Independent Review

State Data Report Card Project

For the
State of Vermont Agency of Education and
Department of Information & Innovation (DII)

Submitted to the
State of Vermont, Office of the CIO

By
Strategic Technology Services, Inc.

5/10/2017

Attachments:

1. Project Costing Spreadsheet (FINAL-REVIEW-SOV-AOE-StateReportCard-IndependentReview-STS_Cost_Detail_FINAL.xlsx)
2. Risk Register (FINAL-REVIEW-SOV-AOE-StateReportCard-IndependentReview-STS_Risk_Register_FINAL.pdf)
3. Consolidated State Plan (Vermont ESSA State Plan.final.5.3.pdf)
4. Vendor Security Policy (BFK_Information_Security_Document.pdf)

Table of Contents

1. Executive Summary

Provide an introduction that includes a brief overview of the technology project and selected vendor(s).

Project Summary

1. **Parties**:
    a. The contemplated contract is between State of Vermont Agency of Education (AOE) and Battelle for Kids, (BFK) of Columbus, Ohio.

2. **Term**:
    a. The term of this project is expected to be 19 months (proposed as 7/2017-2/2019) as follows:
        i. Implementation: 13 months (July, 2017 - August, 2018)
        ii. Knowledge Transfer, Training: 6 months (September, 2018 - February 2019)
    b. Contract terms have not yet been finalized at the time of the writing of this Independent Review.

3. **Solution and Cost**: While the contract is expected to cover a 19 month period, the cost analysis covers a 5 year period to support the minimum expected life-cycle as well as the IT ABC form submission.
    a. Implementation Costs:
        i. Implementation Vendor **$900K**
        ii. Internal Staff Costs: **$744K**
        iii. DII EA Costs, and IR Costs: **$63K**
        iv. Hosting: **$30K**
    b. Software Licensing: $0
    c. Hosting (internally hosted): **$160K**
    d. Internal staffing: **$161K**
    e. Total Costs (5 years): $1.987M
        i. Implementation: $1.67M
        ii. Operations: $321K

4. **Approach**:
    a. Externally hosted solution at Expedient Data Centers.
    b. Software Design, Development, Training and Implementation services from BFK related to developing State Data Report Card reporting system to support ESSA (Every Student Succeeds Act) objectives.
    c. Internal AOE staff supporting the project.

	BEFORE	AFTER
Application(s)	*None*	*Online Report Card System (ORCS)*
Hosting	*None*	*External Hosting at Expedient*
Sys Admin	*None*	*AOE*
Application Management	*None*	*AOE*

5. **Management:** Senior Business Leadership and Subject Matter Expertise are aligned to complete solution implementation.

Vendor Profile

1. **Battelle for Kids**
    a. **Battelle for Kids** a 501(c)(3) not-for-profit organization employing over 70 staff members. The Dun and Bradstreet number is 12-155-3064. Battelle for Kids was established in 2001 through a partnership with the Ohio Business Roundtable and supported by an initial grant from Battelle Memorial Institute to improve student achievement in Ohio. In 2005, Battelle for Kids became an independent, not-for-profit organization focused on developing services, solutions, and products that empower teachers, develop leaders, and improve school systems to accelerate student-centered learning and the growth and success of all.
    b. See http://www.battelleforkids.org/ for more information.

1.1 Cost Summary

IT Activity Lifecycle:	5 Years
Total Lifecycle Costs:	**$1.987M**
PROJECT COSTS:	***$1.67M***
Software Costs:	***$0***
Implementation Services:	***$827K***
Internal Staffing:	***$744K***
Hosting:	***$30K***
Other (DII EA, IR):	***$63K***
OPERATING COSTS:	***$321K***
Software Costs:	***$0***
Maintain Software:	***$0***
Internal Staffing:	***$161K***
Hosting:	***$160K***
CURRENT OPERATING COSTS:	**$286K**
Difference Between Current and New Operating Costs:	**$35K increase:** **$22K decrease in State Funding** **$57K increase in Federal Funding**
Funding Source(s) and Percentage Breakdown if Multiple Sources:	See table below

Funding Source(s) and Percentage Breakdown if Multiple Sources:

FUNDING SOURCE	% of TOTAL	FUNDING SOURCE DESCRIPTION	FUNDING APPLIED TO (Implementation or Operations)	FUNDING AMOUNT
STATE FUNDING: Implementation: Operating Budget	37.67%	State Medicaid Special Fund	Implementation	$748,536
STATE FUNDING: Operations: Operating Budget	6.07%	State Medicaid Special Fund/General Fund	Operations	$120,652
Grant Funding: Implementation	4.28%	Nellie Mae Contribution	Implementation	$85,000
Grant Funding: Operations	0.00%	Nellie Mae Contribution	Operations	$0
FEDERAL FUNDING: Implementation	10.07%	SLDS Reallocation	Implementation	$200,000
FEDERAL FUNDING: Implementation	31.82%	SARA Funding/Title I Assessment Fund	Implementation	$632,187
FEDERAL FUNDING: Operations	10.10%	SARA Funding/Title I Assessment Fund	Operations	$200,652
TOTAL:	**100.00%**			**$1,987,027**

1.2 Disposition of Independent Review Deliverables

Deliverable	Highlights from the Review *Include explanations of any significant concerns*
Acquisition Cost Assessment	Rates for stated hourly rates and derived hourly rates are comparable. Comparisons to projects of similar scope not available. Comparison to other bids show comparable pricing. See *Cost Comparison* **(Section 5.2)** for details.
Technology Architecture Review	The underlying Technology Architecture is sound. See *Technology Architecture* **(Section 6)** for details.
Implementation Plan Assessment	The approach to solution implementation appears sound. See *Assessment of Implementation Plan* **(Section 7)** for details.
Cost Analysis and Model for Benefit Analysis	Cost analysis provides accurate annual cost. No monetary benefits defined. See **Cost Benefit (Section 8)** for details.
Impact Analysis on Net Operating Costs	Overall increase in Operating Costs, with a decrease in State Operating Costs and increase in Federal Operating Costs per attached Project Cost spreadsheet.

1.3 Identified High Impact &/or High Likelihood of Occurrence Risks

Risk Description	State's Planned Risk Response	Reviewer's Assessment of Planned Response
See Risk Register		

1.4 Other Key Issues

Recap any key issues or concerns identified in the body of the report.

1. No other issues identified.

1.5 Recommendation

Provide your independent review recommendation on whether or not to proceed with this technology project and vendor(s).

The following recommendations are made relative to this pending project:

1. Consider the following: As the plan is to move off of Vendor hosting in 2 years to another hosting provider, either internal or other external (AWS, Azure, etc.), consider using that other hosting vendor now (internal, AWS, Azure, etc.). Additionally, ensure the contract is written to hold the Vendor responsible for ensuring their solution works now on at least one other hosting platform.
2. Determine whether or not FERPA data is to be stored. If yes, review and approve proposed Data and Application security model.
3. Address remaining Risk Register items in parallel with drafting of contract.
4. Initiate contract drafting and then proceed with project unless contract terms and conditions not favorable. Include the following identified in the Risk Register in the contract:
    a. Define Deliverables Acceptance criteria and tie payments to those deliverables. See **Appendix 5** for suggested starting point for Payment for Deliverables. Defining the acceptance criteria of each deliverable is needed.
    b. Define Testing responsibilities as Vendor did not propose those. When asked during the IR, what the scope of work related to Testing is, Vendor provided detail outlined in **Appendix 6**. Consider including that Appendix B content in the Scope of Work/Deliverables section of the Contract.
    c. Define Training responsibilities as Vendor did not propose those. When asking during the IR, what the scope of work related to Training is, Vendor provided detail outlined in **Appendix 7**. Consider including that Appendix C content in the Scope of Work/Deliverables section of the Contract.
    d. Define Service Level Agreements in the Contract. See **Appendix 8** for suggested content.
    e. Ensure Vendor can support security of FERPA data.
    f. Define Non-Functional Requirements.
5. Proceed with project initiation after above items completed.

1.6 Certification

I certify that this Independent Review Report is an independent and unbiased assessment of the proposed solution's acquisition costs, technical architecture, implementation plan, cost-benefit analysis, and impact on net operating costs, based on the information made available to me by the State.

e-Signed by David Gadway
on 2017-05-16 14:12:41 GMT

Signature **Date**

1.7 Report Acceptance

The electronic signatures below represent the acceptance of this document as the final completed Independent Review Report.

e-Signed by Philip Dessureau
on 2017-05-16 14:08:01 GMT

DII Oversight Project Manager **Date**

e-Signed by John Quinn
on 2017-05-18 12:34:44 GMT

State of Vermont Chief Information Officer **Date**

2. Scope of this Independent Review

Add or change this section as applicable.

2.1 In-Scope

The scope of this document is fulfilling the requirements of Vermont Statute, Title 3, Chapter 45, §2222(g):

The Secretary of Administration shall obtain independent expert review of any recommendation for any information technology initiated after July 1, 1996, as information technology activity is defined by subdivision (a)(10), when its total cost is $1,000,000 or greater or when required by the State Chief Information Officer.

The independent review report includes:

- An acquisition cost assessment
- A technology architecture review
- An implementation plan assessment
- A cost analysis and model for benefit analysis
- An impact analysis on net operating costs for the agency carrying out the activity
- A procurement negotiation advisory services contract (as needed)

2.2 Out-of-Scope

If applicable, describe any limits of this review and any area of the project or proposal that you did not review.

- Procurement Advisory Services.

3. Sources of Information

3.1 Independent Review Participants

List the individuals that participated in this Independent Review.

