load balancer. See the heading “Amount of Data Served” for more details on calculating the amount of data.

### Web Server Instance Type

Each virtual computer created in the cloud of a particular configuration is known as an *instance*. Amazon EC2 currently offers the following instance types.

Instance Family	Instance Type	Processor Arch	vCPU	ECU	Memory (GiB)	Instance Storage (GB)	EBS-optimized Available	Network Performance
General purpose	m1.small	32-bit or 64-bit	1	1	1.7	1 x 160	-	Low
General purpose	m1.medium	32-bit or 64-bit	2	2	3.75	1 x 410	-	Moderate
General purpose	m1.large	64-bit	4	4	7.5	2 x 420	Yes	Moderate
General purpose	m1.xlarge	64-bit	8	8	15	4 x 420	Yes	High
General purpose	m3.xlarge	64-bit	4	13	15	EBS only	Yes	Moderate
General purpose	m3.2xlarge	64-bit	8	26	30	EBS only	Yes	High
Compute optimized	c1.medium	32-bit or 64-bit	2	5	1.7	1 x 350	-	Moderate
Compute optimized	c1.xlarge	64-bit	8	20	7	4 x 420	Yes	High
Compute optimized	cc2.8xlarge	64-bit	32	88	60.5	4 x 840	-	10 Gigabit4

Instance Family	Instance Type	Processor Arch	vCPU	ECU	Memory (GiB)	Instance Storage (GB)	EBS-optimized Available	Network Performance
Memory optimized	m2.xlarge	64-bit	2	6.5	17.1	1 x 420	-	Moderate
Memory optimized	m2.2xlarge	64-bit	4	13	34.2	1 x 850	Yes	Moderate
Memory optimized	m2.4xlarge	64-bit	8	26	68.4	2 x 840	Yes	High
Memory optimized	cr1.8xlarge	64-bit	32	88	244	2 x 120 SSD	-	10 Gigabit4
Storage optimized	hi1.4xlarge	64-bit	16	35	60.5	2 x 1,024 SSD2	-	10 Gigabit4
Storage optimized	hs1.8xlarge	64-bit	16	35	117	24 x 2,0483	-	10 Gigabit4
Micro instances	t1.micro	32-bit or 64-bit	1	Variable5	0.615	EBS only	-	Very Low
GPU instances	cg1.4xlarge	64-bit	16	33.5	22.5	2 x 840	-	10 Gigabit4

\*1 CC2 and CR1 Instances are backed by 2 x Intel Xeon E5-2670 processors, eight-cores with hyperthreading

\*2 CG1 Instances are backed by 2 x Intel Xeon X5570, quad-core with hyperthread plus 2 NVIDIA Tesla M2050 GPUs

\*3 HI1 Instances can deliver more than 120,000 4 KB random read IOPS and between 10,000 and 85,000 4 KB random write IOPS (depending on active logical block addressing span) to applications. The maximum sequential throughput on is approximately 2 GB/s read and 1.1 GB/s write.

\*4 HS1 Instances can deliver 2.4 GB/s of 2 MB sequential read performance and 2.6 GB/s of sequential write performance.

\*5 Instances launched into the same cluster placement group are placed into a non-blocking 10 Gigabit ethernet network

\*6 For more information on the Micro instances see the

Table 5. EC2 Instance Types

The general purpose m1.xlarge instance type is selected for baseline and on-demand web servers for its high network performance. It represents a reasonable trade-off of compute capacity, memory, storage, and cost (\$0.48 per hour). EC2 instances incur costs for each hour or fraction of an hour the virtual computer is powered up and operating.

In addition to selecting the web server instance type, the web server operating system is also selected. Amazon EC2 offers preconfigured Amazon Machine Instances (AMI) to select from. AMIs come in many operating systems and various flavors of each operating system. Smarter Balanced

Contract 11 components are intended to run on the Linux operating system, and Linux comes prepackaged in various flavors known as distributions. Some of these distributions are enterprise versions that require paid support (Red Hat and SUSE Enterprise, for example) and some are community versions that are free to download and use (Fedora, CentOS, for example). The Ubuntu Server distributions are the same for enterprise and community users but offer paid support as an option.

Some enterprise distributions place restrictions on changing any of the software components provided in the distribution, and these are updated only when the distribution is updated in periodic release cycles. This means that certain components such as the Java Virtual Machine (JVM) may be older and may lack desirable features available in later versions. With Red Hat and SUSE Enterprise Linux, there is no option to upgrade components without voiding the support agreement.

Canonical Inc., the company that packages the Ubuntu Linux distribution, allows modifications to the preloaded components and provides cloud support for up to 100 virtual cloud servers for a reasonable cost. For this reason, AIR has selected the Ubuntu Server version 13 Linux distribution for this project.

Once a web server instance is created, it can be customized with deployments of software packages and Smarter Balanced components. This is done for each type of deployment, and the resulting customized virtual server is stored as a custom AMI. This way, additional identical copies of baseline and on-demand instances can be easily created. The baseline web server instances are left running for continuous availability, but the on-demand instances are powered up as needed to satisfy peak demand and shut down during off-peak periods to save money.

Unless otherwise indicated, web servers do not require persistent storage. Once a web server AMI is created, starting a new instance from the AMI creates a new virtual web server that is identical to the stored AMI. On the other hand, database server instances do require persistent high performance database storage.

#### **Number of Baseline Web Servers**

The number of baseline web servers is selected to ensure that adequate baseline capacity is available when demand starts to increase. For the Test Delivery unit, the number of baseline web servers selected is two to ensure fault tolerance. For other components with less critical response time and fault tolerance requirements, one baseline web server is adequate.

#### **Number of On-Demand Web Servers**

The number of baseline and on-demand web servers for the Test Delivery deployment unit is selected based on the expected number of students that will be taking assessments concurrently. We are using 5,000 students per web server as a rule of thumb. Two baseline web servers will therefore handle  $2 \times 5,000 = 10,000$  concurrent students. If more than 10,000 concurrent students are needed, additional on-demand web servers are required for peak periods.

On-demand web servers can be provisioned at peak demand hours and days. The specific hours and days are dependent on a given deployment's expectations for the number of testing hours per day and days per year. For example, a client may plan for 8 testing hours per day and 120 total testing days per school year.

#### **Amount of Data Served**

For the Test Delivery deployment unit, the data required is calculated as follows:

Total Data Served = Number of concurrent students X average number of items served per student per hour X average size of item served X overhead factor

For example:

Total Data Served = 15,000 concurrent students X 20 items per student per hour X 50KB per item X 125% / KB per GB

= 17.88 GB per hour

≈ 18 GB/hour

Data served is charged separately as a standalone expense and as part of the cost of running an Elastic Load Balancer. The amount of data served should be planned out based on the peak data demands and pro-rated for the number of hours and days of peak data demand.

### **Database Server Instance Type**

Database server instances are selected from Amazon's Relational Database Service. These are high-performance instance types that are preconfigured with appropriate database engines and provide high availability features. For example, RDS instances are available in "Multi-Availability Zone Deployments." Availability Zones (AZ) are regions where Amazon maintains data centers such as the Eastern region in Northern Virginia. These types of instances are provided with a second standby instance in a different AZ in case of AZ failure.

The following DB instances classes are available:

- Micro DB instance: 613 MB memory, up to 1 ECU, 64-bit platform, Low I/O Capacity
- Small DB instance: 1.7 GB memory, 1 ECU (1 virtual core with 1 ECU), 64-bit platform, Moderate I/O Capacity
- Medium DB instance: 3.75 GB memory, 2 ECUs (1 virtual core with 2 ECUs), 64-bit platform, Moderate I/O Capacity
- Large DB instance: 7.5 GB memory, 4 ECUs (2 virtual cores with 2 ECUs each), 64-bit platform, High I/O Capacity
- Extra Large DB instance: 15 GB of memory, 8 ECUs (4 virtual cores with 2 ECUs each), 64-bit platform, High I/O Capacity
- High-Memory Extra Large Instance: 17.1 GB memory, 6.5 ECU (2 virtual cores with 3.25 ECUs each), 64-bit platform, High I/O Capacity
- High-Memory Double Extra Large DB instance: 34 GB of memory, 13 ECUs (4 virtual cores with 3.25 ECUs each), 64-bit platform, High I/O Capacity
- High-Memory Quadruple Extra Large DB instance: 68 GB of memory, 26 ECUs (8 virtual cores with 3.25 ECUs each), 64-bit platform, High I/O Capacity
- High-Memory Cluster Eight Extra Large DB instance: 244 GB of memory, 88 ECUs (32 virtual cores with 2.75 ECUs each), 64-bit platform, High I/O Capacity.

The Multi-AZ High-Memory Quadruple Extra Large DB Instance is selected for the Test Delivery deployment unit for high performance and high availability.

### **Database Server Persistent Storage and Provisioned IOPS**

Database server persistent storage can be selected in sizes between 100GB and 3TB, and with up to 30,000 provisioned IOPS. The amount of provisioned IOPS for MySQL should be selected to be within

a 3:1 and 10:1 ratio of IOPS to storage size. For example, a 100 GB storage size should be provisioned with an IOPS between 300 (3/1) and 1,000 (10/1) IOPS.

When selecting database instances for use with Provisioned IOPS, Amazon recommends the following:

*If you are using Provisioned IOPS storage, we recommend that you use the m1.large, m1.xlarge, m2.2xlarge, m2.4xlarge, or cr1.8xlarge instance classes. These instance types are optimized for Provisioned IOPS storage; other instance types are not. In addition, the available network bandwidth for Provisioned IOPS for m1.large instance class is 500 megabits per second (Mbps) compared to 1000 Mbps for an m1.xlarge, m2.2xlarge, or m2.4xlarge instance. As a result, for a similar IOPS-intensive workload, the number of realized IOPS for m1.xlarge, m2.2xlarge, m2.4xlarge, and cr1.8xlarge will be higher than that of m1.large.*

[://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/USER\\_PIOPS.html#USER\\_PIOPS](http://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/USER_PIOPS.html#USER_PIOPS).

For this reason, only the four instance types are selected for database servers when high transactional performance is required. When the highest performance is required, only one of the four top instances mentioned above is selected.

Each of these database instances provides high performance and scale, but the scale is limited by the speed of the persistent database storage. The following applies to MySQL:

*The following table shows the page size and the theoretical maximum IOPS rate for each DB engine. IOPS rates are based on the m2.4xlarge instance class with full duplex and a workload that is perfectly balanced between reads and writes. The SQL Server limit of 10,000 is due to the current storage limit of 1 TB and the current maximum IOPS to storage ratio of 10:1.*

DB Engine	Page Size	Maximum IOPS Rate
MySQL	16 KB	20,000
Oracle	8 KB	25,000
SQL Server	8 KB	10,000

[://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/USER\\_PIOPS.html#USER\\_PIOPS](http://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/USER_PIOPS.html#USER_PIOPS).

AIR's experience shows that one concurrent student can be supported per IOPS. Given that the maximum expected performance is 12,500 IOPS for MySQL, AIR recommends that no more than 20,000 concurrent students be supported with a single-instance deployment of an Amazon RDS database server. For scale beyond 20,000 concurrent students, AIR recommends one additional Test Delivery deployment group per every additional 20,000 concurrent students. This will also require partitioning the student registration data according to partitioning criteria such as geography.

If 20,000 Provisioned IOPS is the target number of IOPS for the Test Delivery data store, Amazon recommends that the data store be within a 3/1 and a 10/1 ratio of provisioned IOPS to storage size. Therefore, 20,000 provisioned IOPS / 10 = a lower limit of 2,000 GB of storage. Although this is more storage than is required for Test Delivery, the Test Delivery database storage size is selected to be 2,000 GB to be consistent with 20,000 provisioned IOPS.

### Test Integration and Scoring Deployment Unit

The Test Integration and Scoring deployment unit supports the Test Delivery deployment unit with test integration and scoring services. This unit receives the student assessment once the interactive real-time highly transactional part of the student assessment is complete. This unit receives results from hand scoring and other scoring engines and integrates these scores with the other assessment items scored in real time during the student assessment. Once a student assessment is completely integrated, the assessment is scored (including determination of scale scores) according to the configured scoring rules.

The following is a summary of the Test Integration and Scoring deployment unit selections.

Deployment Selection	Description
Elastic Load Balancer	An Elastic Load Balancer is required for this deployment unit.
Web Server Instance Type	An EC2 general purpose m1.xlarge instance is selected (64 bit, 4 virtual CPUs, 15GB of memory, 4x420GB of ephemeral storage, available EBS storage, and high network performance).
Number of Baseline Web Servers	Same scaling model as Test Delivery: two baseline web servers are selected for high availability and performance.
Number of On-Demand Web Servers	Same scaling model as Test Delivery: one on-demand web server is selected for increased load.
Amount of Data Served	Based on the number of concurrent students, the number of assessments completed per hour, the size of each assessment unit and an overhead factor. For example, for 10,000 concurrent students, one student assessment per hour, an assessment size of 20KB and an overhead factor of 25%, we have = 10,000 students X 50KB per student X 125% = 0.60GB/hour, or about 1 GB per hour.
DB Server Instance Type	A Multi-AZ Extra Large RDS database instance is selected. This server is not as large as the DB server selected for Test Delivery but reflects the lower activity expected for this server as compared to Test Delivery. It is optimized for Provisioned IOPS.
DB Server Storage	This storage size is selected based on the total number of students, the size of each test opportunity, the number of test opportunities, and an overhead figure. For example, = 500,000 students X 50KB per test opportunity X 3 opportunities per student X 125% overhead = 89.4GB Select a 200GB persistent store. Please note that this size will vary with the expected size of the deployment. A deployment with more students will require additional storage.
DB Server Provisioned IOPS	A 3/1 ratio of provisioned IOPS is selected. 200GB X 3 = 600 Provisioned IOPS

**Table 6. Test Integration and Scoring Deployment Unit Summary**

### Test Registration and Administration Deployment Unit

The Test Registration and Administration deployment unit provides services for upload of entity, user and student files and a user interface for ad hoc modification of user roles, student

demographics and accessibility tools information. The following selections are made for this deployment unit.

Deployment Selection	Description
Elastic Load Balancer	An Elastic Load Balancer is required for this deployment unit.
Web Server Instance Type	An EC2 general purpose m1.xlarge instance is selected (64 bit, 4 virtual CPUs, 15GB of memory, 4x420GB of ephemeral storage, available EBS storage, and high network performance).
Number of Baseline Web Servers	Two baseline web servers are selected for high availability and performance.
Number of On-Demand Web Servers	One on-demand web server is selected for periods of increased load during student registration and testing time.
Amount of Data Served	Test Registration and Administration functions consume a significant amount of data from various sources, but sends a similar amount of data to SSO, Test Delivery and Data Warehouse. For example, = 500,000 students X 50KB per student (leveled over 6 hours per day and 60 days per year) X 125% overhead for users and entities X 125% overhead
DB Server Instance Type	A Multi-AZ Extra Large RDS database instance is selected (IOPS optimized).
DB Server Storage	The database server storage size is proportional to the total number of students, the size of an average student record, an overhead factor to account for users and entities as a proportion of students, and the database overhead of storing a student record. For example: = 500,000 students X 50KB per student record X 125% user/entity factor X 125% database overhead factor = 37.25 GB, assume a safe size of database storage of 200GB
DB Server Provisioned IOPS	600 Provisioned IOPS are required for a factor of 3 to 1 Provisioned IOPS to storage size.

**Table 7. Test Registration and Administration Deployment Unit Summary**

### Assessment Creation and Management Deployment Unit

This deployment unit is only required for entities that wish to have their own item authoring, test authoring and test packaging capabilities. The following selections are made for this deployment unit.

Deployment Selection	Description
Elastic Load Balancer	An Elastic Load Balancer is required for this deployment unit.
Web Server Instance Type	An EC2 general purpose m1.xlarge instance is selected (64 bit, 4 virtual CPUs, 15GB of memory, 4x420GB of ephemeral storage, available EBS storage, and high network performance).
Number of Baseline Web Servers	Two baseline web servers are selected for high availability and performance.
Number of On-Demand Web Servers	One on-demand web server is selected for periods of increased load during student registration and testing time.

Deployment Selection	Description
Amount of Data Served	Predicting the amount of data served by this deployment unit is TBD at this time. Assume 5 GB/hour for the time being.
DB Server Instance Type	A Multi-AZ Extra Large RDS database instance is selected (IOPS optimized).
DB Server Storage	<p>DB server storage for this deployment unit varies based on the number of items and the average size of each item. Various multipliers apply such as:</p> <ul style="list-style-type: none"> <li>• A multiplier to account for various versions of an item</li> <li>• Number of test packages items are used in (items are replicated into each test package)</li> <li>• Database overhead</li> </ul> <p>For example, = 200,000 items X 50 KB per item X 5 item versions X 10 copies in Test Packages X 125% DB OH / 1024<sup>2</sup> KB per GB ≈ 597 KB. Assume 1,000 GB.</p>
DB Server Provisioned IOPS	3,000 IOPS for a ratio of 3 to 1 Provisioned IOPS to storage size.

Table 8. Assessment Creation and Management Deployment Unit Summary

### SSO and Permissions Deployment Unit

The SSO and Permissions deployment unit is different than other deployment units in that it utilizes an open source identity management system, OpenAM. Each instance of OpenAM includes the OpenDJ LDAP directory server. Therefore, no separate DB server instance is required. However, each web server instance requires persistent storage. This is different from web servers in other deployment units.

Deployment Selection	Description
Elastic Load Balancer	An Elastic Load Balancer is required for this deployment unit.
Web Server Instance Type	An EC2 general purpose 2nd generation double extra large instance is selected (64 bit, 8 virtual CPUs, 30GB of memory, EBS storage only, and high network performance).
Number of Baseline Web Servers	Two baseline web servers are selected for high availability and performance.
Number of On-Demand Web Servers	One on-demand web server is selected for periods of increased load during student registration and testing time.
Amount of Data Served	<p>This varies according to the peak number of authentications per hour, the size in KB of each authentication, and an overhead factor.</p> <p>For example, = 10,000 authentications per hour X 50 KB per authentication X 150% overhead / 1024<sup>2</sup> GB per MB ≈ 1 GB/s</p>
DB Server Instance Type	No DB server is required
DB Server Storage	Although no DB server storage is required, storage for the LDAP data store is required in each web server instance. For example, = 50,000 users X 50 KB per user X 150% DB overhead ≈ 4GB. Assume 50GB.

Deployment Selection	Description
DB Server Provisioned IOPS	500 IOPS for a ratio of 10 to 1 Provisioned IOPS to storage size for peak LDAP performance. Also include 200GB of Amazon S3 storage for snapshots for backup purposes (this is always included in the RDS database instance storage but is extra in standard EBS storage).

Table 9. SSO and Permissions Deployment Unit Summary

### Monitoring and Alerting Deployment Unit

Monitoring and Alerting is similar to SSO and Permissions in that it uses an off the shelf open source monitoring solution called Hyperic for its function. It also has a custom component for storing logs and alerts. Therefore, no RDS database instance is required. Also, since Hyperic does not require multi-instance scaling (one instance is adequate for the number of servers in question), only one web server with persistent storage is required.

Deployment Selection	Description
Elastic Load Balancer	No load balancer required.
Web Server Instance Type	An EC2 general purpose m1.xlarge instance is selected (64 bit, 4 virtual CPUs, 15GB of memory, 4x420GB of ephemeral storage, available EBS storage, and high network performance).
Number of Baseline Web Servers	One baseline web server is required.
Number of On-Demand Web Servers	No additional on-demand web servers are required.
Amount of Data Served	This component is primarily a data sink rather than a data source. Assume 1GB/hour out for nominal usage.
DB Server Instance Type	A standard EC2 instance with EBS block storage will be used instead of a dedicated RDS database server instance. This choice is made because Hyperic has an embedded database and does not rely on RDS virtual hardware dedicated to a MySQL database.
DB Server Storage	Although no DB server storage is required, storage for Hyperic and custom log and alert data is required. This is difficult to predict, assume 250GB of standard EBS storage (as opposed to RDS DB server storage).
DB Server Provisioned IOPS	750 IOPS for a ratio of 3 to 1 Provisioned IOPS to storage size. Also include 350GB of Amazon S3 storage for snapshots for backup purposes (this is always included in the RDS database instance storage but is extra in standard EBS storage).

Table 10. Monitoring and Alerting Deployment Unit

### Shared Services Deployment Unit

This deployment unit is used to house the remaining shared services other than SSO, Permissions and Monitoring and Alerting that do not require the same level of high availability, scalability and performance.

Deployment Selection	Description
----------------------	-------------

Deployment Selection	Description
Elastic Load Balancer	No load balancer required.
Web Server Instance Type	An EC2 general purpose m1.xlarge instance is selected (64 bit, 4 virtual CPUs, 15GB of memory, 4x420GB of ephemeral storage, available EBS storage, and high network performance).
Number of Baseline Web Servers	Two baseline web servers are required.
Number of On-Demand Web Servers	One on-demand web server is required.
Amount of Data Served	Assume 1GB per hour, primarily for standards information stored in Core Standards.
DB Server Instance Type	A Multi-AZ Large RDS database instance is selected (IOPS optimized).
DB Server Storage	Assume minimum of 100GB of database storage.
DB Server Provisioned IOPS	300 IOPS for a ratio of 3 to 1 Provisioned IOPS to storage size.

Table 11. Shared Services Deployment Unit Summary

#### Alternative Deployment Scenario

Smarter Balanced is aware that some vendors may choose to certify alternative delivery systems rather than deploy the open source code base. To support that approach, Smarter Balanced will be releasing a Certification Package composed of all of the requirements, specifications, sample items and test harnesses necessary to certify a system for delivery of Smarter Balanced assessments. As Smarter Balanced is presently contracting out development of the certification package, delivery dates are not yet fixed. However, we expect the first specifications to become available before the end of Calendar Year 2013. One convenient way to adapt an existing test delivery system is to combine a vendor's existing test delivery server with the Smarter Balanced front-end. The following diagram illustrates this approach.

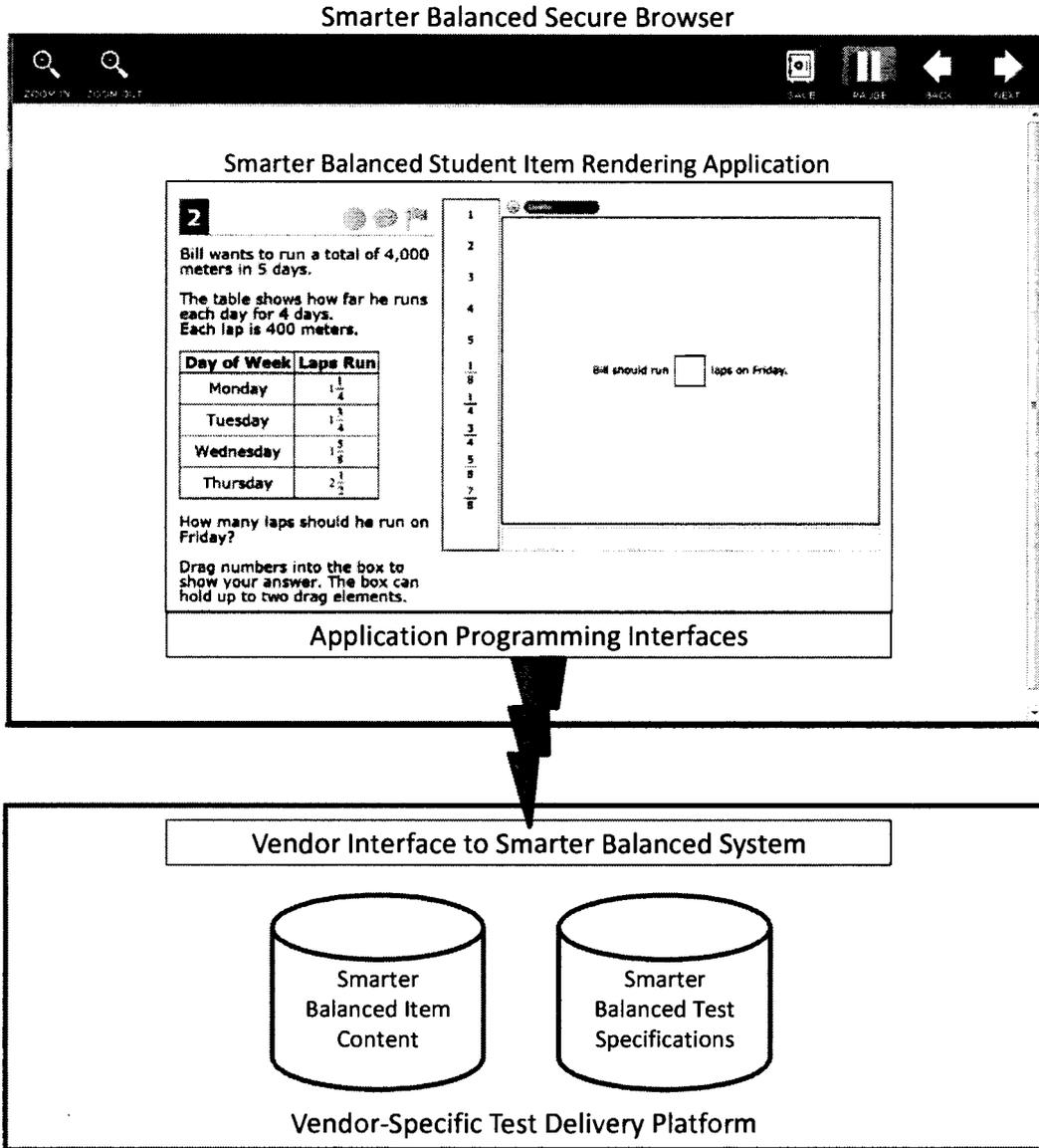


Figure 3. Alternative Approach Using Vendor-Specific Test Delivery Platform

In this scenario, test delivery vendors develop a Smarter Balanced-specific set of server-side interfaces that satisfy the application programming interface (API) requirements of Smarter Balanced Student Item Rendering Application and Secure Browser.

The Smarter Balanced Student Item Rendering Application is a Javascript client-side application that enables navigation and accurate item rendering for Smarter Balanced assessments. The Secure Browser is a special version of browser that limits student interactions outside of the assessment and provides certain accessibility features. Together, these two applications comprise the part of the assessment platform that runs on the student computer and that interacts with the student.

Not shown in this diagram is the Smarter Balanced Proctor Application, a client-side application similar to the Student application that is used by test administrators to create and manage test sessions that students can join. It also requires certain server side interfaces that are part of the vendor-specific interface.

This approach has the distinct advantage that the test delivery platform remains the same as the vendor’s current proprietary test delivery platform. In order to take advantage of this alternative, a vendor will have to take the following steps:

1. Implement vendor interfaces to the Smarter Balanced Student and Proctor applications and the Secure Browser. This is necessary to present and render Smarter Balanced assessments that are indistinguishable to the test administrator and student. The uniformity of navigation and rendering provides a uniform assessment experience, maintaining the integrity of the Smarter Balanced assessments.
2. Consume Smarter Balanced items: Assessment item content and item assets would be made available by Smarter Balanced. Vendors will need to perform the appropriate translation between the item content and assets and provide the Student Application with correctly formatted XML. The Student Application will correctly render the items on the student’s computer and provide the necessary student-facing navigation and features that the vendor interface satisfies.
3. Consume Smarter Balanced test specifications: Assessment packages will be provided that includes blueprints, scoring rules, reporting parameters and adaptive algorithm configuration. These test packages provide sufficient information for the vendor’s proprietary assessment platform to deliver the Smarter Balanced assessments as designed.

Smarter Balanced is working on a complete set of specifications including APIs, item specifications and test specifications that vendors can use to adapt their assessment delivery platforms in this scenario. Smarter Balanced will announce the completion of the specifications and provide documentation and implementation guidelines as appropriate.

**Cost Calculation Spreadsheet**

A spreadsheet is provided embedded in the table below that calculates expected monthly and yearly costs. The spreadsheet accepts inputs that capture assumptions of the deployment and produce total costs based on the AWS prices at the time of this writing.

<p>Cost Model Spreadsheet</p>	 Smarter Balanced Contract 11 Hosting F
-------------------------------	---

Table 12. Cost Calculation Embedded Spreadsheet

The following is an example cost summary produced by this spreadsheet when key assumptions shown above are plugged in. This is a worse-case example using California student population numbers and assuming a 7.8% concurrent student load.

**TOTAL COSTS PER MONTH**

Monthly Costs	Test Delivery	Test Int & Scoring	Test Reg & Adm	SSO & Perm	Mon & Alerting	Shared Services	Assmt Creation & Mgmt	Total
Load balancer	1,678.60	293.58	263.64	32.97	0.00	19.97	31.64	2,320.40
Data transfer out	1,219.20	32.00	2,944.00	176.00	0.00	20.00	160.00	4,551.20
Baseline web server	9,838.08	9,838.08	702.72	1,464.00	351.36	702.72	702.72	23,599.68
On-demand web server	1,617.28	1,797.04	128.36	133.70	0.00	160.44	128.36	3,965.18
Web server storage	0.00	0.00	0.00	117.65	139.50	0.00	0.00	257.15
Database server	38,634.96	11,170.32	797.88	0.00	0.00	398.94	797.88	51,799.98
Database server storage	63,000.00	3,076.50	223.50	0.00	0.00	85.00	850.00	67,235.00
CloudWatch Monitoring	245.00	147.00	10.50	10.50	3.50	14.00	10.50	441.00
Subtotal	116,233.12	26,354.52	5,070.60	1,934.82	494.36	1,401.07	2,681.10	154,169.59
AWS Support Costs								10,791.88
Ubuntu Cloud Support Costs								666.67
Total								165,628.14

**TOTAL COSTS PER YEAR**

Monthly Costs	Test Delivery	Test Int & Scoring	Test Reg & Adm	SSO & Perm	Mon & Alerting	Shared Services	Assmt Creation & Mgmt	Total
Load balancer	20,143.20	3,522.96	3,163.68	395.64	0.00	239.64	379.68	27,844.80
Data transfer out	14,630.40	384.00	35,328.00	2,112.00	0.00	240.00	1,920.00	54,614.40
Baseline web server	118,056.96	118,056.96	8,432.64	17,568.00	4,216.32	8,432.64	8,432.64	283,196.16
On-demand web server	19,407.36	21,564.48	1,540.32	1,604.40	0.00	1,925.28	1,540.32	47,582.16
Web server storage	0.00	0.00	0.00	1,411.80	1,674.00	0.00	0.00	3,085.80
Database server	463,619.52	134,043.84	9,574.56	0.00	0.00	4,787.28	9,574.56	621,599.76
Database server storage	756,000.00	36,918.00	2,682.00	0.00	0.00	1,020.00	10,200.00	806,820.00
CloudWatch Monitoring	2,940.00	1,764.00	126.00	126.00	42.00	168.00	126.00	5,292.00
Subtotal	1,394,797.44	314,490.24	60,721.20	23,091.84	5,890.32	16,644.84	32,047.20	1,850,035.08
AWS Support Costs								129,502.56
Ubuntu Cloud Support Costs								8,000.00
Total								1,987,537.64

Table 13. Example Cost Summary from Spreadsheet

Please note that Amazon support costs of 10% of the subtotal and Ubuntu yearly support costs of \$8,000 per year are factored in.

# 2014-018 ATTACHMENT 4 - NEAC & NH BUDGETS

## New England Assessment Consortium RFP Budget and Personnel Forms

### CONTENTS

- Form 1.1 CONSORTIUM BUDGET SUMMARY Estimated Expenses by Category
- Form 1.2 BUDGE SUMMARY BY STATE AND FISCAL YEAR: Estimated Expenses by Category
- Form 2.1 BUDGET DETAIL: Personnel Costs
- Form 2.2 BUDGET DETAIL: Labor Versus Direct Costs
- Form 2.3 BUDGET DETAIL: Line Item Estimates
- Form 3 TASK ALLOCATION by Task Area and Fiscal Year

**2014-018 ATTACHMENT 4 - NEAC & NH BUDGETS  
New England Assessment Consortium**

<b>Form 1.1 CONSORTIUM BUDGET SUMMARY Estimated Expenses by Category</b>					
<b>Category</b>	<b>FY 15</b>	<b>FY 16</b>	<b>FY 17</b>	<b>Contract Total</b>	
Project Management	\$762,810	\$768,627	\$774,561	\$2,305,998	
On-line Assessment and Technical Support	\$1,582,456	\$1,582,456	\$1,582,456	\$4,747,368	
Manufacture, Delivery, Scanning and Scoring of Pencil and Paper Tests	\$361,725	\$364,085	\$0	\$725,810	
Scoring of On-line Items and Tasks	\$3,480,380	\$3,237,887	\$3,225,257	\$9,943,524	
Accommodations Data Collection System	\$0	\$0	\$0	\$0	
<b>SUBTOTAL</b>	\$6,187,371	\$5,953,055	\$5,582,273	\$17,722,700	
Indirect Costs	\$1,658,971	\$1,627,525	\$1,577,766	\$4,864,262	
<b>TOTAL</b>	\$7,846,342	\$7,580,580	\$7,160,039	\$22,586,962	
Web-based Analysis and Reporting System (Separate Bid)	\$160,926	\$160,926	\$160,926	\$482,778	
<b>TOTAL w/ Analysis and Reporting</b>	\$8,007,268	\$7,741,506	\$7,320,965	\$23,069,740	

2014-018 ATTACHMENT 4 - NEAC & NH BUDGETS  
**New England Assessment Consortium**

**BUDGE SUMMARY BY STATE AND FISCAL YEAR: Estimated Expenses by Category**

Directions: Please complete a separate form for each fiscal year FY15, FY16 and FY17.

Fiscal Year: 2015	Category	Distribution Method	Total Cost	State Share		
				CT (67%)	NH (23%)	VT (10%)
	Project Management	Equal	\$762,810	\$ 254,270	\$ 254,270	\$ 254,270
	On-line Assessment and Technical Support	Proportional	\$1,582,456	\$ 1,060,245	\$ 363,965	\$ 158,246
	Manufacture, Delivery, Scanning and Scoring of Pencil and Paper Tests	Proportional	\$361,725	\$ 242,356	\$ 83,197	\$ 36,173
	Scoring of On-line Items and Tasks	Proportional	\$3,480,380	\$ 2,331,855	\$ 800,487	\$ 348,038
	Accommodations Data Collection System	Equal	\$0	\$ -	\$ -	\$ -
	<b>SUBTOTAL</b>		\$6,187,371	\$3,888,726	\$1,501,919	\$796,726
	Indirect Costs	Equal	\$1,658,971	\$ 552,990	\$ 552,990	\$ 552,990
	<b>TOTAL</b>		\$7,846,342	\$4,441,716	\$2,054,909	\$1,349,716
	Web-based Analysis and Reporting System*	Equal	\$160,926	\$ 53,642	\$ 53,642	\$ 53,642
	<b>TOTAL w/Analysis and Reporting</b>		\$8,007,268	\$4,495,358	\$2,108,551	\$1,403,358

\*Separate Bid

2014-018 ATTACHMENT 4 - NEAC & NH BUDGETS  
**New England Assessment Consortium**

**BUDGE SUMMARY BY STATE AND FISCAL YEAR: Estimated Expenses by Category**

Directions: Please complete a separate form for each fiscal year FY15, FY16 and FY17.