Name	Employer and Title	Participation Topic(s)
Amy Fowler	AOE Project Sponsor	Discussed project plan, budget, staffing and desired outcomes
Patrick Halladay	AOE Project Manager	Discussed project plan, budget, desired outcomes, project risks and risk mitigation
Brian Townsend	AOE Director of Digital Services	Discussed project budget, data sources and desired outcomes
Wendy Geller	AOE Director of Analysis & Data Management	Discussed data sources and desired outcomes
Jennifer Perry	AOE Data Administration Director	Discussed data sources and desired outcomes
Glenn Bailey	AOE Education Analysis & Data Management Director	Discussed data sources and desired outcomes
Mike Bailey	AOE Special Education Data Manager/Business Analyst	Discussed data sources and desired outcomes
David Kelley	AOE IT Business Analyst III	Discussed data sources and desired outcomes
Beth Ann Willey	AOE Business Analyst	Discussed data sources and desired outcomes
Lila Denton	AOE Business Analyst / EDFacts Coordinator	Discussed data sources and desired outcomes
John Nelson	AOE Data and Reporting Coordinator, CTE	Discussed data sources and desired outcomes
Alena Marand	AOE Compliance Project Manager and Education Analyst	Discussed data sources and desired outcomes
Rachel Stanger	AOE Education Statistician II	Discussed data sources and desired outcomes
Michael Hock	AOE Director of Educational Assessment	Discussed data sources and desired outcomes
Chris Case	AOE Education Project Manager	Project kickoff
Mary Mulloy	AOE Title I Coordinator	Project kickoff
Josh Souliere	AOE Education Quality Assurance Manager	Project kickoff
Jen Gresham	AOE Director Government Supported Programs	Project kickoff
Philip Dessureau	DII Oversight Project Manager	Project Management Oversight
Rhonda Hardaker	DII Project Manager	Project Management Oversight
Amber DeVoss	DII Enterprise Architect	Discussed technology architecture
Glenn Schoonover	DII Security Officer	Discussed technology architecture
Oscar Paredes	Managing Director Technology, Battelle for Kids	Discussed roles, responsibilities, pricing model, comparable projects, ability to meet security requirements, technical architecture, PM Approach, Implementation Approach, Risk Management Approach
Abbey Smanik	Project Manager, Battelle for Kids	Ditto

3.2 Independent Review Documentation

Complete the chart below to list the documentation utilized to compile this independent review.

*All document sources are the Project SharePoint site unless otherwise noted

Document Name	Description	Source*
ADDENDUM 1 - 1-18-17.pdf	Addendum to Report Card RFP	
eseareauth.pdf	ESEA Reauthorization Bill	US DOE Web Site
essafactsheet1127.pdf	ESSA Fact Sheet	US DOE Web Site
essastatereportcard.pdf	ESSSA Report Card Guidance	US DOE Web Site
nprmaccountabilitystateplans52016.pdf	Description of ESSA Regulatory Action	US DOE Web Site
Report Card RFP_Answers to vendor questions_1-17-17-bt-hb.doc	Report Card RFP Q&A	
Report Card RFP_Answers to vendor questions_1-17-18.pdf	Report Card RFP Q&A	
State Report Card_ RFP.docx	Report Card RFP in Word format	
State Report Card_ RFP.pdf	Report Card RFP in PDF format	
IR Statement of Work RFP - Vt Agency of Education State Report Card.docx	SOW to conduct Independent Review for Report Card project	
Vermont RFP Attachment F compiled.pdf	Vendor response to Report Card RFP	
Vermont RFP State Report Card Attachment C.pdf	Vendor response to Report Card RFP	
Vermont RFP State Report Card Attachment D.pdf	Vendor response to Report Card RFP	
Vermont State Report Card - Presentation.pdf	Vendor response to Report Card RFP	
Vermont State Report Card Addendum - Project Plan.jpg	Vendor response to Report Card RFP	
Vermont State Report Card Attachment A Certificate of Compliance.pdf	Vendor response to Report Card RFP	
Vermont State Report Card Attachment A WC Self.pdf	Vendor response to Report Card RFP	
Vermont State Report Card Attachment A WC Sub.pdf	Vendor response to Report Card RFP	
Vermont State Report Card Attachment B.pdf	Vendor response to Report Card RFP	
Vermont State Report Card Attachment E Economic Modeling Questionnaire.pdf	Vendor response to Report Card RFP	
Vermont State Report Card Cost Proposal.pdf	Vendor response to Report Card RFP	
Vermont State Report Card proposal FINAL.pdf	Vendor response to Report Card RFP	
Vermont State Report Card Transmittal Letter.pdf	Vendor response to Report Card RFP	
VermontTechnology Agreement (002).pdf	Vendor response to Report Card RFP	
Vermont State Report Card proposal FINAL_Redacted.pdf	Redacted Vendor response to Report Card RFP	
BGS posted AOE State Report Card_ RFP.PDF	BGS Posted Report Card RFP	
Consolidated_Scores.xlsx	Team Scoring of Finalist Vendors	
School Report Card Project Charter.doc.042017.doc	Project Charter	
AOE_State_Report_Card-IT_ABC_Form_3_23_2017.pdf	IT ABC Form	
AOE_State_Report_Card-IT_ABC_Form_3_24_2017_esigned.pdf	Signed IT ABC Form	
AOE_StateReportCard_Vendor_Questions_VendorResponse1.docx	Vendor response to Independent Review questions	IR process
AOE_StateReportCard_Vendor_Questions_VendorResponse2.docx	Vendor response to Independent Review questions Version #2	IR process
BFK_Information_Security_Document.pdf	Vendor response to Independent Review questions related to security	IR process

Document Name	Description	Source*
Vermont State Report Card Addendum - Project Plan.jpg	Vendor proposed project plan	
All Snapshot Measures.docx	Report Card reporting requirements (known as snapshots)	
VTAOE_ReportCard_ExtractSpecs.xlsx	List of data sources anticipated to be used to product Report Card reports	
edu-essa-vermont-state-plan-draft.pdf	Vermont State Plan draft submitted to US DOE	AOE Web Site
Vermont ESSA State Plan.final.5.3	Final Vermont State Plan	

4. Project Information

4.1 Historical Background

Provide any relevant background that has resulted in this project.

It is the mission of The State Board and Agency of Education to provide leadership, support and oversight to ensure that the Vermont public education system enables each student to be successful. In accordance with **ESSA (Every Student Succeeds Act)**, VT AOE is particularly focused on ensuring that all PK-12 students have equitable access to high quality learning experiences that prepare them for successful career and college opportunities. ESSA funds more than 3 percent of statewide school spending.

The Vermont Agency of Education (also known as a State educational agency (SEA)) is required, under Section 8302 of the **Elementary and Secondary Education Act of 1965 (ESEA)**, as amended by the Every Student Succeeds Act (ESSA) (see https://www.congress.gov/bill/114th-congress/senate-bill/1177/text), to **establish procedures and criteria under which**, after consultation with the Governor, to submit a **Consolidated State Plan designed to simplify the application requirements and reduce burden for SEAs** (School Education Agencies).

The Consolidated State Plan includes all programs under the ESEA and ESSA, including:

- Title I, Part A: Improving Basic Programs Operated by Local Educational Agencies
- Title I, Part C: Education of Migratory Children
- Title I, Part D: Prevention and Intervention Programs for Children and Youth Who Are Neglected, Delinquent, or At-Risk
- Title II, Part A: Supporting Effective Instruction
- Title III, Part A: English Language Acquisition, Language Enhancement, and Academic Achievement
- Title IV, Part A: Student Support and Academic Enrichment Grants
- Title IV, Part B: 21st Century Community Learning Centers
- Title V, Part B, Subpart 2: Rural and Low-Income School Program
- Title VII, Subpart B of the McKinney-Vento Homeless Assistance Act: Education for Homeless Children and Youth Program (McKinney-Vento Act)

AOE submitted *draft* **Consolidated State Plan** in April 2017, and final Consolidated State Plan in May 2017 (see attached "*Vermont ESSA State Plan.final.5.3.pdf*") that supports the most vulnerable children in the state, focuses on preparing students for college or a career, and leverages federal funding to advance the state's education agenda, in order to comply with ESSA. ESSA requires states to **report** on how students are performing, identify gaps in equity, and develop a plan to fix schools with poor results. Federal education dollars are then applied to support local efforts to close achievement gaps and help underserved children. These ESSA reporting requirements are a key driver for this project to develop a **State Report Card data reporting system.**

Another key driver for the project is the **Agency of Education Accountability Plan**, summarized as follows:

1. Support Vermont student and schools while targeting equity gaps impacting historically marginalized students;
2. Meet the requirements of ESSA (noted above);
3. Don't create duplicative state and federal systems;
4. Provide schools and SUs (Supervisory Union)/SDs (School District) with reliable, relevant data;
5. Provide a foundation for continuous improvement efforts;
6. Identify and support the education systems that are most struggling to meet performance measures.

4.2 Project Goal

Explain why the project is being undertaken.

The primary goals of the project as defined in the RFP include:

1. Meet the requirements outlined in the RFP for implementation and two years of hosting of the system. (*Also see Section 4.3 of this IR detailing the report content and grouping attributes*)
2. Build system using non-proprietary tools/software to allow for AOE to own and support the system.
3. Recommend approach to small-n suppression to work in conjunction with proposed solution.
4. Provide documentation and training for AOE to maintain the system.
5. Host the hardware to support the system.
6. Recommend staffing models and skills for AOE to maintain the system.

The project objectives and success criteria defined in the Project Charter include:

#	Objective	Success Criteria
1	Increase public use of data by improving the quality and accessibility of school and SU/SD-level data.	Publication of report cards through the VT—AOE website and citation of report cards in SU/SD Continuous Improvement Plans
2	Reduce the amount of manual labor required to meet federal reporting requirements.	Current State labor hours to meet federal reporting requirements are reduced by 10% annually.
3	Meet the requirements of the RFP for implementation and two years of hosting of the system.	The solution is implemented in two phases, with full implementation by 30 November 2018. Over the course of the contract, the system is hosted by the vendor.
4	Build system using non-proprietary tools/software to allow for AOE to own and support the system.	AOE owns and supports the solution at the conclusion of the project.
5	Identify approach to small-n suppression to work in conjunction with proposed solution.	Approach suppresses groups under 11 for the public, but allows for tiered access at the state, SU, and school level.
6	Provide documentation and training for AOE to maintain the system.	At the end of the project, the AOE has staff trained in maintaining the solution.
7	Host the hardware to support the system.	The vendor hosts the hardware through 30 June 2022 though this will be finalized at contracting.
8	Recommend staffing models and skills for AOE to maintain the system.	Staffing models are identified and implemented by 31 December 2017.

4.3 Project Scope

Describe the project scope and list the major deliverables. Add or delete lines as needed.

Overall Scope: The high level scope of this project is the development of a school report card that meets the requirements outlined in section 1111(h)(1) of the Every Student Succeeds Act and which also conveys all elements of the State Accountability Plan and the Consolidated State Plan (see attached "*Vermont ESSA State Plan.final.5.3.pdf*").

Additional scope items include:

- Implementation and rollout of the solution, including training of key AOE staff who will sustain the work post-contract period
- Protecting the privacy of students by developing and implementing a small N solution
- Working with internal and external stakeholders to develop a solution that meets the technical and practical criteria of the project.
- The solution should provide flexibility to include additional performance indicators still under consideration.

Vermont will use the **Education Quality Review (EQR) Categories** listed below as the basis of the reports in order to show how school systems are performing:

Category	A good education provides students with…
Academic Proficiency	Opportunities to develop their skills and knowledge to be career and college ready.
Personalized Learning	Opportunities to shape their own learning and to provide authentic engagement.
Safe, Healthy Schools	Environments where students feel healthy, safe and supported in achieving their goals.
High Quality Staffing	Educators who are well trained and qualified to meet their needs.
Financial Efficiencies	Quality experiences at a price which the community believes is appropriate.

In all cases the data needs to be filterable at the State, SU (Supervisory Union)/SD (School District), and School level with appropriate suppression.

In most cases the data needs to be filterable for one or more student groups required by ESSA with appropriate data suppression when there are small data sets, as specified in the table below:

Student Groups	Data Source
American Indian or Alaskan Native	Census until SLDS is fully operational
Asian	Census until SLDS is fully operational
Black	Census until SLDS is fully operational
Hispanic	Census until SLDS is fully operational
Native Hawaiian or other Pacific Islander	Census until SLDS is fully operational
White	Census until SLDS is fully operational
English Learners	Census until SLDS is fully operational
Non-English Learners	Census until SLDS is fully operational
Students with Free and Reduced Lunch	Census until SLDS is fully operational
Non-Students with Free and Reduced Lunch	Census until SLDS is fully operational
Students with Disabilities	Child Count and Census

Non-Students with Disabilities	Child Count and Census
Historically Marginalized Students	Census until SLDS is fully operational
Historically Privileged Students	Census until SLDS is fully operational
Additional Reporting Categories	
Female	Census until SLDS is fully operational
Male	Census until SLDS is fully operational
Migrant Students*	External Data Source (Is and will remain external data collection/application. Data will be loaded and stored within SLDS once fully operational. SLDS will become source for Report Card (via SLDS extract)
Military-Affiliated Students	New Data Requirement: (This is a new data requirement that will be accommodated via a new data collection/sharing agreement. Data will be loaded and stored within SLDS once fully operational. SLDS will become source for Report Card (via SLDS extract)
Homeless Students	External Data Source (Is and will remain external data collection/application. Data will be loaded and stored within SLDS once fully operational. SLDS will become source for Report Card (via SLDS extract)
Students in Foster Care	External Data Source (Is and will remain external data collection/application. Data will be loaded and stored within SLDS once fully operational. SLDS will become source for Report Card (via SLDS extract)

The remainder of this report section describes at a high level how the report content and one possible layout as well as potential data sources:

	All Students		Equity Index		
Criteria	Current	Year-to-Year Change	Current	Year-to-Year Change	Disaggregate student groups?
Academic Proficiency	##	##	##	##	Yes
Personalization	##	##	##	##	Yes
Safe, Healthy Schools	##	##	##	##	No
High Quality Staffing	##	##	##	##	No
Financial Efficiency	##	##	##	##	No

Each criteria then leads to another page when clicked upon.

1. **Criteria 1- Academic Proficiency Secondary Landing Page**

	All Students		Equity Index		
	Current	Year-to-Year Change	Current	Year-to-Year Change	Disaggregate student groups?
How well are students performing in ELA/reading in 3rd-9th grade?	##	##	##	##	Yes
How well are students performing in mathematics in 3rd-9th grade?	##	##	##	##	Yes
How well are students performing in science? 5,8,11	##	##	##	##	Yes
How well are students performing in physical education? (grades to be determined)	##	##	##	##	Yes
How well are English Learners gaining English proficiency?	##	##	##	##	Yes
Are students staying in school until they *graduate*?	##	##	##	##	Yes
How well did seniors perform on career and college ready assessments?	##	##	##	##	Yes
Are alumni pursuing a career and college ready outcome within 16 months of graduation?	##	##	##	##	Yes

2. **Criteria 1- Academic Proficiency ELA- Page 1A**

	All Students		Equity Index		
	Current	Year-to-Year Change	Current	Year-to-Year Change	Disaggregate student groups?
ELA Scale	##	##	##	##	Yes
ELA Growth	##	##	##	##	Yes

3. **Criteria 1- Academic Proficiency Page 1B**

	All Students		Equity Index		
	Current	Year-to-Year Change	Current	Year-to-Year Change	Disaggregate student groups?
ELA Scale 3rd Grade	##	##	##	##	Yes
ELA Scale 4th Grade	##	##	##	##	Yes
ELA Scale 5th Grade	##	##	##	##	Yes
ELA Scale 6th Grade	##	##	##	##	Yes
ELA Scale 7th Grade	##	##	##	##	Yes
ELA Scale 8th Grade	##	##	##	##	Yes
ELA Scale 9th Grade	##	##	##	##	Yes

4. Criteria 1- Academic Proficiency Page 1C

	All Students		Equity Index		
	Current	Year-to-Year Change	Current	Year-to-Year Change	Disaggregate student groups?
ELA Growth 5th Grade	##	##	##	##	Yes
ELA Growth 6th Grade	##	##	##	##	Yes
ELA Growth 7th Grade	##	##	##	##	Yes
ELA Growth 8th Grade	##	##	##	##	Yes
ELA Growth 9th Grade	##	##	##	##	Yes

5. Criteria 1- Academic Proficiency Math Page 2A

	All Students		Equity Index		
	Current	Year-to-Year Change	Current	Year-to-Year Change	Disaggregate student groups?
MATH Scale	##	##	##	##	Yes
MATH Growth	##	##	##	##	Yes

6. Criteria 1- Academic Proficiency Page 2B

	All Students		Equity Index		
	Current	Year-to-Year Change	Current	Year-to-Year Change	Disaggregate student groups?
MATH Scale 3rd Grade	##	##	##	##	Yes
MATH Scale 4th Grade	##	##	##	##	Yes
MATH Scale 5th Grade	##	##	##	##	Yes
MATH Scale 6th Grade	##	##	##	##	Yes
MATH Scale 7th Grade	##	##	##	##	Yes
MATH Scale 8th Grade	##	##	##	##	Yes
MATH Scale 9th Grade	##	##	##	##	Yes

7. Criteria 1- Academic Proficiency Page 2C

	All Students		Equity Index		
	Current	Year-to-Year Change	Current	Year-to-Year Change	Disaggregate student groups?
MATH Growth 5th Grade	##	##	##	##	Yes
MATH Growth 6th Grade	##	##	##	##	Yes
MATH Growth 7th Grade	##	##	##	##	Yes
MATH Growth 8th Grade	##	##	##	##	Yes
MATH Growth 9th Grade	##	##	##	##	Yes

8. Criteria 1- Academic Proficiency Science- Page 3A

	All Students		Equity Index		
	Current	Year-to-Year Change	Current	Year-to-Year Change	Disaggregate student groups?
5th Grade Science Scale	##	##	##	##	Yes
8th Grade Science Scale	##	##	##	##	Yes
11th grade Science Scale	##	##	##	##	Yes

9. Criteria 1- Academic Proficiency PE- Page 4A

	All Students		Equity Index		
	Current	Year-to-Year Change	Current	Year-to-Year Change	Disaggregate student groups?
Elementary Grade Science Scale	##	##	##	##	Yes
Middle Grade Science Scale	##	##	##	##	Yes
High School grade Science Scale	##	##	##	##	Yes

10. Criteria 1- Academic Proficiency English Language Proficiency- Page 5A

	All Students		Equity Index		
	Current	Year-to-Year Change	Current	Year-to-Year Change	Disaggregate student groups?
English Language Proficiency	##	##	##	##	Yes
English Language Benchmarks	##	##	##	##	Yes