Fiscal Year: 2016	Category	Distribution Method	Total Cost	State Share		
				CT (67%)	NH (23%)	VT (10%)
	Project Management	Equal	\$768,627	\$ 256,209	\$ 256,209	\$ 256,209
	On-line Assessment and Technical Support	Proportional	\$1,582,456	\$ 1,060,245	\$ 363,965	\$ 158,246
	Manufacture, Delivery, Scanning and Scoring of Pencil and Paper Tests	Proportional	\$364,085	\$ 243,937	\$ 83,739	\$ 36,408
	Scoring of On-line Items and Tasks	Proportional	\$3,237,887	\$ 2,169,384	\$ 744,714	\$ 323,789
	Accommodations Data Collection System	Equal	\$0	\$ -	\$ -	\$ -
	<b>SUBTOTAL</b>		\$5,953,055	\$3,729,776	\$1,448,627	\$774,652
	Indirect Costs	Equal	\$1,627,525	\$ 542,508	\$ 542,508	\$ 542,508
	<b>TOTAL</b>		\$7,580,580	\$4,272,284	\$1,991,136	\$1,317,160
	Web-based Analysis and Reporting System*	Equal	\$160,926	\$ 53,642	\$ 53,642	\$ 53,642
	<b>TOTAL w/Analysis and Reporting</b>		\$7,741,506	\$4,325,926	\$2,044,778	\$1,370,802

\*Separate Bid

**2014-018 ATTACHMENT 4 - NEAC & NH BUDGETS  
New England Assessment Consortium**

**BUDGET SUMMARY BY STATE AND FISCAL YEAR: Estimated Expenses by Category**

Directions: Please complete a separate form for each fiscal year FY15, FY16 and FY17.

Fiscal Year: 2017	Category	Distribution Method	Total Cost	State Share		
				CT (67%)	NH (23%)	VT (10%)
	Project Management	Equal	\$774,561	\$ 258,187	\$ 258,187	\$ 258,187
	On-line Assessment and Technical Support	Proportional	\$1,582,456	\$ 1,060,245	\$ 363,965	\$ 158,246
	Manufacture, Delivery, Scanning and Scoring of Pencil and Paper Tests	Proportional	\$0	\$ -	\$ -	\$ -
	Scoring of On-line Items and Tasks	Proportional	\$3,225,257	\$ 2,160,922	\$ 741,809	\$ 322,526
	Accommodations Data Collection System	Equal	\$0	\$ -	\$ -	\$ -
	<b>SUBTOTAL</b>		\$5,582,273	\$3,479,354	\$1,363,961	\$738,958
	Indirect Costs	Equal	\$1,577,766	\$ 525,922	\$ 525,922	\$ 525,922
	<b>TOTAL</b>		\$7,160,039	\$4,005,276	\$1,889,883	\$1,264,880
	Web-based Analysis and Reporting System*	Equal	\$160,926	\$ 53,642	\$ 53,642	\$ 53,642
	<b>TOTAL w/Analysis and Reporting</b>		\$7,320,965	\$4,058,918	\$1,943,525	\$1,318,522

\*Separate Bid

2014-018 ATTACHMENT 4 - NEAC & NH BUDGETS  
 New England Assessment Consortium

**BUDGET DETAIL: Personnel Costs**

Directions: Please complete a separate form for each fiscal year FY15, FY16 and FY17

**Fiscal Year: 2015**

**Salary and Benefits**

Name	Position Title	Hourly Rate \$	Number of Hours	Total Annual Salary \$	Fringe Benefit Cost \$	Total Personnel Cost \$
Jenn Chou	Sr. Project Director	\$52.90	1,840	\$110,040	\$51,719	\$161,759
Other Staff*	Average Rate	\$36.50	10,168	\$371,086	\$174,411	\$545,497
Reporting*	Average Rate	\$41.28	1,288	\$53,165	\$24,987	\$78,152
*other staff are below 50% each; average rates are used						
<b>Total Request</b>			12,008	\$481,126	\$226,129	\$785,408

**Consultants/Subcontractors**

Name	Position Title, Activity or Service	Hourly Rate \$	Number of Hours	Total Cost \$
Measurement Inc	Manufacture, Delivery, Scanning			\$361,725
Measurement Inc	Scoring of On-line Items and Task			\$3,622,598
<b>Total Request</b>				\$3,984,323

**Personnel Expenses (Travel, Office Expenses, Equipment, etc. - Please List)**

Expense Category	Description	Cost \$
Rackspace	Hosting	\$725,820
Help Desk	Temporary Staff on Tier 1 and Tier 2 Help Desk	\$422,400
Travel	AIR staff travel	\$60,000
Meetings Cost	See cost proposal text for Detail	\$237,572
Miscellaneous	Telephone, misc. postage, photocopying, supplies, misc. shipping, etc.	\$50,000
<b>Total Request</b>		\$1,495,792

2014-018 ATTACHMENT 4 - NEAC & NH BUDGETS  
 New England Assessment Consortium

**BUDGET DETAIL: Personnel Costs**

Directions: Please complete a separate form for each fiscal year FY15, FY16 and FY17

**Fiscal Year: 2016**

**Salary and Benefits**

Name	Position Title	Hourly Rate \$	Number of Hours	Total Annual Salary \$	Fringe Benefit Cost \$	Total Personnel Cost \$
Jenn Chou	Sr. Project Director	\$54.23	1,840	\$112,791	\$53,012	\$165,803
Other Staff*	Average Rate	\$36.50	10,093	\$368,335	\$173,118	\$541,453
Reporting*	Average Rate	\$41.28	1,288	\$53,165	\$24,987	\$78,152
*all other staff are below 50% each; average rate shown)						
<b>Total Request</b>			11,933	\$481,126	\$226,129	\$785,408

**Consultants/Subcontractors**

Name	Position Title, Activity or Service	Hourly Rate \$	Number of Hours	Total Cost \$
Measurement Inc	Manufacture, Delivery, Scanning			\$364,085
Measurement Inc	Scoring of On-line Items and Task			\$3,385,922
<b>Total Request</b>				\$3,750,007

**Personnel Expenses (Travel, Office Expenses, Equipment, etc. - Please List)**

Expense Category	Description	Cost \$
Rackspace	Hosting	\$725,820
Help Desk	Temporary Staff on Tier 1 and Tier 2 Help Desk	\$422,400
Travel	AIR staff travel	\$60,000
Meetings Cost	See cost proposal text for Detail	\$237,572
Miscellaneous	Telephone, misc. postage, photocopying, supplies, misc. shipping, etc	\$50,000
<b>Total Request</b>		\$1,495,792

2014-018 ATTACHMENT 4 - NEAC & NH BUDGETS  
 New England Assessment Consortium

**BUDGET DETAIL: Personnel Costs**

Directions: Please complete a separate form for each fiscal year FY15, FY16 and FY17

Fiscal Year: 2017

**Salary and Benefits**

Name	Position Title	Hourly Rate \$	Number of Hours	Total Annual Salary \$	Fringe Benefit Cost \$	Total Personnel Cost \$
Jenn Chou	Sr. Project Director	\$55.58	1,840	\$ 115,611	\$ 54,337	\$ 169,948
Other Staff*	Average Rate	\$36.50	10,015	\$ 365,516	\$ 171,792	\$ 537,308
Reporting*	Average Rate	\$41.28	1,288	\$ 53,165	\$ 24,987	\$ 78,152
*all other staff are below 50% each; average rate shown)						
<b>Total Request</b>			11,855	\$ 481,126	\$ 226,129	\$ 785,408

**Consultants/Subcontractors**

Name	Position Title, Activity or Service	Hourly Rate \$	Number of Hours	Total Cost \$
Measurement Inc	Manufacture, Delivery, Scanning			\$0
Measurement Inc	Scoring of On-line Items and Task			\$3,379,225
<b>Total Request</b>				\$3,379,225

**Personnel Expenses (Travel, Office Expenses, Equipment, etc. - Please List)**

Expense Category	Description	Cost \$
Rackspace	Hosting	\$725,820
Help Desk	Temporary Staff on Tier 1 and Tier 2 Help Desk	\$422,400
Travel	AIR staff travel	\$60,000
Meetings Cost	See cost proposal text for Detail	\$237,572
Miscellaneous	Telephone, misc. postage, photocopying, supplies, misc. shipping, etc	\$50,000
<b>Total Request</b>		\$1,495,792

2014-018 ATTACHMENT 4 - NEAC & NH BUDGETS

New England Assessment Consortium

Form 2.2 - BUDGET DETAIL: Labor Versus Direct Costs

Directions: Please complete a separate form for each fiscal year FY15, FY16 and FY17.

Fiscal Year: 2015	Task	All Employees (regular)	I. Labor			II. Other Direct Costs	Total
			Scorers	Subcontractors			
	Project Management	\$ 124,391		\$ 290,847	\$ 347,572	\$ 762,810	
	On-line Assessment and Technical Support	\$ 434,236		\$ 422,400	\$ 725,820	\$ 1,582,456	
	Manufacture, Delivery, Scanning and Scoring of Pencil and Paper Tests	\$ -	\$ 60,133	\$ 301,592	\$ -	\$ 361,725	
	Scoring of On-line Items and Tasks	\$ 148,629	\$ 2,898,607	\$ 433,144	\$ -	\$ 3,480,380	
	Accommodations Data Collection System	\$ -		\$ -	\$ -	\$ -	
	<b>Subtotal</b>	<b>\$ 707,256</b>	<b>\$ 2,958,740</b>	<b>\$ 1,447,983</b>	<b>\$ 1,073,392</b>	<b>\$ 6,187,371</b>	
	Indirect Costs					\$ 1,658,971	
	<b>Total</b>	<b>\$ 707,256</b>	<b>\$ 2,958,740</b>	<b>\$ 1,447,983</b>	<b>\$ 1,073,392</b>	<b>\$ 7,846,342</b>	
	Web-based Analysis and Reporting System (Separate Bid)	\$ 160,926		\$ -	\$ -	\$ 160,926	
	<b>Total w/ Analysis and Reporting</b>	<b>\$ 868,182</b>	<b>\$ 2,958,740</b>	<b>\$ 1,447,983</b>	<b>\$ 1,073,392</b>	<b>\$ 8,007,268</b>	

2014-018 ATTACHMENT 4 - NEAC & NH BUDGETS

New England Assessment Consortium

Form 2.2 - BUDGET DETAIL: Labor Versus Direct Costs

Directions: Please complete a separate form for each fiscal year FY15, FY16 and FY17.

Fiscal Year: 2016 Task	All Employees (regular)	I. Labor			II. Other Direct Costs	Total
		Scores	Subcontractors			
Project Management	\$ 124,391		\$ 296,664	\$ 347,572	\$ 768,627	
On-line Assessment and Technical Support	\$ 434,236		\$ 422,400	\$ 725,820	\$ 1,582,456	
Manufacture, Delivery, Scanning and Scoring of Pencil and Paper Tests	\$ -	\$ 56,461	\$ 307,624	\$ -	\$ 364,085	
Scoring of On-line Items and Tasks	\$ 148,629	\$ 2,721,592	\$ 367,666	\$ -	\$ 3,237,887	
Accommodations Data Collection System	\$ -	\$ -	\$ -	\$ -	\$ -	
	Subtotal	\$ 707,256	\$ 2,778,053	\$ 1,394,354	\$ 5,953,055	
Indirect Costs					\$ 1,627,525	
	Total	\$ 707,256	\$ 2,778,053	\$ 1,394,354	\$ 7,580,580	
Web-based Analysis and Reporting System (Separate Bid)	\$ 160,926		\$ -	\$ -	\$ 160,926	
<b>Total w/ Analysis and Reporting</b>	<b>\$ 868,182</b>	<b>\$ 2,778,053</b>	<b>\$ 1,394,354</b>	<b>\$ 1,073,392</b>	<b>\$ 7,741,506</b>	

2014-018 ATTACHMENT 4 - NEAC & NH BUDGETS  
 New England Assessment Consortium

Form 2.2 - BUDGET DETAIL: Labor Versus Direct Costs

Directions: Please complete a separate form for each fiscal year FY15, FY16 and FY17.

Fiscal Year: 2017	Task	All Employees (regular)	I. Labor			H. Other Direct Costs	Total
			Scorers	Subcontractors			
	Project Management	\$ 124,391		\$ 302,597	\$ 347,572	\$ 774,561	
	On-line Assessment and Technical Support	\$ 434,236		\$ 422,400	\$ 725,820	\$ 1,582,456	
	Manufacture, Delivery, Scanning and Scoring of Pencil and Paper Tests	\$ -	\$ -	\$ -	\$ -	\$ -	
	Scoring of On-line Items and Tasks	\$ 148,629	\$ 2,635,170	\$ 441,458	\$ -	\$ 3,225,257	
	Accommodations Data Collection System	\$ -	\$ -	\$ -	\$ -	\$ -	
	Subtotal	\$ 707,256	\$ 2,635,170	\$ 1,166,455	\$ 1,073,392	\$ 5,582,273	
	Indirect Costs					\$ 1,577,766	
	Total	\$ 707,256	\$ 2,635,170	\$ 1,166,455	\$ 1,073,392	\$ 7,160,039	
	Web-based Analysis and Reporting System (Separate Bid)	\$ 160,926		\$ -	\$ -	\$ 160,926	
	Total w/ Analysis and Reporting	\$ 868,182	\$ 2,635,170	\$ 1,166,455	\$ 1,073,392	\$ 7,320,965	

2014-018 ATTACHMENT 4 - NEAC & NH BUDGETS

Form 2.3 - BUDGET DETAIL: Line Item Estimates

Provide direct costs, including labor, for tasks within selected task categories. Costs on this form do not need to reflect the total proposed costs for the contract. Total costs are provided on the *Consortium Budget Summary* (Form 1.1). Detailed information provided on this form is intended to enhance understanding of costs. When completing this form, please follow these guidelines: (1) all lines must be completed, entering \$0 if appropriate, (2) do not include indirect costs, (3) travel costs should be included in line items when appropriate, (4) enter subtotals across tasks for higher level categories on corresponding lines (e.g., Project Management, On-line Assessment, Pencil and Paper Testing, etc), (5) include a detailed narrative explaining and supporting the cost projections, (6) budgets for tasks identified as separate cost items and alternative or additional tasks recommended by the Proposer must be entered in the space provided at the end of this form. Additional lines may be added to the form, as needed, and should include all costs for the item including labor, other direct costs and indirect costs.

Task Categories	Scope of Work Task	FY15 \$	FY16 \$	FY17 \$	Total \$
<b>1. Project Management</b>					
1.1 Project Team (Salaries and Benefits)		\$ 415,238	\$ 421,056	\$ 426,988	\$ 1,263,283
1.2 Office Operations (telephone, misc. postage, photocopying, supplies, misc. shipping, etc.)		\$ 50,000	\$ 50,000	\$ 50,000	\$ 150,000
1.3 Management Meetings and Activities (Meeting expenses, conference calls, project reports)		\$ 213,456	\$ 213,456	\$ 213,456	\$ 640,368
1.4 Technical Advisory Committee Meetings (Travel, lodging, meals and honoraria for TAC members, meeting expenses, meeting materials, etc.)		\$ 84,116	\$ 84,116	\$ 84,116	\$ 252,348
<b>Project Management Subtotal</b>		<b>\$762,810</b>	<b>\$768,628</b>	<b>\$774,560</b>	<b>\$2,305,999</b>
<b>2. On-line Assessment and Technical Support</b>					
SBAC Assessment Delivery Platform or Vendor-provided Alternate (please indicate)?	<input type="checkbox"/> SBAC				
	<input type="checkbox"/> Alternate				
2.1 Technology Development		\$ 412,186	\$ 412,186	\$ 412,186	\$ 1,236,558
2.2 Web Hosting (including all fees, licenses, maintenance, and trouble-shooting)		\$ 725,820	\$ 725,820	\$ 725,820	\$ 2,177,460
2.3 Operational Field-testing		\$ -	\$ -	\$ -	\$ -
2.4 Technical Support (Materials and service center)		\$ 422,400	\$ 422,400	\$ 422,400	\$ 1,267,200
2.5 Data Forensics		\$ 22,050	\$ 22,050	\$ 22,050	\$ 66,150
<b>On-line Assessment Subtotal</b>		<b>\$ 1,582,456</b>	<b>\$ 1,582,456</b>	<b>\$ 1,582,456</b>	<b>\$ 4,747,368</b>
<b>3. Paper-based Tests</b>					

2014-018 ATTACHMENT 4 - NEAC & NH BUDGETS

Task Categories	Scope of Work Task	FY15 \$	FY16 \$	FY17 \$	Total \$
3.1 Production (Including printing, collating, and quality control)		\$ 68,170	\$ 69,533	\$ -	\$ 137,703
3.2 Packaging, Shipping and Receiving		\$ 61,693	\$ 62,926	\$ -	\$ 124,619
3.3 Test Security Processes and Procedures		\$ 23,490	\$ 23,960	\$ -	\$ 47,450
3.4 Student Labels		\$ 7,169	\$ 7,312	\$ -	\$ 14,480
3.5 Scanning		\$ 100,093	\$ 102,095	\$ -	\$ 202,188
3.6 Data Forensics		\$ 16,841	\$ 17,178	\$ -	\$ 34,019
	<b>Paper-based Subtotal</b>	<b>\$ 277,455</b>	<b>\$ 283,004</b>	<b>\$ -</b>	<b>\$ 560,459</b>
<b>4. Scoring</b>					
4.1 Scorers (recruiting, salaries, benefits)		\$ 3,082,242	\$ 2,904,025	\$ 2,761,725	\$ 8,747,992
4.2 Scoring Sessions (including facilities, materials, expenses)		\$ -	\$ -	\$ -	\$ 0
4.3 Data Processing		\$ 333,779	\$ 266,314	\$ 314,903	\$ 914,996
4.4 Documentation		\$ 148,629	\$ 148,629	\$ 148,629	\$ 445,886
	<b>Scoring Subtotals</b>	<b>\$ 3,564,650</b>	<b>\$ 3,318,968</b>	<b>\$ 3,225,257</b>	<b>\$ 10,108,874</b>
<b>5. Accommodations Data Collection System</b>					
5.1 Technology Design and Development		\$ -	\$ -	\$ -	\$ 0
5.2 Web Hosting		\$ -	\$ -	\$ -	\$ 0
5.3 Data Processing	*Included in overall online assessment pricing	\$ -	\$ -	\$ -	\$ 0
5.4 Monitoring and Maintenance		\$ -	\$ -	\$ -	\$ 0
	<b>Accommodations Systems Subtotals</b>	<b>\$ 0</b>	<b>\$ 0</b>	<b>\$ 0</b>	<b>\$ 0</b>
<b>6. Vendor Proposed Additions and Modifications (please list)</b>					
<b>7. State Specific Requests (please list)</b>					
CT: Preliminary test results by 6/1/16			\$ 47,392		\$ 47,392
CT: Preliminary test results by 6/1/17				\$ 47,392	\$ 47,392
	<b>State Specific Subtotals</b>	<b>\$ 0</b>	<b>\$ 47,392</b>	<b>\$ 47,392</b>	<b>\$ 94,784</b>

**2014-018 ATTACHMENT 4 - NEAC & NH BUDGETS  
New England Assessment Consortium**

Directions: Please complete a separate form for each fiscal year of the project. Include the name of each staff person assigned to the project for 0.5 FTE or more in a given year. Include the FTE by department name or job description for major tasks completed across other staff. Column totals should reflect an estimate of the total FTE assigned to each task. Additional pages may be submitted, as necessary and should be clearly labeled (e.g., page x of y). The final page must contain a grand total across pages. Corresponding forms must be submitted and clearly labeled for separate cost items specified in the RFP or additional/alternative tasks proposed by the bidder.