11. Criteria 1- Academic Proficiency Graduation Rates- Page 6A

	All Students		Equity Index		
	Current	Year-to-Year Change	Current	Year-to-Year Change	Disaggregate student groups?
4-Year Cohort Graduation Rate	##	##	##	##	Yes
6-Year Cohort Graduation Rate	##	##	##	##	Yes

12. Criteria 1- Career and College Readiness- Page 7A

	All Students		Equity Index		
	Current	Year-to-Year Change	Current	Year-to-Year Change	Disaggregate student groups?
Career and College Ready Assessments	##	##	##	##	Yes

13. Career and College Readiness- Page 7B

	All Students		Equity Index		
	Current	Year-to-Year Change	Current	Year-to-Year Change	Disaggregate student groups?
SAT Score	##	##	##	##	Yes
ACT Score	##	##	##	##	Yes
AP Score	##	##	##	##	Yes
College Credit	##	##	##	##	Yes
CTE Certification	##	##	##	##	Yes
ASVAB Assessment	##	##	##	##	Yes
CLEP Assessment	##	##	##	##	Yes
Work Keys Assessment	##	##	##	##	Yes

14. Criteria 1- Career and College Readiness Outcomes- Page 8A

	All Students		Equity Index		
	Current	Year-to-Year Change	Current	Year-to-Year Change	Disaggregate student groups?
Career and College Ready Outcomes	##	##	##	##	Yes

15. Criteria 1- Career and College Readiness Outcomes- Page 8B

	All Students		Equity Index		
	Current	Year-to-Year Change	Current	Year-to-Year Change	Disaggregate student groups?
Trade School	##	##	##	##	Yes
College	##	##	##	##	Yes
Employed full time	##	##	##	##	Yes
Military	##	##	##	##	Yes

16. Criteria 2- Personalization Secondary Landing Page

	All Students		Equity Index		
	Current	Year-to-Year Change	Current	Year-to-Year Change	Disaggregate student groups?
Student Participation in Flexible Pathways	##	##	##	##	Yes
School Offerings of Flexible Pathways	##	##	##	##	No
Student Perceptions of PLPs	##	##	##	##	No

17. Criteria 3- Safe and Healthy Schools

	All Students		Equity Index		
	Current	Year-to-Year Change	Current	Year-to-Year Change	Disaggregate student groups?
Out of School Exclusions	##	##	##	##	Yes
Student Climate Reports	##	##	##	##	No
Staff Climate Reports	##	##	##	##	No

18. Criteria 3- High Quality Staffing

	All Students		Equity Index		
	Current	Year-to-Year Change	Current	Year-to-Year Change	Disaggregate student groups?
Licensed Teachers	##	##	##	##	No
Education Stability	##	##	##	##	No
Staff Survey- Professional Development	##	##	##	##	No
Staff Survey-Evaluation	##	##	##	##	No

19. Criteria 3- High Quality Staffing B

	All Students		Equity Index		
	Current	Year-to-Year Change	Current	Year-to-Year Change	Disaggregate student groups?
First Year Teachers	##	##	##	##	No
Percent of New Teachers over 3 years	##	##	##	##	No
Number of Principals in 3 Years	##	##	##	##	No
Number of Superintendents in 3 years	##	##	##	##	No

20. Criteria 3- High Quality Staffing

	All Students		Equity Index		
	Current	Year-to-Year Change	Current	Year-to-Year Change	Disaggregate student groups?
EQS Staffing ratio	##	##	##	##	No
Return on Investment	##	##	##	##	No
Holding: Per Student Allocation per ESSA yet to be determined	##	##	##	##	No

21. Criteria 3- High Quality Staffing B

	All Students		Equity Index		
	Current	Year-to-Year Change	Current	Year-to-Year Change	Disaggregate student groups?
Nurses Ratio	##	##	##	##	No
Counselor Ratio	##	##	##	##	No
Principal Ratio	##	##	##	##	No
Library/Media Ratio					
Class Size K-3					
Class Size 4-12					

22. Criteria 5- Financial Efficiency

Snapshot	**Accountability Question**	**Proposed Reporting Measure(s):**	**Is SLDS a data source?**	**Data Source/Data Needs**
Financial	Is the school adequately positioned to meet EQS?	An index that compiles the required staffing formulas in EQS.	YES	Finance data- need to calculate positions required under statute and EQS in relation to enrollment
Financial	What is the return on investment for the dollars spent on education?	The overall performance of the school on the previous indicators divided by the spending per equalized pupil.	?	This isn't yet determined
Financial	Whatever the calculation that Bill creates to meet ESSA	?????	?	This isn't yet determined

4.3.1 Major Deliverables

See **Section 4.4** for a listing of Deliverables tied to Phase and Date.

4.4 Project Phases, Milestones and Schedule

Provide a list of the major project phases, milestones and high level schedule. You may elect to include it as an attachment to the report instead of within the body.

The **proposed** milestones/deliverables of the project are summarized in the table below. **The actual dates are not yet finalized at the time of the writing of this IR report.**

Please see **Assessment of Implementation Plan** (Section 7) for details on the activities and methodology which comprise each phase of the project.

Phase	Activity within the Phase	Deliverables	Schedule
Initiating	Define project goal, scope, project stakeholder expectations	Project Charter	May 2017
Planning	Create plans that address PMBOK knowledge areas: scope, time, cost, quality, human resources, communication, risk, procurement, and stakeholder management	Project Management Plan, Stakeholder Management Plan, Change Management Plan, Risk Management Register, Status Report Template	May – June 2017
Executing	Regular updates to existing documentation and reports	Updated project plan, Weekly status reports	Beginning May 2017 and ongoing
	Product Visioning and Conceptualization	Detailed Functional Requirements	May – June 2017
	User Experience and Navigation	User stories and identification of screens and reports to be created; An initial website sitemap will be created and a subset of the most visible web pages, reports and dashboard pages will be identified in order to create wireframes, page layouts and design concepts.	June 2017
	Development Phase 1	Development of the majority of the functionality associated with the system.	June – November 2017
	Development Phase 1 Data Load	Loading of the 2016-2017 school year data into the system to allow for beta testing to begin.	December 2017
	Development Phase 1 Beta Testing	User Acceptance Testing of the beta release of the software. This may potentially include some testing by members of the community. Feedback from this testing will drive development phase 2.	January 2018
	Development Phase 2	Incorporate features that may not have been implemented in Dev Phase 1 and features refinements based on feedback received from the Beta Testing.	May – July 2018
	Development Phase 2 Data Load	Load 2017-2018 school year data into the system in preparation for final rollout.	July 2018
	Development Rollout	Rollout of the State Report Card system.	August 2018
Monitoring and Controlling	Identify and quantify variances, evaluate potential impacts and	Project reporting	Ongoing

Phase	Activity within the Phase	Deliverables	Schedule
	establish corrective actions for any negative variances		
Closing	Obtain final acceptance, confirming that project scope has been completed in full	Knowledge Transfer/Handoff Report, Final Project Report (reconciled back to scope)	August 2018 – February 2019

As part of the Independent Review, we asked BFK to align payments to milestones and they provided the following chart. Acceptance criteria for each deliverable should also be defined. This is noted in the Risk Register.

Deliverable	Invoice Date	Amount
Project kickoff, discovery, project documentation development (e.g., project charter)	July 2017	$34,225
Functional requirements and user experience and validation flow	July 2017	$71,268
Hosting – Year 1	July 2017	$32,000
Development Phase 1	August 2017	$74,134
Development Phase 1	September 2017	$74,133
Development Phase 1	October 2017	$74,133
Development Phase 1	November 2017	$74,133
Technical Documentation and Communications Materials Development	November 2017	$64,859
Development Phase 1 Data Load and Beta Testing	January 2018	$61,333
Help desk/support, maintenance, fixes	January 2018	$17,083
Development Phase 2	May 2018	$46,256
Development Phase 2	June 2018	$46,256
Development Phase 2	July 2018	$46,255
Development Phase 2 Data Load and Testing	July 2018	$49,866
Hosting – Year 2	July 2018	$40,000
Development Rollout	August 2018	$18,000
Help desk/support, maintenance, fixes	August 2018	$17,083
Knowledge Transfer, Training, Handoff Report, Final Project Report	February 2019	$58,027
Total		**$899,044**

1. **Implementation Total: $827,044**
    a. Development, Training, Implementation: $761,100
        i. Labor:
            1. Developers and Data Analysts (includes Training): 3,214 hours (2.5 FTE during peak development time)
            2. Project Management: 1,185 hours
            3. Communications (Toolkit development): 248 hours
                a. The toolkit will be a resource for Vermont school district leaders and principals to engage teachers, parents, community members, and other stakeholders.
            4. Subject Matter Expertise: 210 hours
            5. Help desk: 219 hours (.25 FTE during periods of Beta and production)
    b. Travel: $65,944
        i. Includes 8 onsite trips for 2-3 team members
        ii. Note that this is the non-recurring pricing.
2. **Operations/Recurring Total**: **$72,000:** Hosting Year 1: $32,000; Hosting Year 2: $40,000.
3. **Hourly Rate for future work**: $150

5. Acquisition Cost Assessment

List all acquisition costs in the table below (i.e. the comprehensive list of the one-time costs to acquire the proposed system/service). Do not include any costs that reoccur during the system/service lifecycle. Add or delete lines as appropriate. Based on your assessment of Acquisition Costs, please answer the questions listed below in this section.

The following chart represents the Acquisition Costs for the stated project period. Detailed composition of these numbers are found in the attached project cost spreadsheet.