Fiscal Year:		2015									
Name of Department/Staff	Project Mgmt	On-line Testing	Pencil/Paper Testing	Scoring	Accom. System	Reporting System*	Total				
<b>Senior Technical Staff</b>	<b>1.44</b>	<b>0.81</b>	<b>0.65</b>	<b>0.95</b>	<b>0.00</b>	<b>0.45</b>	<b>4.30</b>				
Jennifer Chou - Project Director (AIR)	0.50	0.25		0.20		0.05	1.00				
Greg Eller - Project Liasion (MI)	0.50		0.15	0.10			0.75				
Project Management/Admin Staff (AIR)	0.34	0.33					0.67				
Test Development Staff (AIR)	0.10	0.23					0.33				
Psychometric Staff (AIR)				0.40		0.05	0.45				
Reporting Staff (AIR)				0.25		0.25	0.50				
Project Managers (MI)			0.50			0.10	0.60				
							0.00				
							0.00				
							0.00				
<b>Client Services</b>	<b>0.00</b>	<b>0.50</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.50</b>				
Customer Service Staff (AIR)		0.50					0.50				
Dominic McCarthy (MI)							0.00				
<b>IT/Technical</b>	<b>0.00</b>	<b>2.35</b>	<b>0.00</b>	<b>0.38</b>	<b>0.00</b>	<b>0.35</b>	<b>3.08</b>				
Software Project Managers (AIR)		0.60		0.13		0.15	0.88				
Software Development Staff (AIR)		0.95		0.25		0.20	1.40				
Network Engineer Staff (AIR)		0.50					0.50				
Software QA Staff (AIR)		0.30					0.30				
<b>Scoring</b>	<b>0.45</b>	<b>0.00</b>	<b>1.30</b>	<b>3.85</b>	<b>0.00</b>	<b>0.00</b>	<b>5.60</b>				

2014-018 ATTACHMENT 4 - NEAC & NH BUDGETS

Name of Department/Staff	Project Mgmt	On-line Testing	Pencil/Paper Testing	Scoring	Accom. System	Reporting System*	Total
Ann Atwell (MI)	0.25			0.50			0.75
Josh Johnson (MI)				0.50			0.50
Dominic McCarthy (MI)				0.50			0.50
Mrudala Vaidya (MI)			0.35	0.25			0.60
August McConnell (MI)			0.30	0.30			0.60
David Boulter (MI)			0.30	0.30			0.60
Jyothirmaye Kunduru (MI)			0.30	0.30			0.60
Other Scoring Staff (MI)	0.20		0.05	1.20			1.45
(See other Direct Costs for Temporary Staff)							0.00
<b>Other:</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
							0.00
							0.00
<b>Total FTEs</b>	<b>1.89</b>	<b>3.66</b>	<b>1.95</b>	<b>5.18</b>	<b>0.00</b>	<b>0.80</b>	<b>13.48</b>

\* Separate Bid

**2014-018 ATTACHMENT 4 - NEAC & NH BUDGETS  
New England Assessment Consortium**

Directions: Please complete a separate form for each fiscal year of the project. Include the name of each staff person assigned to the project for 0.5 FTE or more in a given year. Include the FTE by department name or job description for major tasks completed across other staff. Column totals should reflect an estimate of the total FTE assigned to each task. Additional pages may be submitted, as necessary and should be clearly labeled (e.g., page x of y). The final page must contain a grand total across pages. Corresponding forms must be submitted and clearly labeled for separate cost items specified in the RFP or additional/alternative tasks proposed by the bidder.

Fiscal Year:		2016									
Name of Department/Staff	Project Mgmt	On-line Testing	Pencil/Paper Testing	Scoring	Accom. System	Reporting System*	Total				
<b>Senior Technical Staff</b>	<b>1.44</b>	<b>0.81</b>	<b>0.65</b>	<b>0.95</b>	<b>0.00</b>	<b>0.45</b>	<b>4.30</b>				
Jennifer Chou - Project Director (AIR)	0.50	0.25		0.20		0.05	1.00				
Greg Eller - Project Liason (MI)	0.50		0.15	0.10			0.75				
Project Management/Admin Staff (AIR)	0.34	0.33					0.67				
Test Development Staff (AIR)	0.10	0.23					0.33				
Psychometric Staff (AIR)				0.40		0.05	0.45				
Reporting Staff (AIR)				0.25		0.25	0.50				
Project Managers (MI)			0.50			0.10	0.60				
							0.00				
							0.00				
							0.00				
<b>Client Services</b>	<b>0.00</b>	<b>0.50</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.50</b>				
Customer Service Staff (AIR)		0.50					0.50				
(See other Direct Costs for Temporary Staff)							0.00				
<b>IT/Technical</b>	<b>0.00</b>	<b>2.35</b>	<b>0.00</b>	<b>0.35</b>	<b>0.00</b>	<b>0.35</b>	<b>3.05</b>				
Software Project Managers (AIR)		0.60		0.10		0.15	0.85				
Software Development Staff (AIR)		0.95		0.25		0.20	1.40				
Network Engineer Staff (AIR)		0.50					0.50				
Software QA Staff (AIR)		0.30					0.30				
<b>Scoring</b>	<b>0.45</b>	<b>0.00</b>	<b>1.30</b>	<b>3.85</b>	<b>0.00</b>	<b>0.00</b>	<b>5.60</b>				

2014-018 ATTACHMENT 4 - NEAC & NH BUDGETS

Name of Department/Staff	Project Mgmt	On-line Testing	Pencil/Paper Testing	Scoring	Accom. System	Reporting System*	Total
Ann Atwell (MI)	0.25			0.50			0.75
Josh Johnson (MI)				0.50			0.50
Dominic McCarthy (MI)				0.50			0.50
Mrudala Vaidya (MI)			0.35	0.25			0.60
August McConnell (MI)			0.30	0.30			0.60
David Boulter (MI)			0.30	0.30			0.60
Jyothirmaye Kunduru (MI)			0.30	0.30			0.60
Other Scoring Staff (MI)	0.20		0.05	1.20			1.45
(See other Direct Costs for Temporary Staff)							0.00
<b>Other:</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
							0.00
							0.00
<b>Total FTEs</b>	<b>1.89</b>	<b>3.66</b>	<b>1.95</b>	<b>5.15</b>	<b>0.00</b>	<b>0.80</b>	<b>13.45</b>

\* Separate Bid

**2014-018 ATTACHMENT 4 - NEAC & NH BUDGETS  
New England Assessment Consortium**

Directions: Please complete a separate form for each fiscal year of the project. Include the name of each staff person assigned to the project for 0.5 FTE or more in a given year. Include the FTE by department name or job description for major tasks completed across other staff. Column totals should reflect an estimate of the total FTE assigned to each task. Additional pages may be submitted, as necessary and should be clearly labeled (e.g., page x of y). The final page must contain a grand total across pages. Corresponding forms must be submitted and clearly labeled for separate cost items specified in the RFP or additional/alternative tasks proposed by the bidder.

Fiscal Year:		2017									
Name of Department/Staff	Project Mgmt	On-line Testing	Pencil/Paper Testing	Scoring	Accom. System	Reporting System*	Total				
<b>Senior Technical Staff</b>	<b>1.44</b>	<b>0.81</b>	<b>0.00</b>	<b>0.95</b>	<b>0.00</b>	<b>0.45</b>	<b>3.65</b>				
Jennifer Chou - Project Director (AIR)	0.50	0.25		0.20		0.05	1.00				
Greg Eller - Project Liaison (MI)	0.50			0.10			0.60				
Project Management/Admin Staff (AIR)	0.34	0.33					0.67				
Test Development Staff (AIR)	0.10	0.23					0.33				
Psychometric Staff (AIR)				0.40		0.05	0.45				
Reporting Staff (AIR)				0.25		0.25	0.50				
Project Managers (MI)						0.10	0.10				
							0.00				
							0.00				
<b>Client Services</b>	<b>0.00</b>	<b>0.50</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.50</b>				
Customer Service Staff (AIR)		0.50					0.50				
(See other Direct Costs for Temporary Staff)							0.00				
<b>IT/Technical</b>	<b>0.00</b>	<b>2.35</b>	<b>0.00</b>	<b>0.35</b>	<b>0.00</b>	<b>0.35</b>	<b>3.05</b>				
Software Project Managers (AIR)		0.60		0.10		0.15	0.85				
Software Development Staff (AIR)		0.95		0.25		0.20	1.40				
Network Engineer Staff (AIR)		0.50					0.50				
Software QA Staff (AIR)		0.30					0.30				
<b>Scoring</b>	<b>0.45</b>	<b>0.00</b>	<b>0.00</b>	<b>3.85</b>	<b>0.00</b>	<b>0.00</b>	<b>4.30</b>				

2014-018 ATTACHMENT 4 - NEAC & NH BUDGETS

Name of Department/Staff	Project Mgmt	On-line Testing	Pencil/Paper Testing	Scoring	Accom. System	Reporting System *	Total
Ann Atwell (MI)	0.25			0.50			0.75
Josh Johnson (MI)				0.50			0.50
Dominic McCarthy (MI)				0.50			0.50
Mrudala Vaidya (MI)				0.25			0.25
August McConnell (MI)				0.30			0.30
David Boulter (MI)				0.30			0.30
Jyothirmaye Kunduru (MI)				0.30			0.30
Other Scoring Staff (MI)	0.20			1.20			1.40
(See other Direct Costs for Temporary Staff)							0.00
<b>Other:</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
							0.00
							0.00
<b>Total FTEs</b>	<b>1.89</b>	<b>3.66</b>	<b>0.00</b>	<b>5.15</b>	<b>0.00</b>	<b>0.80</b>	<b>11.50</b>

\* Separate Bid



## Exhibit 8.1-1: Planning Documents

Team	Document	Description	Owner
Management	Project implementation plan	Summarizes the overall project, including all deliverables, goals, milestones, grades, subjects tested, and modes of testing	Project Director
Management	Administration summary	Lists characteristics of the administration, such as grades and subjects available for testing, the number of opportunities offered for each, the number of field-test items to be included, and the start and end of the administration period	Project Director
Psychometrics and Statistics	Field-test plan. These are common across Smarter Balanced states	Describes the sampling methods used to field test items, the statistics used to analyze them, the ways in which risks of item exposure will be mitigated, and other aspects of the field-test plan	Lead Psychometrician
Psychometrics and Statistics	Analysis plan. These are common across Smarter Balanced states	Objectives of the analysis and the specific analysis methods for calibration and linking for operational psychometrics; special analyses such as generalizability analyses, comparability studies, etc., are described in each study's individual analysis plan	Lead Psychometrician or Study Lead
Operations	Special version summary	Summarizes the special versions to be offered, including translations, alternate language audio, Braille; details the requirements for each test	Project Director
Operations	Ancillary abstract	Summarizes ancillary documents to be developed, including administration guides, user manuals and other materials; includes special instructions or requirements	Project Director
CSSC	Testing design	Design document describing the testing strategies to be employed for a new system or the modifications to an existing system; lays the groundwork for the test plan	Software Project Manger
CSSC	Test plans	Detailed plans for load testing, individual test cases, and regression tests to be implemented	Software Project Manger

Exhibit 8.1-1: Planning Documents (Continued)

Team	Document	Description	Owner
CSSC	Software release plans	Step-by-step activities for the software development team and network engineering teams to deploy software systems for scheduled releases	Software Project Manager
CSSC	Production control forms	Steps required by AIR's Production Control Board for evaluating and approving the test plans for a configuration change in the middle of the year in production systems	Software Project Manager
Reporting	Reporting goals	Objectives of the elements to be included in the report; describes the goals and the types of actions that the report might motivate, and suggests data elements that might support those actions	Reporting Lead

Exhibit 8.1-2: Tracking Documents

Team	Document	Description	Owner
Management	Issues Log	Updated weekly; tracks issues and near-term deliverables; notes progress, problems, risks, assignments, and agreed-upon changes to scope or progress	Project Director
Management	Priority List	Lists the testing and administration documents currently being exchanged between AIR and NEAC; assigns a priority value to each document; identifies the document's review level and due dates	Project Director
Management	Risk Register	Identifies and classifies project risks, organized by function and area; summarizes proposed mitigation strategies	Project Director

tains (and shares with our clients) a priority list of deliverables that are currently in play (e.g., blackline 1 of the Test Administration Manual). The priority list identifies the document name, the responsible party, the date the document is due to be returned, and the date the document is due to be finalized. This document also assigns a priority level to help clients manage and prioritize work during busier times in the schedule. Exhibit 8.1-2 summarizes relevant tracking documents.

### **Specification Documents**

Our team leads work with our clients to develop detailed specification documents. These documents function as the detailed requirements documents for each phase of the program. For example, our reporting team will work with the NEAC-assigned staff to develop a detailed reporting specifications document that includes lists of reports to be produced, descriptions of report recipients, packaging specifications for paper reports, calculation rules for each data element, and other details of the reporting system. This document is usu-



## Exhibit 8.1-3: Specification Documents

Team	Document	Description	Owner
Psychometrics and Statistics	Quality control specifications. These are common across Smarter Balanced states	Identifies quality control-specific analyses and comparisons to be undertaken	Lead Psychometrician
Psychometrics and Statistics	Scoring specifications. These are common across Smarter Balanced states	Summarizes scores to be reported at various levels, attemptedness rules, and scoring computations that are performed by the test-scoring engine for all tests	Lead Psychometrician
Psychometrics and Statistics and Test Development	Test specifications. These are common across Smarter Balanced states	Includes test blueprints, item specifications, and style guides	Lead Psychometrician, Item Development Manager
Test Development	Field-test summary. These are common across Smarter Balanced states	Shows numbers and types of items to be field-tested each year and form construction details	Item Development Manager
Operations	Packaging specifications	Describes materials to be shipped, shipping carrier, expected packing list format, materials to be packed, and details of packaging	Packaging and Shipping Manager
Operations	Receipt specifications	Details secure and nonsecure documents to be received, expected quantity, receipt start and end dates, and special instructions	Packaging and Shipping Manager
Operations	Scoring specifications. These are common across Smarter Balanced states	Identifies human-scored constructed-response items, the dimensions and points on which items are scored, condition codes for unscored responses, backread and second-read rates, frequency of validity papers, and target reliability and validity statistics	Scoring Director
CSSC	Requirements documents	Defines the detailed requirements for the software or software modification to be implemented	Software Project Manager
CSSC	Test Information Distribution Engine (TIDE) specifications	Defines detailed requirements for materials ordering, student management, and user management, including user roles within the suite of online testing applications	Software Project Manager
CSSC	Data file generator specifications	Defines detailed requirements for student and item-score files delivered after testing	Software Project Manager

Exhibit 8.1-3: Specification Documents (Continued)

Team	Document	Description	Owner
CSSC	Online Project Portal specifications	Defines the layout, skin/theme, user cards, and content sections	Software Project Manager
CSSC	Online Reporting System specifications	Lists the reporting settings for student and aggregate reports	Software Project Manager
Reporting	Reporting specifications	Details the reports, data elements to be included, calculation rules for each data element, special rules for merging and cleaning data, and so forth	Reporting Lead
Reporting	Report mockups	Presents annotated graphic mockup of reports, providing the look and feel and identifying the critical elements of the visual appearance of the reports	Reporting Lead

ally created in collaboration with the lead psychometrician and the technical, content, and leadership staff at the NEAC project management level, or with designated representatives.

Each document has an owner and a list of stakeholders. The owner is the person responsible for keeping the document up to date and ensuring that all stakeholders sign off on any changes to the document. Stakeholders include project team members whose work depends directly or indirectly on the work described in the document. In almost every case, client staff members are stakeholders in these documents as well. Exhibit 8.1-3 summarizes relevant specification documents.

### ***Managing the Management Documents***

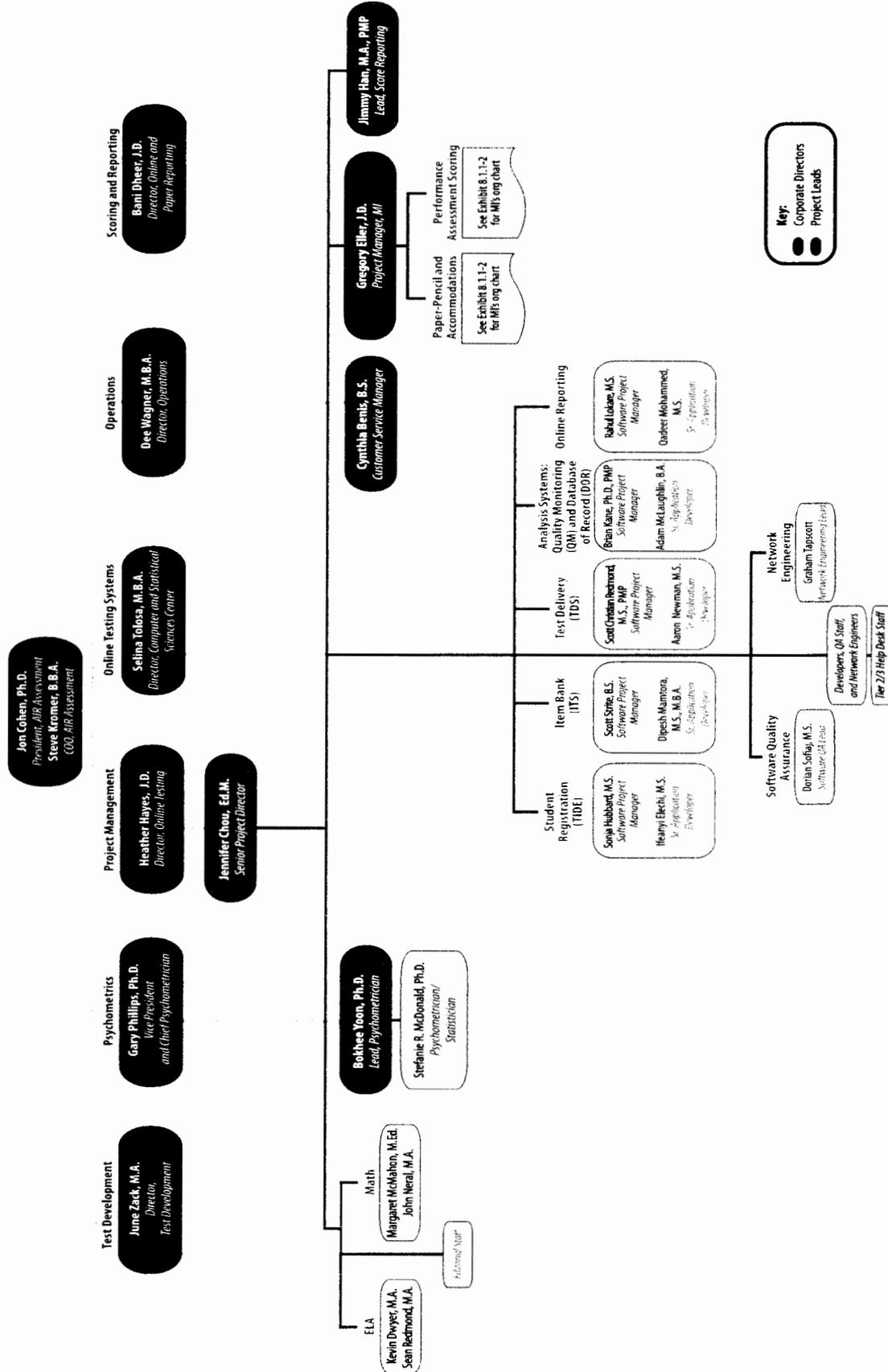
Given the complex nature of assessment projects, the multitude of documents alone, not including the review and approval process of iterations of these documents, can be a challenge to maintain using traditional share-drive options found in most organizations. We use a document management tool called KnowledgeTree to manage the collection of documents, and to help manage the workflow around those documents.

KnowledgeTree is an online document management system on a secure cloud computing platform. KnowledgeTree manages document workflow and file sharing, alerts document followers to changes, and maintains version control, including authors and document history. Documents are checked in and checked out for editing. Access to documents can be controlled through a user roles and permissions system.

KnowledgeTree can manage the workflow needed for orderly change management. Proposed changes to specifications are routed to the technical stakeholders in the specifications. This process helps experts identify the potential unforeseen consequences or downstream impacts of proposed changes.

This project will start with a clean slate of project documents. Managing documents through KnowledgeTree from the kickoff will increase productivity, increase efficiency, reduce error and miscommunication, provide a single reference point for all documents that house key project decisions, and lead to a higher degree of collaboration across internal teams and across our organizations.

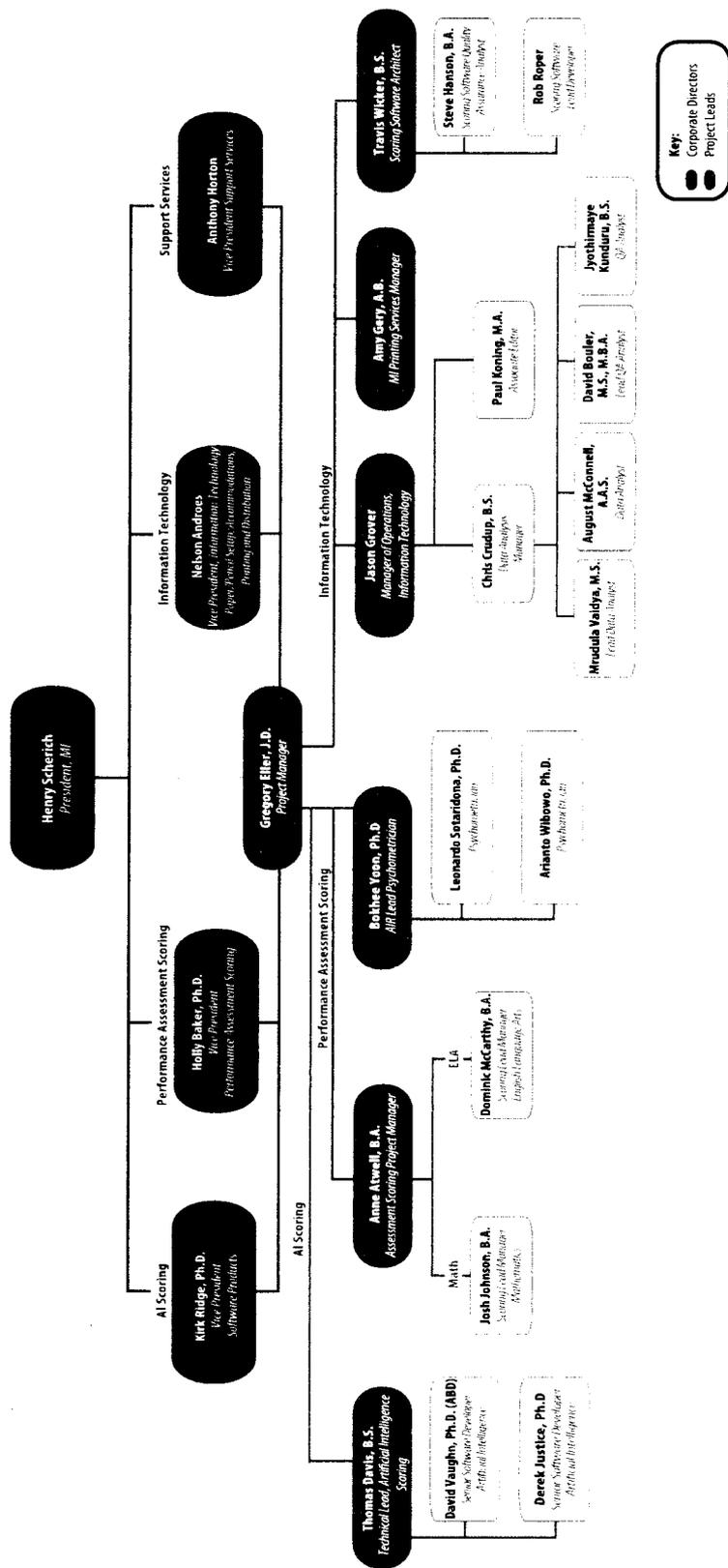
Exhibit 8.1.1-1: AIR's Project Organization Chart



ATTACHMENT 6 -- AIR PROJECT TEAM ORGANIZATIONAL CHART



Exhibit 8.1.1-2: MI's Project Organization Chart





## Exhibit 8.3.8-2: Proposed Presentations and Formats for Annual Training

Training Phase I: Preparing for Online Testing		
Presentation Title and Primary Audience	Proposed Training Topics	Proposed Training Formats
User Roles: Principals, Teachers, Test Administrators, Data Administrators, Technology Coordinators, Test Coordinators	User roles: Who does what and in which system?	<ol style="list-style-type: none"> <li>1. User role chart</li> <li>2. Will be a component of each webinar and optional face-to-face training</li> </ol>
Technology Requirements For Online Testing	Steps for secure browser installation and minimum hardware requirements. <i>Note: This module is based on the existing Smarter Balanced module of the same name.</i>	<ol style="list-style-type: none"> <li>1. Webinar presentation</li> <li>2. Instructions on portal</li> </ol>
Test Information Distribution Engine (TIDE): Registering Users and Modifying Student Settings	Learn how to register users in TIDE and update student test settings and restrictions. <i>Note: This module is based on the existing TIDE module for Smarter Balanced.</i>	<ol style="list-style-type: none"> <li>1. Webinar presentation</li> <li>2. Optional face-to-face training</li> <li>3. Online module</li> </ol>
Training Phase II: Administering Online Tests		
Online Test Administrator Certification Course: Test Administrators, Proctors, Teachers	Learn how to use the new online testing system, set up a test session, manage and monitor testing, assist students with online tools, and understand accessibility and accommodations. Certification earned only through passing mandatory quiz. <i>Note: This course will include information in the Smarter Balanced modules titled "Test Administrator Interface for Online Testing" and "Student Interface for Online Testing."</i>	<ul style="list-style-type: none"> <li>• Online test administration certification course</li> </ul>
Online Practice Tests: Test Administrators, Educators	Practice setting up, pausing, resuming, and ending live test sessions, and setting accommodations, using the same functionality as the operational test administrator site.	<ul style="list-style-type: none"> <li>• Online practice tests</li> </ul>
Online Practice Tests: Students, Parents, Educators	Practice signing in to a live test session, using the same functionality as the operational student testing site, including using text-to-speech (TTS), zoom, highlighter, and strike-through, and answering all item types.	<ul style="list-style-type: none"> <li>• Online practice tests</li> </ul>
How to Start and Monitor Online Testing and Modify Test Settings: Test Administrators, Teachers	Learn how to set up a test session, modify test settings, and monitor participation in multi-opportunity testing. Additionally, learn how to reset and invalidate tests. <i>Note: The information in this module will also include information in the Smarter Balanced modules "Accessibility and Accommodations" and "Universal Tools."</i>	<ol style="list-style-type: none"> <li>1. Webinar presentation</li> <li>2. Optional face-to-face training presentation</li> <li>3. Online tutorial</li> </ol>
Training Phase III: Post-Testing		
How to Use the Online Reporting System: Teachers, Principals, District Administrators	Learn how to access student scores, create class rosters, and drill down from district and school results.	<ol style="list-style-type: none"> <li>1. Webinar presentation</li> <li>2. Optional face-to-face training presentation</li> <li>3. Online tutorial</li> </ol>

ATTACHMENT 8 – NEAC COMMON SOW

**I. TERMS and DEFINITIONS**

The following general contracting terms and definitions apply except as specifically noted elsewhere in this document.

<b>Artificial Intelligence (AI) Scoring</b>	An automated approach to scoring student test responses that use a machine-scoring engine that applies artificial intelligence technologies in a manner that emulates human scoring.
<b>Computer Adaptive Test (CAT) Engine</b>	A software system with the ability to automatically adjust the difficulty level of test questions based on student responses. An adaptive test engine has the ability to automatically determine which questions should be delivered next based on the previous response.
<b>Embedded field testing (EFT)</b>	A process for delivering field test items to students where said items are placed in embedded field test slots using an algorithm that controls the position and number of items delivered to each student.
<b>Project Implementation Plan</b>	Planning document that summarizes the overall project, including all deliverables, goals, milestones, grades, subjects tested and modes of testing.
<b>Interim Assessment</b>	Assessments that provide educators with actionable information about student progress at locally determined intervals throughout the school year. Like summative assessments, the interim assessments described in this contract will be both fixed form and computer adaptive and will include performance tasks.
<b>NEAC States</b>	The respective Departments of Education in Connecticut, New Hampshire and Vermont.
<b>Project</b>	The planned undertaking regarding the entire subject matter of an RFP and Contract and the activities of the parties related hereto.
<b>Project Management Team</b>	The group of Connecticut, New Hampshire and Vermont state employees and AIR's and MI's personnel responsible for managing the processes and mechanisms required such that the Services are procured in accordance with the Work Plan on time, on budget and to the required specifications and quality.
<b>Project Management Plan</b>	A document that describes the processes and methodology to be employed by AIR to ensure a successful Project.
<b>Proposal</b>	The proposal submitted by AIR in response to New Hampshire RFP# DOE2014-018
<b>Security Testing</b>	A type of testing designed to see how well the system is protected against unauthorized access.
<b>Smarter Balanced Assessment Consortium (SBAC)</b>	The partnership of 21 states and 1 U.S. territory that have worked together to design, develop, and deliver the Smarter Balanced assessment system.

ATTACHMENT 8 – NEAC COMMON SOW

<b>NHDOE</b>	New Hampshire Department of Education
<b>Smarter Balanced Staff</b>	The staff employed by the Smarter Balanced Assessment Consortium who provide leadership and management regarding the design and development of the assessment system.
<b>Solution</b>	The Solution consists of the total Solution, which includes, without limitation, Software and Services, addressing the requirements and terms of the Specifications. The off-the-shelf Software and configured Software customized for the NHDOE provided by AIR in response to the RFP.
<b>Specifications</b>	The written Specifications that set forth the requirements which include, without limitation, the RFP, the Proposal, the Contract, any performance standards, Documentation, applicable State and federal policies, laws and regulations, State technical standards, subsequent State-approved Deliverables, and other Specifications and requirements described in the Contract Documents. The Specifications are, by this reference, made a part of the Contract as though completely set forth herein.
<b>Summative Assessment</b>	A test used primarily to evaluate student competency at the end of comprehensive and integrated period or unit of learning, typically at the end of a school year. Summative assessments are commonly aligned with state standards and are typically used for purposes of determining school accountability.
<b>System</b>	The array of hardware/software-based services provided by AIR necessary to provide a web-based computer adaptive testing system in compliance with the SB hosting requirements for the test delivery system.
<b>Testing Window</b>	The dates during which the Test Delivery System is open for assessing students
<b>User Acceptance Testing (UAT)</b>	A process of verifying that a solution works for the user (e.g., the Software/System works as required and without issues during normal use). During UAT, software users test the software to make sure it can handle required tasks in real-world scenarios, according to specifications.
<b>Work Plan</b>	The overall plan of activities for the Project created in accordance with the Contract. The plan and delineation of tasks, activities and events to be performed and Deliverables to be produced under the Project as specified in Appendix 1 Project Schedule. The Work Plan shall include a detailed description of the schedule, tasks/activities, deliverables, critical events, task dependencies, and the resources that would lead and/or participate on each task.

**II. GENERAL OVERALL RESPONSIBILITIES OF AIR**

- A. AIR shall have the lead responsibility for:
1. Overall project management
  2. Maintenance of the Smarter Balanced (SB)-provided item banks and test maps for summative and interim testing, including all SB-provided tagging
  3. The hosting site, test administration application, server and application management services, for the SB on-line operational assessments.
  4. The state-specific portal (NH Portal) that will provide access to the secure browsers, the Test Information Distribution Engine (TIDE), Practice Tests, Training Tests, manuals, and other resources.
  5. The overall security plan to ensure the security of test items, materials and student data.
  6. Data forensics to ensure validity of test score interpretation in cases of irregularities in test administration.
  7. The automated electronic scoring for the summative and interim assessments.
  8. Embedded field testing.
  9. Operational psychometric services.
  10. The upload of universal tools, designated supports, and accommodations into TIDE and the delivery of web-based universal tools, designated supports and accommodations to students.
  11. Web-based analysis and reporting system.
  12. Digital Library access for NH educators.
- B. MI shall have the lead responsibility for:
1. All hand-scoring for the summative assessment.
  2. Automated essay scoring (Artificial Intelligence scoring).
  3. Manufacture, delivery, scanning and scoring of paper-based tests.