IT Activity Lifecycle:	5 Years
Total Lifecycle Costs:	**$1.987M**
PROJECT COSTS:	***$1.67M***
Software Costs:	***$0***
Implementation Services:	***$827K***
Internal Staffing:	***$744K***
Hosting:	***$30K***
Other (DII EA, IR):	***$63K***
OPERATING COSTS:	***$321K***
Software Costs:	***$0***
Maintain Software:	***$0***
Internal Staffing:	***$161K***
Hosting:	***$160K***
CURRENT OPERATING COSTS:	**$286K**
Difference Between Current and New Operating Costs:	**$35K increase:** **$22K decrease in State Funding** **$57K increase in Federal Funding**
Funding Source(s) and Percentage Breakdown if Multiple Sources:	See table below

Funding Source(s) and Percentage Breakdown if Multiple Sources:

FUNDING SOURCE	% of TOTAL	FUNDING SOURCE DESCRIPTION	FUNDING APPLIED TO (Implementation or Operations)	FUNDING AMOUNT
STATE FUNDING: Implementation: Operating Budget	37.67%	State Medicaid Special Fund	Implementation	$748,536
STATE FUNDING: Operations: Operating Budget	6.07%	State Medicaid Special Fund/General Fund	Operations	$120,652
Grant Funding: Implementation	4.28%	Nellie Mae Contribution	Implementation	$85,000
Grant Funding: Operations	0.00%	Nellie Mae Contribution	Operations	$0
FEDERAL FUNDING: Implementation	10.07%	SLDS Reallocation	Implementation	$200,000
FEDERAL FUNDING: Implementation	31.82%	SARA Funding/Title I Assessment Fund	Implementation	$632,187
FEDERAL FUNDING: Operations	10.10%	SARA Funding/Title I Assessment Fund	Operations	$200,652
TOTAL:	**100.00%**			**$1,987,027**

5.1 Cost Validation

Describe how you validated the Acquisition Costs.

The Acquisition Costs were validated through the following methods:

1. Comparison of Hourly Rates of Similar Services
2. Comparison with Projects of Similar Scope
3. Comparison with Other Bidders

1. Comparison of Hourly Rates of Similar Services:

Hourly rates range from $150-$200 for Project Management and Software Development roles. Evaluated against market rates, these hourly rates are **comparable**.

2. Comparison with Projects of Similar Scope:

Vendor was asked to name projects they've worked on which are similar in scope and budget, to which they provided the following examples:

With Vermont serving 89,000 students statewide, two client project surface to similar or larger scale. The scope of the project varies slightly, but is analogous in custom software development:

- Houston Independent Schools: BFK developed two software solutions to meet the needs of the district: BFK•Link® and BFK•Award®. Both solutions were designed to scale to meet the needs of the 280,000 student school district, its data storage, transactions, analytics, access, reporting, workflow, and security requirements. These products were cooperatively developed by BFK, HISD and grant funds from private donors. These systems have been in use by the district since 2007 for high-profile programs such as school and teacher growth measures and performance-pay programs awarding more than $250M in teacher bonuses, securely and accurately.
- State of Ohio: BFK•Link® was designed for district use, and modified to scale to serve 611 districts serving more than 1.8M students. This solution for roster verification is supported by Race to the Top funds, and the development costs subsidized through federal, state and private grants. BFK•Learn® software was developed by BFK and serves the professional learning needs of educators throughout Ohio (as well as Tennessee and Georgia). This software has been in use by these states since 2009 and continues today.

Each of these solutions were built to solve specific business needs, has been in multi-year operation, at scale, and meeting all service-level agreements for availability, performance, security and deliverables.

While these projects are comparable in scope, Vendor is unable to share costs of these projects.

3. **Comparison with Other Bidders:**

Four finalist bids were evaluated, and as the table below shows, BFK is in the middle of the pack.

	Implementation	Hosting (Annual)	Maintenance/Support (Annual)	Total Cost Over 5 Years (2 years Impl, 3 years Ops)
Vendor 1	$730,660	$20,400	$73,066	$1,011,058
Vendor 2	$695,231	$90,000	$0	$965,231
BFK	$827,044	$40,000	$0	$947,044
Vendor 4*	$340,000	$5,000	$70,000	$565,000

* This vendor substantially missed the mark on what the project was to deliver (only touching on 1 of the 5 report card areas). As such, of the 3 bidders that proposed to deliver on all deliverables, BFK was the least cost.

In summary, the VT project costs are **within a reasonable range** with other bidders on this project.

5.2 Cost Comparison

How do the above Acquisition Costs compare with others who have purchased similar solutions (i.e., is the State paying more, less or about the same)?

Point of Comparison	Measure
Hourly Rates:	Hourly rates are **comparable** to market rates.
Similarly Scoped Projects:	Cost comparison to other similarly scoped projects not available.
Comparison with other bidders:	Costs are **comparable** to other bids.

5.3 Cost Assessment

Are the Acquisition Costs valid and appropriate in your professional opinion? List any concerns or issues with the costs.

As outlined in the Cost Comparison **Section 5.2** above, in summary, this project costs are comparable to other project costs and appear to be reasonable costs given the expected value to be delivered.

Additional Comments on Acquisition Costs:

None.

6. Technology Architecture Review

After performing an independent technology architecture review of the proposed solution, please respond to the following.

SUMMARY:

1. Software Design, Development, Training and Implementation services from BFK related to developing State Data Report Card reporting system to support ESSA (Every Student Succeeds Act) objectives.
2. Hosting environment provided Expedient.
3. Internal Project Management, Subject Matter, Data Analysts, and Software Development staff supporting the project.

See **Appendix 4** for detailed technology specifications.

1. State's IT Strategic Plan: Describe how the proposed solution aligns with each of the State's IT Strategic Principles:

i. Leverage successes of others, learning best practices from outside Vermont.
ii. Leverage shared services and cloud-based IT, taking advantage of IT economies of scale.
iii. Adapt the Vermont workforce to the evolving needs of state government.
iv. Apply enterprise architecture principles to drive digital transformation based on business needs.
v. Couple IT with business process optimization, to improve overall productivity and customer service.
vi. Optimize IT investments via sound Project Management.
vii. Manage data commensurate with risk.
viii. Incorporate metrics to measure outcomes.

b. The following describes how this project exploits these principles:

i. Leverage successes of others, learning best practices from outside Vermont.
   1. *The proposed solution is specific to Vermont. However, Vendor has completed similar projects for other clients.*

ii. Leverage shared services and cloud-based IT, taking advantage of IT economies of scale.
   1. *The solution is expected to be installed in an external data center (Expedient).*

iii. Adapt the Vermont workforce to the evolving needs of state government.
   1. *The proposed solution is targeted to be used by both internal SOV staff as well as data consumers outside of AOE (SU/SD and public). The areas where Vermont workforce is impacted is in supporting and maintaining the application and as this is in Microsoft .NET tools and database, it is expected to match the needs of state government.*

iv. Apply enterprise architecture principles to drive digital transformation based on business needs.
   1. *If Enterprise Architecture is defined as "alignment between IT and business concerns: to guide the process of planning and design the IT capabilities of an enterprise in order to meet desired organizational objectives", then this project does deploy such principles to drive digital transformation of business needs by*

utilizing current database and web-based technologies to facilitate more efficient business processes and more complete data management (more data tracked, more accurate data).

v. Couple IT with business process optimization, to improve overall productivity and customer service.
    1. *The expected outcome of more accurate and timely data, and improved functionality is expected to improve ability to measure results.*

vi. Optimize IT investments via sound Project Management.
    1. *Both the vendor and SOV are expecting to provide sound Project Management services on this initiative.*

vii. Manage data commensurate with risk.
    1. *The approach to data security is sound. See the SECURITY section below.*

viii. Incorporate metrics to measure outcomes.
    1. *The result of the project, specifically providing accountability measures, are the metrics for this project.*

2. **Service Level(s):** What is the desired service level for the proposed solution and is the technical architecture appropriate to meet it?

   See Service Level Agreement section. Proposed SLAs appear adequate.

3. **Sustainability:** Comment on the sustainability of the solution's technical architecture (i.e., is it sustainable?).

   The proposed solution is to be built on Microsoft platform (.NET development toolset and Microsoft SQL Server Standard database). Solution is expected to be sustainable.

4. **License Model:** What is the license model (e.g., perpetual license, etc.)?

   The proposed solution uses a cost-plus pricing model, fixed-fee, not to exceed. The cost basis is derived from a work-breakdown structure and hours estimated to complete the RFP requirements for software design, development and debugging, project management, training, communications and support. Requests for services outside the scope of the requirements and estimates are offered at BFK standard rates either at time and materials, or a revised estimate with a not-to-exceed acceptance. BFK rates vary from $150 per hour to $200 per hour.

   Other pricing models are available, but because this project is custom-development, the pricing model is limited to cost-plus. Other pricing models used at Battelle for Kids are subscription service fees, licensing fees and time and materials. While the basis of this pricing uses time and materials estimates, BFK is committed to a fixed fee, not to exceed offer to mitigate risks for Vermont AOE.

5. **Security:** Does the proposed solution have the appropriate level of security for the proposed activity it will perform (including any applicable State or Federal standards)? Please describe.

   The overall Application and Data Security Model appears sound given the nature of the data set.

Security Architecture and Design: Describe the Vendor's proposed approach to support technical controls and technology solutions that must be secured to ensure the overall security of the System:

Data Security – Application level:
Report cards (using suppressed data) will be available to parents and the public in general without requiring user registration or login. The application will provide the following application security model:

- The ability to create user accounts with three possible roles: principals, superintendents, and the AOE staff.
- These accounts will be able to see reports cards with unsuppressed data for the school(s) and/or school district where they are associated. For example, the school principal of West High School will be able to log in and see unsuppressed data for his school reports cards only. All other report cards will still be displayed using suppressed data. Only authorized AOE staff will have the ability to see unsuppressed data for all report cards in the system.
- User roles will be granted by school year in order to comply with FERPA student confidentiality regulations.
- A self-service mechanism will allow users to reset their password using secure email validation protocols.