**III. DUTIES AND RESPONSIBILITIES OF AIR AND MI (“Contractor”)**

**A. Project Management and Planning**

1. AIR and MI shall assign Key Project Staff who meet the requirements of the Contract. The New Hampshire Department of Education (NHDOE) reserves the right to require removal or reassignment of AIR’s and MI’s Key Project Staff who are found unacceptable to the NHDOE.
2. AIR shall plan, participate in, and provide technical support for regular management meetings with the New England Assessment Consortium (NEAC) states’ Project Management Team. AIR shall schedule, host, and cover all costs associated with NEAC Project Management Team Meetings, which shall include:
  - a. Two-day Kick Off Meeting;
  - b. Three to four full day face-to-face meetings each year; and
  - c. Weekly project management WebEx conference calls.
3. AIR shall provide the NEAC States with management reports on the status of the project. AIR shall:
  - a. Provide mutually agreed-on meeting agendas
  - b. Provide minutes from face-to-face and WebEx meetings;
  - c. Create and maintain the project plan and project schedule
  - d. Produce monthly status reports.
4. AIR shall maintain a secure document management tool to share and provide version control of documents shared between AIR and the NEAC states, (e.g., KnowledgeTree).
  - a. AIR shall provide a system of specification and Project Management Planning Documents that shall record decisions made by the parties about each system and process. These documents facilitate communication among the numerous internal teams, and between AIR’s, MI’s and the NEAC States’ Project Management Teams.

## ATTACHMENT 8 – NEAC COMMON SOW

- b. AIR Project Management Planning Documents shall include:
  - i. Project Implementation Plan
  - ii. Administration Summary
  - iii. Special Versions Summary
  - iv. Ancillary Abstract
  - v. Packaging Specifications
  - vi. Receipt Specifications
  - vii. Scoring Specifications
  - viii. Test Information Distribution Engine (TIDE) Specifications
  - ix. Test Delivery System (TDS) Specifications
  - x. Online Project Portal Specifications
  - xi. Online Reporting Specifications
  - xii. Committee Participant Payments
5. AIR shall note preferential or other changes requested by the NHDOE and shall:
  - a. Provide a draft of the scope (timeline and funding) implications, and
  - b. Implement any funded changes to the scope of the project upon amendment to this agreement.

See Attachment 5: Project Implementation and Planning (Proposal pages 8.1-2 to 8.1-5)

### **B. Technical and Policy Issues**

1. AIR shall identify and recruit members for the NEAC States Technical Advisory Committee (TAC) for the NEAC States' review and approval.
  - a. The NEAC States TAC will be convened to provide guidance to the NEAC States when considering and reviewing technical activities and decisions associated with the implementation of the SB assessments.
  - b. Many of the technical decisions that TACs typically weigh in on have already been considered by the SB TAC.
  - c. It is expected that some issues will arise for which the NEAC States will want TAC input. Some examples include the specifics of the reporting system, the extent to which planned implementation policies may adhere to or conflict with SB standards, and novel accommodations.
2. AIR shall execute any necessary contractual arrangements with TAC members.
3. AIR shall provide necessary support for the NEAC States TAC.
  - a. AIR shall plan and host two NEAC States TAC meetings per year.
  - b. AIR shall identify an appropriate meeting site, and make all logistical arrangements for the TAC meetings.
  - c. AIR shall prepare all meeting materials.
  - d. AIR shall arrange travel and lodging for participants.
  - e. AIR shall provide meeting facilitation including, setting agendas, taking minutes, leading the meeting, providing all appropriate communications with TAC members.
  - f. AIR shall prepare and disseminate detailed meeting notes.
  - g. AIR shall prepare and make presentations on TAC-related agenda topics.
  - h. AIR shall attend a meeting with appropriate NHDOE staff upon request, but not to exceed one time per year.
  - i. AIR shall attend two Smarter Balanced Collaboration Conferences per year upon request from the NEAC States.

### **C. Online Assessment and Technical Support**

1. AIR shall receive and validate SB-provided item banks and test maps for summative and interim testing, including all SB-provided tagging, for NEAC States' review during the User Acceptance Testing (UAT).

2. AIR shall provide the hosting site, test administration application, server and application management services, for the SB on-line operational test construction, assessment delivery, and records retention for both the summative and interim assessments using AIR's Test Delivery System (TDS)
  - a. AIR's TDS shall meet the technical specifications of the SB open-source platform, consistent with the interoperability standards adopted by SB, and provide comparable tests using the same functionalities, accessibility tools, and the same or greater test security protections as noted below;
    - i. Air's TDS shall support most modern browsers and all HTML standards-compliant browsers;
    - ii. AIR's system shall require a minimum technology footprint, consisting of sufficient machines, sufficient bandwidth, and a secure browser;
    - iii. AIR shall receive and discuss the SB-provided *Technical Specifications Manual* with NEAC States' Project Management Team.
    - iv. AIR shall clearly document and explain any NEAC states' requested changes to:
      - a) The requirements for the use of any software and supporting devices
      - b) The minimum and preferred technology infrastructure needed to support online testing
      - c) Information about suggested computer lab configurations, and assistive technology support
    - v. AIR shall update the technical specifications to create a *NEAC States Technical Specifications Manual* for NEAC States' review and approval.
  - b. AIR's platform shall support all of the computer assistive technologies supported by the SB open-source platform;
  - c. AIR shall collaborate with the NEAC States to continue making the test accessible to all students.
3. AIR shall receive the SB-provided online Practice Tests and associated ancillary documents, including answer keys, scoring rubrics, sample responses, performance tasks, classroom activities, and guidelines.
  - a. AIR shall conduct Practice Test UAT for NEAC States' review and approval;
  - b. AIR shall deploy the SB-provided Practice Tests, which shall be available throughout the entire year.
  - c. AIR shall deliver practice tests in two modes:
    - i. Guest Mode – permits any user to log on to the system anonymously and take any test offered in the system and provides the user the ability to select from among the available accommodations and supports at the beginning of the test
    - ii. Secure Mode - allows for a complete rehearsal of operational test administrations;
4. AIR shall receive the SB-provided online Grade-band Training Tests (including the grade-band and content area combination).
  - a. AIR shall conduct Training Test UAT for NEAC States' review and approval
  - b. AIR shall deploy the SB-provided Training Tests which will be available throughout the entire year.
5. AIR's TIDE shall provide an integrated system for:
  - a. Recording student enrollment and registration data;
  - b. Adding, editing and deleting users;
  - c. Providing users with different authorizations, as appropriate and necessary;
  - d. Providing users with role-based access, as appropriate, for adding and editing student accommodation data, test assignments, form assignments, and class roster;
  - e. Integrating with all the other online systems such as test delivery and reporting, so that edits made in TIDE are reflected across all systems;
  - f. Student demographic imports between AIR and NHDOE data systems; and



## ATTACHMENT 8 – NEAC COMMON SOW

13. AIR shall provide up to four half-day District Test Coordinator trainings for a maximum of 100 District Test Coordinators per training.
  - a. AIR shall provide training on system use and test administration procedures, supplemented by an online webinar and other online training materials.
  - b. Each seminar will be staffed by two AIR staff members
  - c. AIR shall schedule the trainings in collaboration with the NHDOE.
  - d. AIR shall make all logistical arrangements and cover costs for each of the meetings.
14. AIR shall provide shared informational brochures, for NHDOE review and approval, produced with NHDOE-specific artwork and titles within specified locations, including:
  - a. FAQ for District/Building Administrators
  - b. FAQ for Technology Coordinators
  - c. FAQ for Test Administrators
  - d. FAQ for Online Test Delivery System (TDS)
  - e. FAQ for TIDE
  - f. FAQ for Online Reporting System (ORS)
15. AIR shall deliver live NEAC States-specific training webinars produced with NHDOE-specific information.
  - a. AIR shall submit the content and format of the webinar to the NEAC States for review and approval.
  - b. AIR shall deliver each live webinar one (1) time in New Hampshire and shall record each webinar for future use by NHDOE.
  - c. Such webinars shall include information on the TDS, TIDE and ORS.
  - d. AIR shall deliver the following webinars
    - i. Webinar for District and Building Administrators
    - ii. Webinar for Technology Coordinators
    - iii. Webinar for Test Administrators
16. AIR shall receive the SB-provided Training Modules and will edit and modify the modules, as needed to align with the functionality of the AIR TDS.
  - a. AIR shall post the training modules on the NH Portal after review and approval by NHDOE.
  - b. Such training modules shall include:
    - i. What is a CAT?
    - ii. Performance Tasks
    - iii. Accessibility and Accommodations
    - iv. Universal Tools
    - v. Technical Requirements
    - vi. Test Administration Training
    - vii. Test Administrator (TA) Interface
    - viii. TIDE
    - ix. Student Interface

See Attachment 7: AIR Annual Training Plan (Proposal page 8.3-40)

17. AIR shall provide customer service and technical support to NHDOE and districts, to ensure a successful testing experience for students and educators.
  - a. AIR shall provide a toll-free customer support line, a chat feature that allows users to enter questions that will be answered via the chat feature, and e-mail for state users, educators, and administrators, which shall be in service Monday through Friday from

## ATTACHMENT 8 – NEAC COMMON SOW

7:00 am to 4:00 pm EST, outside of the testing windows, and between 7:00 am and 7:00 pm EST during the Testing Window.

- b. AIR shall provide a minimum of two points of contact from AIR’s project team, including the NHDOE Project Managers, who will be available to answer and respond to assessment related questions from the NHDOE Project Management Team.
  - c. AIR’s Help Desk shall be available one (1) month prior to the practice test opening and shall remain open until the termination of this Agreement.
  - d. Help Desk operations shall be flexible to ensure adequate support during peak call times throughout the year.
  - e. AIR shall staff the Help Desk and shall train such Help Desk staff to ensure accuracy and consistency in responses to customers.
  - f. AIR shall assign an appropriate number of full-time managers to supervise and monitor the Help Desk.
  - g. AIR shall implement a Help Desk Quality Assurance Plan, as approved by the NHDOE, in collaboration with the other NEAC States.
  - h. AIR shall receive, solve, escalate, and log all inquiries during testing and will update the FAQs detailed in Section C.13 as appropriate.
    - i. AIR shall submit inquiries that require the NHDOE’s response to the NHDOE Project Management Team in a timely manner, no later than 24 hours after being received.
    - ii. AIR’s customer service staff shall document all communications in a log and furnish it daily to NHDOE during each test administration or on request as needed.
  - i. AIR shall implement a tiered approach for the Help Desk to escalate and resolve questions from callers as provided below:
    - i. Tier 1: Scripted answers approved by the NHDOE and the resolution of routine queries by Help Desk agents
    - ii. Tier 2: Escalating a case to a member of a technical support team for further investigation
    - iii. Tier 3: Contacting a subject-matter expert, such as a network engineer or a senior software engineer
18. AIR shall identify and document metrics to monitor and report System performance, including but not limited to, daily usage, peak loads, database latencies on key procedures, average client latency, and average download latencies, for NHDOE review.
19. AIR shall provide documentation regarding the capacity of the System to support the current and potential future range of SB item types.
20. AIR shall provide evidence that the System accepts test packages from SB, delivers tests and items to students with authenticity, collects responses, scores responses, and delivers scores. AIR shall deliver scores in a mutually-agreeable file format.
- D. Embedded Field Testing**
1. AIR shall receive and validate the SB-provided items for embedded field testing (EFT).
  2. AIR shall provide the NEAC States with the summary of number and types of items for review.
  3. AIR shall implement the operational EFT in accordance with a plan approved by the Smarter Balanced Governing states.
  4. AIR shall configure the AIR TDS to deliver EFT items to SB-provided specifications.
  5. AIR shall return all New Hampshire student data to the NHDOE. AIR’s delivery to NHDOE will include student responses to EFT items necessary for rubric validation,

range finding, scoring, data review, equating, etc. AIR will work with NHDOE and SB to ensure data can be delivered according to SB specifications.

**E. Manufacture, Delivery, Scanning, and Scoring of Paper-based Tests**

MI shall provide paper-based tests in case of a “catastrophe” defined as a situation where a school is unable to administer the assessment because of an unexpected lack of technology (e.g., school closes and students are moved to a building that lacks technology).

1. MI shall document methods and quality assurance guidelines for scanning paper-based test forms.
2. MI shall document methods and quality assurance guidelines for scoring paper-based tests.
3. MI shall develop a process to help ensure production of necessary quantities of manufactured paper-based test materials based upon enrollment data and overage requirements provided by the NHDOE.
4. MI shall configure TIDE to accept paper-based test ordering and approval.
5. MI shall receive the SB-provided scannable, blueline-ready, single fixed form for each content area of Grades 3-8 and high school.
  - a. Blueline documents will be PDF documents and ready for printing upon the NEAC States review.
  - b. MI shall establish a process to ensure that all paper-based test materials meet specifications provided by SB and the NHDOE prior to final production, including checks during printing.
6. MI shall create custom cover pages with NHDOE-specific cover art and scanning marks for NHDOE review and approval.
7. MI shall document the process to help ensure accurate collating of paper-based test materials for NEAC States’ review and approval.
8. MI shall document the process to identify and protect the security of paper-based test materials for NEAC States’ review and approval.
9. MI shall document the process, where required, to pre-code answer documents with student SSID numbers, demographic information, LEA and school/testing site information for NEAC States’ review and approval.
10. MI shall document the process to ensure students who take the paper-based assessment do not take a computer-based assessment in the same content area (unless an exception is approved by the NHDOE) for NEAC States’ review and approval.
11. MI shall print paper-based tests in modified RFP quantities and to RFP specifications, including scannable and human-readable codes to support document tracking.
12. MI shall shrink wrap and package materials in boxes and with labels, packing lists, and return boxes to RFP specifications.
13. MI shall ship to schools/districts via traceable carrier.
14. MI shall receive and support helpdesk inquires.
15. MI shall pickup all materials via traceable carrier.
16. MI shall log in all returned boxes of test booklets, prioritizing materials to be scored.
17. MI shall scan, process and score all student responses.
18. MI shall generate Missing Material Reports and follow-up with schools/districts that did not return all of their secure materials for NHDOE review.
19. MI shall receive the SB-provided Braille forms and provide them to NEAC States for review.

20. MI shall produce the SB-provided paper-based Braille forms with state-specific cover art, for NHDOE, in collaboration with the other NEAC States, review and approval.
21. MI shall receive the SB-provided paper-based Large Print forms and provide them to the NEAC States for review.
22. MI shall produce the SB-provided paper-based Large Print forms with state-specific cover art, for NHDOE, in collaboration with the other NEAC States, review and approval.

**F. Test Security**

1. AIR shall develop an overall security plan to ensure the security of test items, materials, and student data.
2. AIR's Project Manager and MI's Project Manager shall be responsible for ensuring that staff adheres to the established procedures, as well as any additional security measures recommended by the NEAC States.
3. AIR and MI shall follow the security plan presented in the Proposal, and will update as necessary, in consultation with the NEAC States, to include:
  - a. Fostering security awareness among employees, subcontractors, consultants, and outside vendors.
  - b. Limiting access to secure materials to only those individuals who have a valid need and documenting access in order to establish an audit trail of users.
  - c. Requiring those who have access to secure materials to sign a confidentiality/nondisclosure agreement.
  - d. Using a tracking system developed in-house to trace test materials through various processing stages while in AIR's or MI's possession.
  - e. Forbidding the removal of secure materials from approved work areas.
  - f. Forbidding the use of recording/photographic equipment in secure areas (scoring rooms) without express consent of the client.
  - g. Limiting the photocopying of secure materials (or printing of their digital images) to legitimate purposes (for training, client decision/documentation, or other purposes authorized by NHDOE).
  - h. Assuring the anonymity of students by using barcodes or other numbers to identify documents rather than using names of students, schools, or districts.
  - i. Providing for the physical security of materials when not in use (e.g., employing security systems and lockboxes).
  - j. Hosting and maintaining secure, password-protected websites; employing secure, encrypted methods of file transmission; and employing multilayered technological defenses.
  - k. Using secure (traceable) shipping and communication methods.
  - l. Providing explicit instructions for safeguarding secure materials to personnel who will have possession of materials at remote locations, such as test sites or committee meeting facilities.
  - m. Shredding confidential/secure materials in house, using AIR and MI staff and equipment, before recycling.
4. AIR and MI shall develop all project-specific security policies in collaboration with the NEAC States and will implement said policies pending the NEAC States' review and approval.
5. AIR shall monitor the security of test content and student data; report any breaches in accordance with the contract requirements identified in the Proposal.
6. AIR and MI shall work collaboratively with the NEAC States to design specific procedures for monitoring, detecting, and evaluating assessments for fidelity to test administration, and thus identify and report possible security breaches and testing irregularities.

- a. For paper-based tests, AIR and MI shall require all project personnel to report any known or suspected violation of security procedures, or attempts by someone to solicit confidential or restricted information, to MI’s Project Manager and to AIR’s Project Manager.
  - i. MI and AIR will collaborate with the NEAC States to develop administrative guidelines for conducting an investigation to determine if a violation has occurred, assess the impact to the program, and report findings and recommendations to MI and AIR executive personnel and the NEAC States’ Program Managers.
  - ii. Following an investigation, AIR and MI will collaborate with the NHDOE in determining whether a breach form needs to be administered.
- b. For on-line assessments, AIR shall configure a NEAC-common Appeals module of TIDE, housed in each state’s Portal, for resetting, reopening, restoring and invalidating tests.
  - i. AIR shall provide for authorized district users to submit appeals in TIDE for NHDOE review and processing.
7. AIR shall provide a NHDOE-branded secure browser for desktops and AIR-branded secure browsers for mobile devices and Chromebooks, consistent with the Proposal, for NHDOE, in collaboration with the other NEAC states, review.
  - a. AIR shall provide evidence that the browser meets SB specifications.
8. AIR shall develop a *Chart of NEAC States User Roles/Access* to specific systems functions using state provided user roles, consistent with SB recommendations.
  - a. AIR shall finalize and configure user roles applicable to TIDE, TDS, and ORS.
9. AIR and MI shall ensure the security, integrity, and accuracy of materials shipped, transported, and received while maintaining chain of custody, and report inconsistencies to NHDOE Project Management.