Additionally, due to the features and functional requirements of the Online Report Card System, Battelle for Kids ensures that the application will meet or exceed Level 1 of the OWASP Application Development Security Standards as outlined on the OWASP website (https://www.owasp.org/images/4/4e/OWASP_ASVS_2009_Web_App_Std_Release.pdf).

Level 2 and higher application security levels are required for handling of personal and business to business transactions that process credit card information. In order to meet these requirements, Battelle for Kids proposes the use of the Qualys Cloud platform (https://www.qualys.com/security-compliance-cloud-platform/) to perform fast and efficient external scanning including vulnerability scanning, compliance scanning and web application scanning. However, this level of security is not applicable to this project given the data set and use.

Data Security Model:
The system will provide security to subsets of data depending on the role or privilege associated to an application user. The two big data groups consist of suppressed and unsuppressed data at the state, district or school level.

Additionally, the data center supports a variety of industry and government compliance requirements including SOX, PCI DSS, FISMA and HIPAA, supported by third-party SSAE16/SOC attestation reports.

Vendor indicates that "given that nature of the data stored and displayed by the Report Card system most of the compliance and regulatory requirements are not applicable." However, FERPA data is expected to be in play, which is identified in the Risk Register.

- FERPA is not applicable because the system does not store any student identifiable data.
- PCI is not applicable because the system does not store cardholder data.
- HIPAA is not applicable because the system does not store personally identifiable health information.

However, the system implements security controls for user access (application security and data security models) that are part of FISMA compliance.

Static Code Review Findings:
None conducted. New software.

Penetration Test Findings:
None conducted. New software.

Please see the attached "*BFK_Information_Security_Document.pdf"* for additional information on BFK position relative to security.

6. **Hosting Environment**
    a. Application is hosted at Expedient Data Centers.
    b. See the **HOSTING** section in **Appendix 4** for details.

7. **Compliance with the Section 508 Amendment to the Rehabilitation Act of 1973, as amended in 1998:**
Comment on the solution's compliance with accessibility standards as outlined in this amendment.
Reference: http://www.section508.gov/content/learn

The solution is expected to comply with Section 508 based on the following response from BFK:
The application will provide basic Section 508 compliance, including:

- A text equivalent for every non-text element is provided.
    - Every image, video file, audio file, etc. has an alt tag and the text succinctly describes the content conveyed by the element.
    - Complex graphics are accompanied by equivalent text descriptions.
    - Images that have a function (images with links, image buttons) include an alt tag that describes both the graphic and the link destination.
    - Decorative graphics will have empty alt descriptions. Images with text alternatives in element content are given empty alt text to avoid redundancy.
- Pages will not contain repeatedly flashing images.
- Pages will not contain a strobe effect.
- Support for keyboard input and navigation using a screen reader.
    - The <area> tags will contain an alt attribute.
    - Data tables have the column and row headers appropriately identified with the <th> tag.
    - Tables used strictly for layout purposes do not have header rows or columns.
    - Data table cells are associated with the appropriate headers.
    - Frames are titled with text that facilitates frame identification and navigation.
    - When form controls are text input fields, the LABEL element is used.
    - All form fields are in a logical tab order.
- All information conveyed with color is also available without color, either from context or markup.
    - Color is not used solely to convey important information.
    - Sufficient contrast is provided.
- A method is provided that permits users to skip repetitive navigation links.
    - A link is provided to skip over navigational menus or other lengthy lists of links.
- When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.

8. **Disaster Recovery:** What is your assessment of the proposed solution's disaster recovery plan; do you think it is adequate? How might it be improved? Are there specific actions that you would recommend to improve the plan?

Please see Disaster Recovery/Business Continuity (DR/BC) section described in **Appendix 4**.

In summary, the DR/BC plan appears adequate in terms of ensuring the restoration of critical data and processing within the desired timeframes.

9. **Data Retention:** Describe the relevant data retention needs and how they will be satisfied for or by the proposed solution.

   Please see Backup/Recovery section described in **Appendix 4**.

   In summary, the Data Retention plan appears adequate.

10. **Service Level Agreement:** What is your assessment of the service level agreement provisions that the proposed vendor will provide? Are they appropriate and adequate in your judgment?

    There are **Service Level Agreements** provided by Vendor and Hosting provider to support the application and data center which are outlined below. These appear adequate. These should also be defined in the contract, which is highlighted in the Risk Register.

SUMMARY OF SLAs provided by Vendor:

TECH SUPPORT - SERVICE LEVEL AGREEMENT:

BFK will provide 2nd-level technical support to application functionality ("how to" type of questions) and technical issues or difficulties using the system. Shall a support request need escalation to Battelle for Kids, the Vermont AOE support staff will be able to create support tickets 24x7 by going to the BFK technical support website, by sending an email or by calling our tech support line. Typical issues to be escalated include:

- Application errors.
- Access denied conditions to specific users and/or areas of the application that are not related to permissions.
- Unexpected behaviors to commonly used application functionality.
- Problems accessing specific pages or functionality in the system.
- System/website unavailable or unreachable to users.
- Other unusual situations.

In order to ensure prompt resolution to the case, issues will be escalated using the levels defined below:

Critical Errors – Application is unavailable or all users are unable to perform any tasks in the system.
Business hours: Provide all available documentation and call the BFK Support Team number.
After hours: Provide all available documentation and call the after-hours BFK Support number.
Target response time: 2 hours

High – Issue is affecting isolated areas of functionality with no work-around.
Please create a support ticket with all documentation available and email the Battelle for Kids support team indicating that the ticket is a high priority.
Target response time: 8 hours (within next business day)

Medium – Issue is affecting isolated areas of functionality but there is a work-around.
Please create a support ticket with all documentation available.
Target response time: 2 business days

SYSTEM RESPONSE TIME - SERVICE LEVEL AGREEMENT:

1. System response time will be measured using the 90th percentile method. Using this measurement, 90% of the web application pages will load in 5 seconds or less. The response time will be measured using automated testing tools.

SYSTEM AVAILABILITY - SERVICE LEVEL AGREEMENT (3 9s, 4 9s?):

1. The web application will provide uptime of 99.5% or higher.

BUG FIX – SERVICE LEVEL AGREEMENT:

1. Bug fixes will typically be reported through on of the following mechanisms:
    a. Error conditions identified as part of application development testing.
        i. Under this scenario, these bug fixes are identified prior to the functionality being available to end users and as such will be prioritized and put back into the sprint log and be addressed as part of the development cycle. Unit cases will be developed to ensure this condition is addressed before the functionality is released to the production environment.
    b. Error conditions identified as part of Support tickets troubleshooting.
    c. In this situation, the bug fix SLA will follow the Tech Support SLA described above.

HOSTING SERVICE LEVEL AGREEMENT:

1. Expedient Datacenters provide uptime of 99.99% or higher.

DR/BC DESCRIPTION AND SERVICE LEVEL AGREEMENT:

1. Primary data center is located at Expedient which has alternative available data centers connected by a private 10 Gbps fiber optic ring with multiple internet providers (AT&T, XO Communications, Spectrum Cable, TW Telecom, and OARnet).
2. RPO (recovery point objective): 1 day.
3. RTO (recovery time objective): 24-36 hours.

11. System Integration: Is the data export/reporting capability of the proposed solution consumable by the State? What data is exchanged and what systems will the solution integrate/interface with*?* ***Please create a visual depiction*** and include as **Appendix 1A** of this report. Will the solution be able to integrate with the State's Vision and financial systems (if applicable)?

System integration is not applicable to this project. See **Appendix 1A** for details.

Additional Comments on Architecture:

None.

7. Assessment of Implementation Plan

7.1 Implementation Readiness

After assessing the Implementation Plan, please comment on each of the following.

This section begins with a description of the proposed Implementation Approach submitted by Vendor. This implementation methodology has been proven to be effective with other similar implementations, as noted elsewhere in this report.

Project Management Phases
BFK will appoint an experienced project manager to lead the project team through all phases, as described in "A Guide to the Project Management Body of Knowledge Fifth Edition" (PMBOK).

Initiating
During the initiate phase the project manager will develop the project charter in close consultation with the State project manager (PM). This deliverable ensures alignment on the overall project goal, defines the general scope and problem statement, and defines project stakeholder expectations. The project manager will gather, compile, and analyze information to create the project charter, and will identify key deliverables, high-level milestones, timeline, stakeholders, risks, assumptions, and constraints. This information will be reviewed with stakeholders to ensure agreement before any work begins. As part of this effort, the project manager will conduct a benefits analysis with relevant stakeholders to ensure strategic alignment. The BFK project manager will also confirm project staffing and ensure timely onboarding of designated staff to project goals.
***Output**: Project Charter*

Planning
During the planning phase the project manager will develop the project plan. The project plan will include the sub-plans from each of the PMBOK areas: scope, time, cost, quality, human resources, communication, risk, procurement, and stakeholder management. BFK will refine the scope, collect requirements, identify constraints, document assumptions, and create the work breakdown structure (WBS). Using the WBS, the project manager will ultimately create the detailed project schedule in Microsoft Project. The schedule will be built using schedule best practices (e.g., all tasks have dependencies, use of effort rather than duration, milestone tasks, and minimal constraint dates), baselined with a clearly defined critical path, and used to create various scheduling diagrams (e.g., Gantt charts, resource usage graphs, and project calendars). The project schedule along with the risk register and issue log will be cloud accessible at any time for those at the AOE, allowing the State PM to access the most up-to-date information. The project plan will be updated weekly, if not daily, as appropriate. The BFK project manager will also develop a detailed project management plan to cover scope management and promote the effective management of task execution. The plan will spell out the nature of the project deliverables, including what is in and out of scope and any required specifications. Thoughtful review of potential risks by the project team will allow for improved risk mitigation throughout the project, resulting in a more efficient process and a greater focus on the desired outcomes. After the BFK and State PMs have identified a comprehensive list of stakeholders, the BFK project manager will develop a stakeholder management plan to analyze the needs, interests, and potential impact of each stakeholder in order to effectively manage expectations and engage stakeholders in project decisions at appropriate intervals and levels of involvement. The stakeholder management plan will help the team best prepare for a meeting to present the project plan to key stakeholders and gather their critical feedback and perspectives. In consultation with the State PM, the BFK PM will create a change management plan that will help the Agency navigate through the state of transition involved in developing and using a new state report card system. The BFK PM will plan and lead the project kickoff meeting to communicate key milestones, share relevant information and engage stakeholders. BFK suggests three components to the project kickoff meeting: senior management and executive steering committee kickoff, core project team kickoff, and stakeholder

kickoff. All three meetings will take place onsite at the AOE office. The BFK PM will schedule regular status meetings and distribute weekly status reports, along with quarterly executive steering committee meetings and high-level status reports that contain information most critical for this audience. BFK will work with the State PM to determine the proper formatting and structure of the status reports. The BFK PM will share examples of status report formats that have been used with other clients in similar work.
***Outputs**: Project Management Plan, Stakeholder Management Plan, Change Management Plan, Risk Management Register, Status Report Template*

Executing
During the executing phase, the BFK PM will lead the team through the tasks outlined in the project plan, ensuring that the work is aligned to both the change management, quality management, and stakeholder management plans. He/she will communicate regularly with the State PM to share progress updates and keep him/her up to speed on key accomplishments, issues, and risks, and to manage and implement change orders when needed. To keep stakeholders engaged and informed, the BFK PM will manage the flow of communication by following the communication plans described in the stakeholder management plan, in addition to preparing presentations for state stakeholders as needed. The BFK PM will provide onsite support throughout the engagement. We estimate that there will be seven on-site trips for the PM and subject matter experts to discuss and review key deliverables throughout the two-year engagement, from the initial project kickoff to the final project knowledge transfer. On a weekly basis, the project team will hold a status meeting. Scheduled and facilitated by the BFK project manager, these meetings will provide a standing opportunity for the AOE to stay up to date on progress and discuss the weekly status reports in more detail. While the State and BFK project managers will decide the exact format at or before the project kickoff, we recommend that the BFK project manager will send out an agenda 24 hours in advance and send the discussion log and action items within 24 hours after the meeting concludes. During each meeting, the BFK project manager will review progress from the past week, clearly articulating what has been completed and what is outstanding as it pertains to the project schedule, providing context for any work delays and recommendations for course correction and/or schedule updates, where needed. There will also be a regular agenda item to review planned work for the next two weeks at the task level.
***Outputs**: Updated project plan, Weekly status reports*

Monitoring and Controlling

By maintaining a close proximity to the work, the BFK project manager will be able to provide the benefit of early identification of potential problems. As a result, the project team will have a greater chance of adjusting course when needed. In order to measure and report out on project performance, the BFK project manager will identify and quantify variances, evaluate potential impacts and establish corrective actions for any negative variances (e.g., schedule deviations). Further, he/she will closely monitor, analyze and proactively manage the critical path, looking at various scheduling diagrams to get a deeper insight into the project schedule. The analysis of schedule dependencies will also allow the BFK project manager to check if there is a more efficient or effective way to do the project. For example, determining where free float exists could allow for further improvement or optimization of the project schedule. In the event that changes are requested, the BFK project manager will work with the State PM to document the request and secure stakeholder approval, following through on the accepted change to ensure all project documentation is updated to reflect the change. The BFK project manager will update the status of tasks in the project plan and weekly status report, including clear status indicators that demonstrate how the work is progressing and explanations for any changes. He/she will also maintain issue and risk logs, to document the latest assessment of each along with estimated severity levels and mitigation plans. In addition to monitoring and assessing risk, we will evaluate the effectiveness of the response. To ensure high quality is met, the BFK project manager will verify that deliverables meet quality standards as well as capture, analyze and manage lessons learned in order to enable continuous improvement. Throughout this work, it will be important to stay aligned to the goals outlined in the change management plan to ensure successful adoption of the new system at the AOE.

***Output**: Project reporting*

Closing

During this stage, the BFK project manager will work with the State PM to obtain final acceptance, confirming that project scope has been completed in full and that both parties obtain financial, legal, and administrative closure. BFK will prepare and share the final report document and convey project performance and evaluation of work performed. This will include lessons learned as part of a comprehensive project review that will help to enhance the AOE knowledge base, both for supporting this particular system moving forward, and for executing related technical projects in the future. As part of this process, the PM will facilitate a detailed knowledge transfer from BFK staff to the AOE, including the transfer of deliverable ownership to the assigned stakeholders. BFK will also obtain feedback from relevant stakeholders to evaluate their satisfaction with the project work.

***Outputs**: Knowledge Transfer/Handoff Report, Final Project Report (reconciled back to scope)*

1. **The reality of the implementation timetable**
    a. Implementation: 13 months (July, 2017 – August, 2018)
    b. Knowledge Transfer, Training: 6 months (September, 2018 – February 2019)
    c. See **Section 4.4** for Deliverables/Milestones schedule.

    This is a reasonable schedule given the vendor experience with other similar projects.

2. **Training of users in preparation for the implementation**

    The vendor approach to training, described below, appears sound, and has worked well with vendor's other clients. This training approach appears adequate.

    Training to Vermont AOE Technical Staff
    Technical knowledge transfer sessions will be scheduled to train the Vermont AOE staff who will be responsible for maintaining the application in the future. This technical training will be inclusive of all components developed as part of the Online Report Card System including, architecture, database design, programming practices, application components, installation, and troubleshooting. It is expected that the Vermont AOE technical staff is knowledgeable and has prior experience developing in the application technology stack as described in this document (e.g., Microsoft SQL Server, Visual Studio, C#, ASP.NET MVC, Bootstrap, etc.).

    Other suggestions to Vermont AOE staff includes:
    - Early participation in the project highly encouraged
    - Invited to participate in SCRUM meetings remotely
    - Invited to participate in Functional and Technical discussions
    - Participate in beta testing
    - Invited to be part of the development team to get acquainted with the solution early

    Training for the field
    BFK proposes to develop a customized toolkit for Vermont school district leaders and principals about the state report card being implemented across the state. The communications toolkit will be a resource to support district leaders and principals who are engaging teachers, parents, community, and other stakeholders in conversations about the report card and how the information can and will be used in the district. The toolkit will offer a comprehensive series of resources for all stakeholder groups to learn about the state report card conceptually, understand benefits of the information, and engage in activities to interpret and reflect on the information.

    Communication toolkit
    - User guide
    - Message map
    - Sample editorial calendar
    - FAQs
    - Facilitation, parent, and educator guides
    - Power point presentation
    - Video screencast of application functionality (with narration and animation)

BFK will work with the AOE to ensure all communication/training materials are effective, cohesive, and personalized, as appropriate to all audiences. BFK will develop all content and graphic design for these materials in partnership with the AOE's vision (specific materials to be included in the toolkit are described question #3 below). In addition, BFK will facilitate a strategy conversation with the AOE to inform implementation and recommended channels to reach all audiences (e.g., website, newsletter, social media).

Technical documentation (training for Vermont AOE Technical staff)
Battelle for Kids will create and maintain development documentation of the system including: high level architecture diagrams, database diagrams, data dictionary, technical design documents, and hosting and network diagrams. Additionally, the source code will be self-documented with developer notes.

3. **Do the milestones and deliverables proposed by the vendor provide enough detail to hold them accountable for meeting the Business needs in these areas:**

   A. Project Management
   B. Training
   C. Testing
   D. Design
   E. Conversion (if applicable)
   F. Implementation planning
   G. Implementation

Please see Deliverables/Milestones Section (**Section 4.4**) for detail on Milestones and Deliverables as well as the Project Schedule listed in the beginning of this section.

The short answer is yes, there is sufficient detail where the Vendor can be held accountable with exceptions noted throughout this section highlighted in yellow.

4. **Does the State have a resource lined up to be the Project Manager on the project? If so, does this person possess the skills and experience to be successful in this role in your judgement? Please explain.**

   a. AOE has assigned Patrick Halladay to this effort. Mr. Halladay is expected to allocate 50% of his time to this effort.
   b. Vendor has one staff member assigned to this effort for PM services, as described below.
   c. In summary, Project Management approach, resources, time allocation and skill set, are adequate.