**G. Data Forensics**

1. AIR shall configure systems to collect data and provide analysis of data including item responses, latencies between item responses and changes, number of revisits to an item or items, test start and end times, scores in each opportunity in the current year, scores in the previous year, and other selected information in the system (e.g., accommodations).
2. AIR’s TDS shall allow AIR psychometricians and NHDOE assessment staff to monitor testing anomalies throughout the test administration window.
  - a. Evidence evaluated includes changes in test scores across administrations, item response time, and item response patterns using the person-fit index.
  - b. The flagging criteria used for these analyses are configurable and can be changed by the user.
  - c. The analyses used to detect the testing anomalies can be run at any time within the testing window.
    - i. AIR shall work with the NEAC States and its TAC to identify and implement flagging rules for online response changes and implement those into the QA reporting system for future test administrations.
3. AIR shall produce forensics reports via AIR’s QA reporting system for NHDOE review.
  - a. The QA report can be generated for each subject or all subjects combined.
  - b. The analysis report can be generated at different aggregate units (e.g., testing session, TA, or school).
  - c. The report includes two tabs: the student tab and the aggregate tab.
    - i. The student tab includes information on students who are flagged with at least one of the flag indices in each flagged aggregate unit.

- ii. The aggregate tab includes information on the aggregate units that are flagged with at least one of the flag indices.
4. AIR shall provide cost estimates (if any) for additional forensic data or analyses beyond the scope of work in the Proposal.

#### **H. Test Administration**

1. AIR shall develop an annual test administration calendar in collaboration with the NEAC States and in accordance with SB testing window policy. At a minimum, the testing calendar shall include the following key dates (Note: dates will need to be adjusted for the first year of the contract):
  - a. Release of the secure browsers (usually June or July)
  - b. Availability of the online test administrator training course (usually August or September)
  - c. Schedule of WebEx and face-to-face meetings (usually 6–8 weeks before testing)
  - d. Opening of TIDE
  - e. Opening of the testing window
  - f. Closing of the testing window
  - g. End of the data cleanup period
  - h. Release of final score results
2. AIR shall provide guidelines and instructions for test administration in accordance with SB guidelines. The current SB documents fall into two categories:
  - a. Manuals (which should be consistent across SB states).
  - b. User guides (which will vary according to the vendor and system being used).
    - i. AIR shall update the user guides and related resources, noted in the Online Assessment and Technical Support section, annually for the NEAC States.
3. AIR shall develop Test Delivery System (TDS) Specifications for the operational summative TDS and the interim TDS.
4. AIR shall conduct TDS User Acceptance Testing (UAT) for the operational summative TDS and the interim TDS.
5. AIR shall deploy the operational summative and interim TDS following completion of UAT for each TDS.
6. AIR shall provide a Training Information Dissemination Schedule.
  - a. AIR will develop and publish guidelines on how, when and what materials, including student-level directions for administration, should be made available prior to the opening of the test administration window for NEAC States review.
7. AIR shall provide a Technical Specifications Manual.
  - a. AIR shall develop the protocol for preparing the testing environment, to be included as a part of the procedure manuals and training.
8. AIR shall conduct TIDE UAT.
9. AIR shall deploy TIDE following completion of the TIDE UAT.
10. AIR shall develop and maintain a secure database of District Test Coordinator contact information in TIDE.

#### **I. Scoring:**

1. **Hand Scoring**
  - a. MI shall provide all hand-scoring for the summative assessments.
  - b. MI will score the hand-scored items upon test completion.

## ATTACHMENT 8 – NEAC COMMON SOW

- i. Scores will be reintegrated with the test when scores are available.
- c. MI shall provide hand scoring specifications that meet SB requirements, as outlined in the SB *Hand Scoring Rules*, for ensuring accuracy, reliability and confidentiality of all hand-scored responses.
  - i. The specifications will cover training, agreement rates, condition codes, process for handling alerts, QA (including information on how to handle 15 percent double reads, 5 percent validity), scoring process reporting, and security.
- d. MI's infrastructure for hand-scoring shall combine site-based and distributed scoring.
- e. MI's scoring management team shall recruit and select qualified, experienced scorers who have scored the SB pilot and field tests or have scored other SB-based assessments, and therefore, will have experience scoring item types that make up the NEAC States' Smarter Balanced assessments. The pool may be augmented by other experienced scorers who have successfully scored other large-scale assessments.
- f. MI shall provide an interactive scoring methodology that will provide for instantaneous feedback on scoring performance and a constant loop of information between the scorers, scoring leadership, and the NEAC States.
- g. MI shall receive all scoring materials from SB, including training, qualifying, and validity papers.
  - i. MI's scoring trainers will use the SB-provided training materials for each grade level and item type.
    - a) With the NEAC States' approval, MI will augment the scoring materials.
    - b) All scoring guides and other training materials will be presented to the NEAC States for review and approval at least one month prior to the start of scoring.
- h. MI shall recruit, qualify, and assign scorers.
- i. MI shall assign scorers primary and 15 percent secondary scores, with 5 percent validity papers.
- j. MI's scoring leadership shall consist of the scoring managers, scoring directors and team leaders.
- k. Scoring managers shall
  - i. Direct and coordinate project activities for performance assessment scoring efforts.
  - ii. Maintain communication with the NHDOE assessment staff.
  - iii. Monitor scoring contract obligations and costs.
  - iv. Supervise and select scoring staff and evaluate scoring staff performance.
- l. Scoring directors shall:
  - i. Manage grade- and content-level scoring efforts.
  - ii. Provide support for and supervision of the team leaders.
  - iii. Direct scorers to recalibration training as required.
  - iv. Collaborate with the NHDOE on decisions if notable unusual responses arise.
  - v. Gather project documentation materials for final reports.
  - vi. Along with the scoring managers, make final decisions about difficult papers, alerts, and other situations requiring scoring management involvement.
- m. Team leaders shall:
  - i. Assist in the monitoring of all scorers assigned to the project and develop exhaustive knowledge of test items as a whole in order to provide the most effective evaluation of scorer performance.
  - ii. Go through a similar training and qualifying process as scorers, but their process is slightly more comprehensive, dealing with specific scoring documentation requirements, identification of non-scorable responses, unusual prompt treatment, potential alert responses (e.g., child-in danger), as specified by SB, and other duties performed by scoring leadership.

## ATTACHMENT 8 – NEAC COMMON SOW

- iii. Conduct the ongoing monitoring of scorers through the processes outlined in the scoring quality control processes
- n. In order to score the breadth of the SB item pool and meet the 30-day turnaround requirement for schools, scorers shall be trained to evaluate types of items within a specific grade and content area, developing a strong foundation to score a variety of items within the type for which they qualify.
  - i. MI shall employ an online training interface for the scorer training in its scoring sites and with distributive scoring activities.
  - ii. Each member of MI's scoring staff shall be required to qualify for the scoring of student responses based on standards established by SB following a vigorous training process.
  - iii. MI shall continually monitor performance in order to guarantee scoring accuracy.
  - iv. During training, scorers shall be required to complete all calibration sets and meet SB and NEAC States' qualification criteria. Any scorer unable to meet these standards will be released from the project.
  - v. MI shall use validity responses as an additional qualification threshold when switching between items within a type of response.
  - vi. Documentation of all training processes and results shall be submitted to the NEAC States at the conclusion of scoring.
  - vii. MI shall conduct hand-scoring efforts using MI's image-based system, the Virtual Scoring Center (VSC), a complete electronic data capture and image-based scoring solution. The VSC system also allows project leaders to spot-check scorers, monitor reliability, and offer feedback. VCS will generate individual scorer and item statistics (such as score distribution, inter-scorer reliability, and non-adjacent scores).
- o. All scoring activities shall be conducted anonymously; at no time will scorers have access to the demographic information of the students.
- p. The requirements for double-scoring shall be defined to the VSC system at setup time. For all items except full writes MI will set this at 15 percent. Full writes will be scored as follows:
  - i. During Year 1, MI shall hand-score 100 percent of the responses and do human second double-blind scorings 15 percent of the time. Artificial Intelligence (AI) will second score the remaining 85 percent of the responses.
  - ii. In Year 2, AI will score 100 percent of the responses and 50 percent will be hand-scored on a second scoring.
  - iii. For Year 3 and beyond, AI will score 100 percent of the responses and 25 percent will be hand-scored on a second scoring.
- q. MI's scoring approach shall ensure the following agreement rates are maintained for each scoring event:
  - i. Four-point items: non-adjacent agreement rate of less than 5 percent and perfect agreement rate of 80 percent.
  - ii. Three-point items: non-adjacent agreement rate of less than 5 percent and perfect agreement rate of 85 percent.
  - iii. Two-point items: perfect agreement rate of 95 percent.
  - iv. One-point items: perfect agreement rate of 100 percent.
  - v. Should SB specify more stringent agreement rates for hand-scoring, MI will adhere to those requirements.
- r. The scoring director and team leaders shall read behind each scorer's performance every day to ensure he or she is on target, and conduct one-on-one retraining sessions when necessary. Daily analyses of the scorer status reports alert management personnel to individual or group retraining needs.

## ATTACHMENT 8 – NEAC COMMON SOW

- i. MI's scorers will maintain the minimum inter-scorer agreement rates outlined above.
- ii. If a scorer's rate falls below the expected standard, the scorer will be re-trained. Should the scorer still be unable to score reliably, the scorer will be assigned to another, non-NEAC-related project or dismissed.
- s. MI shall periodically administer validity sets to each scorer working on the scoring effort as ongoing checks for quality.
- t. MI shall provide hand-scoring process reports (both daily and cumulative score reports) including but not limited to:
  - i. Daily, cumulative, and summary data on the number of responses scored by each scorer
  - ii. The percentage of responses scored that day in exact agreement or adjacent agreement with a second scorer
  - iii. Inter-rater reliability
  - iv. The total number of responses scored at each score point
  - v. The number of correct validity responses generated by each scorer
  - vi. The number of required third scorings, if applicable
- u. At NHDOE request, MI shall rescore certain responses when scorers are released because they are unable to demonstrate the ability to score responses according to the criteria and standards established by MI and the NEAC States.
- v. MI shall provide NHDOE virtual access to all training activities through MI's online training interface. The scoring process shall be monitored by NHDOE through the Client Command Center (CCC) that provides access to view and run specific reports during the scoring process. NHDOE may also attend on-site training for those items to be scored on-site.
- w. MI shall provide any requested input in creating a Yearly Summary Technical Report.
- x. MI shall configure an Alert Tool to scan text responses for each student record for the presence of NEAC States approved target words and phrases, and route those responses to human scorers.
  - i. If an alert paper is identified, the scoring manager will send the information to appropriate NHDOE staff for review and action.
  - ii. MI shall create a secure FTP Alert Site to post student test papers with alerts and contact appropriate NHDOE staff. MI shall provide weekly updates on posted Alert responses.
- y. For situations where assessments are delayed, MI shall provide late batch scoring using the same processes and procedures for hand-scoring outlined above.
- z. MI shall provide re-scoring services for the NEAC States hand-scoring efforts. Should a district request a rescore based on the following or other criteria that the NEAC States establishes, MI shall re-score an assessment to confirm accuracy when test scores are inconsistent with performance in school; and validate scoring due to rater inaccuracy.
  - i. Districts will assume any costs associated with a rescore request if that request does not result in a score change. However, in the event of a score change, costs will be assumed by MI.
  - ii. District rescoring requests are not to be accepted unless they have met the criteria above. Further, any rescore requests for reasons other than those included in the criteria above will be submitted directly to NHDOE, who will then determine whether the request will be forwarded to MI.
  - iii. Should a rater inaccuracy be identified, MI shall rescore student responses promptly. MI will submit a monthly rescore report to NHDOE indicating the original and revised student scores. Costs for rescoring services are provided in the price proposal.

## ATTACHMENT 8 – NEAC COMMON SOW

- a. MI shall maintain confidentiality of the SB testing and training materials and the student responses.
  - i. All personnel shall be trained on MI’s security and confidentiality policies. MI employees shall be required to sign their agreement with the policy and also sign confidentiality/non-disclosure forms. Violation of these agreements will result in disciplinary action, termination of employment, and possible legal action.
  - ii. During training, MI shall secure all paper and online training materials at the end of each work period.
  - iii. Scorers shall not access the scoring system if their direct supervisor is not actively logged into the system.
  - iv. During active scoring, all items shall be presented with no student demographic information included.
2. See **Smarter Balanced Hand-Scoring Rules for Automated Scoring**
  - a. AIR shall provide the automated scoring for the items on the summative and interim assessments that do not require handscoring.
    - i. AIR will provide all “machine-scored” scoring and quality assurance for computer based test items with explicit rubrics, which does not include short answer (SA), proposition, or extended response (ER/WER), essay, or other new constructed response item types. This automated scoring will be near real-time.
    - ii. Per other sections of this SOW, AIR will provide handscoring for the other items on the summative assessment and will provide a Teacher Scoring System to allow educators to handscore other items on the interim assessments.
  - b. MI shall prepare for the use of technology for the scoring of full-writes in Year 2 of the contract.
    - i. MI shall employ their PEG<sup>®</sup> AI scoring system using the machine score as a second read during Year 1.
    - ii. MI shall demonstrate machine-scoring for full-writes items by producing a report containing multiple measures of human/AI agreement. These will include: percent perfect agreement, percent adjacent, percent perfect + adjacent, and quadratic weighted kappa.
    - iii. MI shall configure the systems for Year 2 scoring using machine and human scoring.
    - iv. MI shall expand the use of AI scoring during Year 3 and beyond.
  - c. To verify that PEG<sup>®</sup> is making accurate score predictions, MI shall sample the AI-scored papers at regularly scheduled intervals as part of their quality control procedures.
    - i. If an analysis of the human/AI agreement indicates that the scoring engine needs to be adjusted, MI will recalibrate the scoring model for that item.
  - d. MI shall use the human scored responses from the SB field test for the initial AI engine calibration and evaluation.
    - i. If additional training data are needed, MI will supplement the SB-provided training set with double-read papers from Year 1.
  - e. To facilitate the quality control process, MI shall program PEG<sup>®</sup> to randomly select responses and route them to their professional reading staff for hand-scoring according to the read-behind parameters requested by the NEAC States.
  - f. At the beginning of the project MI shall meet with the NEAC States Project Management Team and MI’s psychometricians to specify the evaluation metric, the

expected level of accuracy for AI scoring, and the validation and documentation schedule.

- i. If any model scoring fails to meet the expected level of accuracy based on the evaluation metric(s), MI will provide documentation on the methods used in attempts to improve the model.
- g. MI shall use a process known as cross-validation to develop an estimate for how well any given model will perform on unseen data.
  - i. MI will use data sets for model calibration and evaluation provided by SB.
  - ii. It is expected that the training data will be representative of the entire student population, including a range of score points, types, and styles of writing.
  - iii. If the models generated from the provided training papers produce results that fail to meet the SB reliability criteria, MI will work with the NEAC States to obtain additional training papers with which to recalibrate the AI engine.
- h. MI shall regularly sample the performance of the AI scoring engine, using pre-defined metrics to compare the AI engine predications to the scores provided by human readers.
  - i. A report documenting the results, including any data anomalies, will be provided to the NEAC States.
  - ii. MI will analyze data anomalies to determine the root cause and discuss findings and potential resolutions with the NEAC States.

#### **J. Operational Psychometrics**

1. AIR shall provide Analysis Specifications (SB-provided), QC Specifications, Scoring Engine Specifications and Test Specifications (SB-Provided).
  - a. AIR shall confirm correct Import SB bank item parameters, both within grade and vertically linked parameter estimates, along with all other attributes of the SB items.
  - b. AIR shall use simulated test administrations to test and verify the performance of all scoring and reporting systems.
  - c. Air shall monitor the performance of testing through a series of quality assurance (QA) reports on item statistics, blueprint match rates, and item exposure rates.
  - d. AIR shall apply SB rules to obtain SB scores.
  - e. AIR shall use software requested by NHDOE to calibrate test items for SB.
  - f. AIR shall review outcomes or QA reports with NHDOE.
2. AIR shall provide the NEAC States with a Technical Report and analyses, as indicated in the proposal, that provide evidence of the reliability of the SB assessments within each NEAC state's assessment context, such as aspects of reliability, including inter-rater agreement for hand-scored item responses, specific to each implementation of the SB assessments.
  - a. AIR shall incorporate technical documents and reports from SB in the Technical Report.
  - b. AIR shall produce reports and analysis, as indicated in the Proposal, to provide evidence of validity of content validity/alignment, comparability across accommodations, and predictive validity for interim assessments.
  - c. AIR shall incorporate SB-provided sections of the Technical Report, with state-specific results, if necessary.
  - d. AIR shall revise the Technical Report, if necessary.
  - e. AIR shall produce an electronic version (PDF) of the Technical Report.

#### **K. Web-Based Designated Supports and Accommodations**

1. AIR shall configure the Student Registration and Test Delivery Systems to SB specifications to receive uploads for all SB-embedded and non-embedded universal tools, designated supports, and accommodations, with NHDOE-selected options.

- a. The TIDE system shall support batch uploads and manual entries of students' designated supports and accommodations.
  - b. The TIDE system shall provide search features to search for students based on different attributes, including test settings (supports and accommodations) and test eligibilities. The search feature also has business rules to limit the search function to certain user roles and to limit the search results within the user's jurisdiction (school or district).
  - c. The TIDE system shall provide for search results that can be readily exported to CSV or Excel, and users shall have the option to export the entire set or just a selected set of student records.
  - d. The TIDE system shall provide a validation process to check for possible errors in data submissions.
  - e. The TIDE system shall be integrated with all other systems, allowing for the transfer of any update to a data element of a user or a student.
  - f. The TIDE system shall be configurable to allow for future modifications, if required.
  - g. The TIDE system shall be configurable to allow for use with different supports and accommodations for other state assessments.
2. AIR shall enable universal tools, designated supports and accommodations to SB specifications.

**L. State-Led Item Development**

1. AIR shall draft scope (time and money) implications for the NEAC States' participation in state-led item development.

**M. Web-Base Analysis and Reporting System**

1. AIR shall provide summary and student-level reports in AIR's Online Reporting System (ORS). The ORS will generate secure, dynamic, interactive reports, including individual student reports that allow educators at all levels to explore the data and their implications for instruction.
2. AIR's ORS shall:
  - a. Provide rapid, flexible online reporting, including both standard and customized reports, available immediately (upon completion of scoring for hand-scored responses).
  - b. Support HTML-compatible browsers and allow access to the system on mobile devices, including smartphones
  - c. Provide results for summative and interim assessments in one system.
  - d. Allow users to download on-demand, standard, and custom PDFs, spreadsheets, and data files.
  - e. Provide security measures that allow the system to serve as a public portal, and also an access point for confidential student-level data and reports.
3. AIR shall collaborate with the NEAC States to gather requirements and configure the ORS to include:
  - a. A state-specific skin for the reporting system
  - b. Downloadable student level data files in csv format
  - c. Aggregated reports for a district, school, teacher and class
  - d. Interactive results analysis
  - e. Longitudinal data reporting
4. AIR shall conduct quality assurance (QA) checks on scores using AIR's Quality Monitoring (QM) system prior to being reported in ORS.
5. AIR shall document the description of the security measures embedded in the reporting system.

- a. AIR’s ORS shall comply with CSDE privacy policy. Student data shall be protected by the same physical, network, and software security as AIR’s TDS.
- b. AIR shall collaborate with the NEAC States to determine the level and types of information that will be made available through the public interface.
6. AIR’s ORS shall provide administrative tools, including:
  - a. Administrative monitoring of the system
  - b. District and school monitoring of test completion
  - c. Addition of users and assignment of roles
  - d. Creation of custom rosters
7. AIR shall provide NHDOE with a complete set of student level results.
  - a. AIR shall collaborate with the NEAC States to establish a customized data delivery format; a set of data validation rules for the files sent to each NEAC state; and a mutually agreeable transfer protocol.
8. AIR shall deploy their Secure Item Review Viewing environment (SIRVE) for processing requests to view a student’s test.

**N. Smarter Balanced Digital Library**

1. AIR shall arrange with SB to allow users access to the SB-hosted Digital Library using a single sign-on. Depending on SB decisions, this may require state users to login separately to the Digital Library or may allow for single sign-on with AIR systems and the Digital Library.
2. AIR shall update Help Desk training and internal FAQ to support user requests for login and password access to the Digital Library. Training on functionality for the Digital Library is not specifically included, although AIR will make best efforts to provide support beyond access.

**O. State Specific Requirements**

1. AIR shall provide options for delivering preliminary test results by June 1, 2016, and June 1, 2017, for the purposes of teacher evaluation for NHDOE review and approval.

**P. Duties and Responsibilities of the NHDOE**

1. The NHDOE shall provide AIR access to data and other information as reasonably requested by AIR.
2. The NHDOE shall, in collaboration with the other NEAC States, review AIR’s validation of the SB-provided items banks and test maps for summative and interim testing, including all SB-provided tagging during UAT in collaboration with the other NEAC States.
3. The NHDOE shall collaborate with AIR in the planning of management meetings.
4. The NHDOE shall participate in all management meetings, including the Kick-Off meeting.
5. The NHDOE shall collaborate with AIR, during the development of all AIR Project Management and Planning documents
6. The NHDOE, in collaboration with the other NEAC States, shall approve all AIR Project Management documents.
7. The NHDOE shall, in collaboration with the other NEAC States, review and approve the NEAC States TAC members.
8. NHDOE shall, in collaboration with the other NEAC States and AIR, review and approve the planning and hosting of the NEAC States TAC meeting.
9. The NHDOE shall review and approve the NH Portal prior to deployment.
10. The NHDOE shall, in collaboration with the other NEAC States, review and approve the Practice Test UAT.
11. The NHDOE shall, in collaboration with the other NEAC States, review and approve the Practice Test UAT.

## ATTACHMENT 8 – NEAC COMMON SOW

12. The NHDOE shall, in collaboration with the other NEAC States, review and identify additional material needed for the SB-provided *Technical Specifications Manual*.
13. NHDOE shall, in collaboration with the other NEAC States, review and approve the NEAC States'-specific *Technical Specifications Manual*.
14. The NHDOE shall, in collaboration with the other NEAC States, review and approve the *TIDE User Guide and Specifications*.
15. The NHDOE shall, in collaboration with the other NEAC States, review and approve AIR's documented security procedures for maintaining the security of the online environment.
16. The NHDOE shall provide AIR with NHDOE specifications for the TAM and TCM and shall review and approve said documents before posting on the NH Portal.
17. The NHDOE shall make state specific updates to the TAM and TCM, review and approve said documents before posting on the NH Portal.
18. The NHDOE shall provide AIR with NHDOE specifications for the *Smarter Balanced Test Administration Guide* and *Smarter Balanced Test Coordination Guide* and shall review and approve said documents prior to posting.
19. The NHDOE shall, in collaboration with the other NEAC States, review and approve training protocols on test administration procedures for use by districts.
20. The NHDOE shall, in collaboration with the other NEAC States, review and approve the NEAC-common versions of a Test Administration (TA) Training/Certification course.
21. The NHDOE shall review and approve the live training webinars for District and Building Administrators, Technology Coordinators, and Test Administrators.
22. The NHDOE shall, in collaboration with the other NEAC States, review and approve all SB-provided Training Modules prior to posting on the NH Portal.
23. The NHDOE shall, in collaboration with the other NEAC States, review and approve AIR's Help Desk Quality Assurance Plan.
24. The NHDOE shall review the metrics for monitoring and documenting Systems performance and reporting.
25. The NHDOE shall, in collaboration with the other NEAC States, review the summary of numbers and types of items received by AIR from SB for embedded field testing.
26. For paper-based tests:
  - a. The NHDOE, in collaboration with the other NEAC States, shall review the documentation of methods and quality assurance guidelines for scoring paper based test forms.
  - b. The NHDOE, in collaboration with the other NEAC States, shall review the documentation of methods and quality assurance guidelines for scanning paper based test forms.
  - c. The NHDOE shall collaborate with the other NEAC States and MI to develop a process to help ensure production of necessary quantities of manufactured paper-based test materials based on enrollment data and overage requirements provided by each NEAC State.
  - d. The NHDOE shall review and approve custom cover pages with NHDOE-specific cover art and scanning marks.
  - e. The NHDOE shall, in collaboration with the other NEAC States, review and approve the process to help ensure accurate collating of paper-based test materials.
  - f. The NHDOE shall, in collaboration with the other NEAC States, review and approve the process to identify and protect the security of paper-based test materials.

## ATTACHMENT 8 – NEAC COMMON SOW

- g. The NHDOE shall, in collaboration with the other NEAC States, review and approve the process, where required, to pre-code answer documents with student SSID numbers, demographic information, LEA and school/testing site information.
  - h. The NHDOE shall, in collaboration with the other NEAC States, review and approve the process to ensure students who take the paper-based assessment do not take a computer-based assessment in the same content area (unless an exception is approved by the NHDOE).
  - i. The NHDOE shall, in collaboration with the other NEAC States, review and approve the SB provided Braille forms.
  - j. The NHDOE shall, in collaboration with the other NEAC States, review and approve the SB provided Large Print forms.
  - k. The NHDOE shall monitor hand scoring via MI's Client Command Center (CCC).
- 27. The NHDOE shall review and approve all project-specific security policies.
  - 28. The NHDOE shall review and process Appeals submitted in TIDE.
  - 29. The NHDOE shall provide state-specific user roles, consistent with SB recommendations for the *Chart of NEAC States User Roles/Access* to specific systems functions.
  - 30. The NHDOE shall review and, if necessary, take action on forensics reports.
  - 31. The NHDOE shall request, if necessary, additional forensic data or analyses.
  - 32. The NHDOE, in collaboration with AIR and the other NEAC States, shall establish an annual test administration calendar in accordance with the SB testing window policy.
  - 33. The NHDOE, in collaboration with the other NEAC States, shall participate in TDS UAT prior to the deployment of the operational interim assessments.
  - 34. The NHDOE, in collaboration with the other NEAC States, shall participate in TDS UAT prior to the deployment of the operational summative assessments.
  - 35. The NHDOE shall review and post the AIR developed guidelines on how, when, and what materials, including student-level directions for test administration, should be made available prior to the test administration window.
  - 36. The NHDOE shall review and post the AIR-published protocol for preparing the testing environment, to be included as part of the procedure manuals and training.
  - 37. The NHDOE, in collaboration with the other NEAC States, shall review the MI-prepared hand scoring specifications that meet the SB hand scoring requirements.
  - 38. The NHDOE, in collaboration with the other NEAC States, shall provide and approve target words and phrases for configuring the Alert Tool.
  - 39. The NHDOE shall review and, if necessary, take action on Alert responses received from MI's scoring manager.
  - 40. The NHDOE, in collaboration with the other NEAC States, shall review reports of multiple measures of human and AI scoring agreement.
  - 41. The NHDOE shall review AIR's process of applying SB rules to obtain SB scores.
  - 42. The NHDOE shall, in consultation with SB, specify software to be used to calibrate test items for SB.
  - 43. The NHDOE shall review issues related to outcomes or Quality Assurance reports.
  - 44. The NHDOE shall review SB provided sections of the Technical Report, with state-specific results, if necessary.
    - a. The NHDOE shall review and approve any revisions to the Technical Report.
  - 45. The NHDOE shall review the configuration of TIDE and TDS to SB specifications to receive the upload for all SB embedded and non-embedded universal tools, designated supports, and accommodations with NHDOE-selected options.
  - 46. The NHDOE shall review the configuration of the ORS.

47. The NHDOE, in collaboration with the other NEAC States, shall review the documentation of the security measures embedded in the ORS.
48. The NHDOE shall identify proposed users for the Digital Library and identify the source of user information, if different from current sources used to populate TIDE.
49. The NHDOE shall review and approve AIR-provided options for delivering preliminary test results by June 1, 2016, and June 1, 2017, for the purposes of teacher evaluation.
50. The NHDOE shall provide payments as detailed in Section VII Payment Schedule of this Agreement.

### **III. ROLES AND RESPONSIBILITIES**

#### **A. AIR Project Team Roles and Responsibilities**

##### **1. AIR Team Project Executive**

The AIR and MI Teams' Project Executives shall be responsible for advising on and monitoring the quality of the Implementation throughout the Project life cycle. The Project Executives shall advise the AIR and MI Team Project Managers and the NHDOE Project Managers on the best practices for implementing the AIR software Solution within the NHDOE. The Project Executives shall participate in the definition of the Project Implementation Plan and provide guidance to the NHDOE Project Managers.

##### **2. AIR Team Project Manager**

The AIR Team Project Manager shall have overall responsibility for the day-to-day management of the Project and shall plan, track, and manage the activities of the AIR implementation team. The AIR Team Project Manager will have the following responsibilities:

- a. Maintain communications with the NHDOE Project Managers;
- b. Work with the NHDOE in planning and conducting a kick-off meeting;
- c. Create and maintain the Work Plan;
- d. Assign AIR Team consultants to tasks in the Implementation Project according to the scheduled staffing requirements;
- e. Define roles and responsibilities of all AIR Team members;
- f. Provide weekly and monthly update progress reports to the NHDOE Project Managers;
- g. Notify the NHDOE Project Managers of requirements for NHDOE resources in order to provide sufficient lead time for resources to be made available;
- h. Review task progress for time, quality, and accuracy in order to achieve progress;
- i. Review requirements and scheduling changes and identify the impact on the Project in order to identify whether the changes may require a change of scope;
- j. Implement scope and schedule changes as authorized by the NHDOE Project Managers and with appropriate change control approvals as identified in the Implementation Plan;
- k. Inform the NHDOE Project Managers and staff of any urgent issues if and when they arise; and
- l. Provide the NHDOE completed Project Deliverables and obtain sign-off from one of the State Project Managers.

#### **B. NHDOE Project Team Roles and Responsibilities**

The following state resources have been identified for the Project. The time demands on the individual NHDOE team members will vary depending on the phase and specific tasks of the Implementation.

**1. NHDOE Project Managers**

The NHDOE Project Managers shall work with the AIR Project Manager. The role of the NHDOE Project Managers is to manage NHDOE resources, facilitate completion of all tasks assigned to NHDOE staff, and communicate project status on a regular basis. The NHDOE Project Managers represent the NHDOE in all decisions on the implementation of the Project, provide all necessary support in the conduct of the implementation of the Project, and provide necessary NHDOE resources, as defined by the Work Plan and as otherwise identified throughout the course of the Project. The NHDOE Project Managers have the following responsibilities:

- a. Collaborate with the AIR Project Manager to plan and conduct a kick-off meeting;
- b. Assist the AIR Project Manager in the development of a detailed Work Plan;
- c. Identify and secure the NHDOE Project Team members in accordance with the Work Plan;
- d. Define roles and responsibilities of all NHDOE Project Team members assigned to the Project;
- e. Identify and secure access to additional NHDOE end-user staff as needed to support specific areas of knowledge if and when required to perform certain implementation tasks;
- f. Communicate issues to NHDOE management as necessary to secure resolution of any matter that cannot be addressed at the Project level;
- g. Inform the AIR Project Manager of any urgent issues if and when they arise; and
- h. Assist the AIR team staff to obtain requested information if and when required to perform certain Project tasks.

**IV. PROJECT STAFFING**

**A. AIR and MI Key Project Staff**

**1. Project Director(s)**

- a. Jennifer Chou, Senior Project Director, AIR
- b. Gregory Eller, J.D., Project Manager, MI

See Attachment 6: AIR Project Organization Chart and MI Project Organization Chart (Proposal pages 8.1-7 to 8.1-8)

**In the event that AIR needs to substitute any management, supervisory, or other key personnel, AIR will identify the substitute personnel, the work to be performed, and the reason for the substitution. AIR will submit resumes of the replacement personnel for NHDOE approval. Substitute personnel will not begin work until AIR has received written approval from the NHDOE.**

**V. PROTECTION OF CONFIDENTIAL INFORMATION**

- A. Additional assurances that all processes and designs as described in any proposal for sections 8.3 – 8.11 regarding student information are subject to New Hampshire statute on student privacy, as per RSA 193:-C:11 and 193-E:5, as well as any new student privacy laws passed from this date forward (reference HB 1587 of 2014).**

- B. Provide a detailed description regarding a parent’s specific requests to view their own student’s assessment (questions and answers) and instructions for the assessment, in response to RSA-193-C:10.**
- C. AIR agrees to address all requirements of current and future New Hampshire laws including:**

**“All of our systems protect individual privacy and confidentiality in a manner consistent with New Hampshire’s privacy laws (in particular, RSA Sections 193-C:11 and 193-E:5), Family Educational Rights and Privacy Act (FERPA), and other federal laws. AIR will protect student information in accordance with New Hampshire statutes on student privacy.”**

**Such protections will include but not be limited to the following items:**

- Use of an annual student assessment identifier generated by the NH DOE rather than the state assigned student ID (SASID)**
- Removal of requirement to submit actual student demographics such as English language learner status, socio-economic status and race.**
- Deletion of identifiable information, such as student name, from all databases including scanned images held by vendor after the conclusion of the test administration. It is anticipated that test administration will conclude when individual student reports are delivered to the local school districts.**
- Deletion of backup tapes containing student names at conclusion of test administration.**
- Shredding of paper tests or return of tests to NH DOE.**

**VI. CONTACT INFORMATION**

**A. State Contract Manager**

**The State shall assign a Contract Manager who shall function as the State’s representative with regard to Contract administration. The State Contract Manager is:**

**Scott Mantie, PhD  
Bureau of Accountability and Assessment  
New Hampshire Department of Education  
Concord, NH 03301  
Tel: 603-271-3844  
Fax: 603-271-7381**

**B. State Project Manager**

**Scott Mantie, PhD  
Bureau of Accountability and Assessment  
New Hampshire Department of Education  
Concord, NH 03301  
Tel: 603-271-3844  
Fax: 603-271-7381**

**VII. PAYMENT SCHEDULE**

- a. Payments pursuant to this agreement shall not exceed \$2,108,551.
- b. Payment will be made upon receipt of invoices citing the services rendered, dates and hours of services, as approved by the NHDOE.

**Not to Exceed**

This is a Not to Exceed (NTE) Contract totaling \$2,108,551 for the period between the Effective Date through June 30, 2015 AIR shall be responsible for performing its obligations in accordance with the Contract. This Contract will allow AIR to invoice the State for the following activities, Deliverables, or milestones appearing in the price and payment tables below.

See Attachment 1: Project Schedule.xlsx  
 See Attachment 4: NEAC and NH Budgets

<b>FY2014-15 Academic Testing Year (July 1, 2014 – June 30, 2015)</b>		<b>Estimated Amount</b>
First Payment upon NH Governor and Council Approval of Contract	<b>35%</b> of \$2,108,551 (Total Annual Amount)	\$737,992.85
Second Payment January 1, 2015	<b>35%</b> of \$2,108,551 (Total Annual Amount)	\$737,992.85
Final Payment upon conclusion of the end-of-year assessment as described below.	<b>30%</b> of \$2,108,551 (Total Annual Amount)	\$632,565.30

American Institutes for Research Proposal to the Department of Education is incorporated herein by reference.

**Attachments:**

- Hosting Requirements: Smarter Balanced Assessment Consortium Contract 11 – Test Delivery System*
- Work Plan
- Project Implementation and Planning
- AIR Annual Training Plan
- AIR/MI Project Organization Chart
- NEAC States and NH Budgets