5. **Readiness of impacted divisions/departments to participate in this solution/project**

   a. **AOE has assembled the following team for this project:**
      i. **Project Sponsor,** Deputy Secretary: Amy Fowler
      ii. Deputy Secretary, Chief Financial Officer: Bill Talbott
      iii. IT Director: Brian Townsend
      iv. **Project Manager:** Patrick Halladay
      v. **Subject Matter Experts:**
         1. Wendy Geller, Director of Analysis & Data Management
         2. Jennifer Perry, Data Administration Director
         3. Glenn Bailey, Education Analysis & Data Management Director

4. Mike Bailey, Special Education Data Manager/Business Analyst
5. David Kelley, IT Business Analyst III
6. Beth Ann Willey, Business Analyst
7. Lila Denton, Business Analyst / EDFacts Coordinator
8. John Nelson, Data and Reporting Coordinator, CTE
9. Alena Marand, Compliance Project Manager and Education Analyst
10. Rachel Stanger, Education Statistician II

vi. DII Oversight Project Manager: Philip Dessureau
vii. DII EA Architect: Amber DeVoss
viii. DII Security Officer: Glenn Schoonover

Time expected from AOE annually per BFK:

- Software Developer to maintain and update the web based application (estimate 2-4 hours/month).
- Data Analyst responsible for data updates as needed (typically annual basis, estimate 40 hours for annual data loading and 2-4 hours/month for maintenance).
- Application Owner/Project Manager to define configuration of the application and define roles (estimate 2-4 hours/month).
- Support Specialist to answer any functional or technical-related question and maintain educator accounts (estimate 4-8 hours - seasonal in nature).

b. The vendor team includes:

Name	Role	% time	Experience
Abbey Smanik	Project Manager	40%	PM for BFK product enhancements, Tulsa Public Schools technology work
Oscar Paredes	Technology Lead	7%	Ohio Statewide Rollout of Roster Verification, BFK Link Development, Los Angeles USD, Atlanta Public Schools
Paul Hopkins	Subject Matter Expert	7%	Vermont Education Quality Review design, messaging and evaluation; As a former teacher, principal and Director of Exceptional Education, provided professional learning around implementing Ohio's New Learning Standards and how to assist educators most effectively understand and use Ohio State Report Card information to move education forward; Arkansas Department of Education ESSA plan and state report card dashboard design
Courtney Wanat	Software Development Lead	20%	Ohio Statewide Rollout of Roster Verification, BFK Link Development, Los Angeles USD, Atlanta Public Schools
Chris Melnik	Software Development	27%	Ohio Statewide Rollout of Roster Verification, BFK Link Development, Los Angeles USD, Atlanta Public Schools
Carl Schrader	Software Development	27%	Ohio Statewide Rollout of Roster Verification, BFK Link Development
Matt Geiger	Data Analyst	27%	Ohio Statewide Rollout of Roster Verification, BFK Link Development, Atlanta Public Schools
Kim Ratcliff	Communications	8%	Vermont Education Quality Review messaging, evaluation, and video series; BFK Link communications and marketing; Ohio's original hard copy and online State Report Card design, development, and launch; Arkansas Department of Education ESSA plan and state report card dashboard design

*Note that time is averaged out over entire project period (2 years). Will be higher during peak development times, lower during lighter portions of the work.

Based on our experience conducting IRs, when comparing this project to other technology projects, both the vendor and department staff appear to be fully prepared to undertake a project of this scope.

6. Adequacy of design, development, migration/conversion, and implementation plans

This section describes vendor's approach to **design and development**.

The following describes the Vendor methodology for design and development. In summary, the **Design and Development** approach appears sound and adequate.

Application Development Approach
BFK follows a SCRUM based agile development methodology that is both iterative and incremental. This approach allows developers to efficiently identify, build, validate, and deliver the functionality required by the AOE online report card system. This approach also provides flexibility throughout the project to make adjustments not only to the process but also to the software features being developed in order to refine the requirements to address unexpected conditions and to ensure a friendly usable application.

Application Development Cycle
As noted above, the application development cycle will follow a modified SCRUM based approach. Upon identification and documentation of the functional requirements and approval of the high level designs, the product backlog will be created. This product backlog is a prioritized list of all the features with approximate development estimates and timelines. Once the Product Backlog is defined, the development will schedule the work in two-week sprints. Each sprint consists of a planning session, which takes place right before or at the beginning of the sprint. During this planning meeting the team determines what requirements will be worked on with input from the AOE product owner. The development team breaks these requirements into specific tasks and the works is scheduled. At the end of each sprint, a sprint review meeting is scheduled where the team shows the work accomplished to product stakeholders. Similarly, sprint retrospectives meetings will be scheduled where the team discussed how the sprint went and plans for improvements.

The proposed approach includes two development cycles as follows:

1. Development Phase 1: This phase includes the development the majority of the functionality associated with the system. The purpose of this is to have the application ready for the Beta Testing in the winter 2017 timeframe.
2. Development Phase 2: This phase will incorporate features that may not have been implemented in Phase 1 and features refinements based on feedback received from the Beta Testing.

Product Visioning and Conceptualization
BFK will facilitate onsite sessions where the project team will define the overall vision for the Vermont Online Report Card System (ORCS) based on the requirements specified on the RFP document. Based on these discussions, BFK will present a draft proposal to the review team assembled by the AOE and provide the opportunity for discussion, validation and refinement.

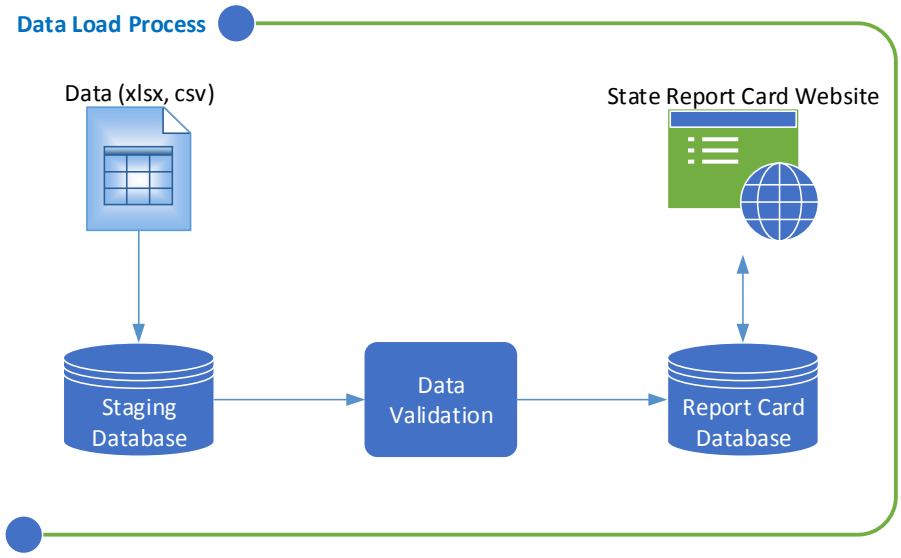
This section describes vendor's approach to **System Integration**.

The following describes the Vendor methodology for System Integration. In summary, the **System Integration** approach appears sound and adequate.

System Integration for this project will center on ETL (Extract, Transform, and Load) activities in order to pull data out of systems and push it to the Operational Data Store from which the reports will be run. The SLDS (State Longitudinal Data System) will be the main data source for the ODS. The Vendor is expected to provide a file layout into which the data should be formatted.

This process is expected to occur as follows:

1. BFK and Vermont AOE will agree upon a common data set and data layouts needed to populate the new State Report Card system.
2. Vermont AOE will be responsible for extracting this data into pre-determined formats (XML, CSV, XLS, etc.) and provide these files to BFK.
3. BFK will provide a secure transfer mechanism (SFTP or similar) for Vermont AOE to upload the data to the data staging servers.
4. BFK will then proceed to load the data into the system using a semi-automated ETL process.



1. **BFK and Vermont AOE will agree upon a common data set and data layouts needed to populate the new State Report Card system.**
    a. The final metrics and data sources have not been fully identified until the Vermont State Plan is approved and assessment vendors are identified. However, vendor suggests defining a common data layout for the different data sources. This requires collaboration between AOE and BFK to leverage existing structures and streamline the process as much as possible.
2. **Vermont AOE will be responsible for extracting this data into pre-determined formats and providing these files to BFK.**
    a. Vendor high-level architecture includes the creation of a centralized Data Stage (SQL server database) as a central hub for the collection of data from multiple sources. The approaches for transporting and populating the data into this Data Stage are (in order of preference):

i. **Vermont AOE to build data transfer programs** that populate this database directly from the data source instead of sending individual data files. This is the ideal stage and the main rationale behind the creation of a Data Stage database. If not possible initially in the project this can be implemented and streamlined in the future as well.
ii. **Vermont AOE to create data extractions** of each individual Data source in either CSV, or XML format.

3. **BFK will provide a secure transfer mechanism (SFTP or similar) for Vermont AOE to upload the data to the data staging servers.**
    a. Only applicable if 2.a is selected above
4. **BFK will then proceed to load the data into the system using a semi-automated ETL process.**
    a. Data will manually be loaded into the Data Stage database using SQL Importer.
    b. BFK will develop a series of Scripts to:
        i. Validate the data being sent including several checks for conditions such as missing critical fields, referential integrity checks, valid values, etc.
        ii. Prepare data for data load.
        iii. Perform the actual data load.

This section describes vendor's approach to **Conversion/Migration**.

Conversion/Migration is not part of the Vendor scope of work for this project.

There are no data migration services expected nor requested of the Vendor.

This section describes vendor's approach to **Implementation**.

Testing and Deployment
Even though the product is shippable at the end of the sprint, BFK considers it important to schedule a dedicated testing time where in depth functional and stress testing is performed in the system before is deployed to the production environment. BFK will use automated testing tools to perform regression and stress testing to ensure potential bugs are captured early during the development phase. Special attention will be paid to application performance and response time.

Application Rollout Approach
BFK follows a well-established deployment and rollout strategy that provides several checkpoints and validation points to ensure the application presents data accurately to end users. This approach has been successfully used in the past when rolling out online school, principals and teacher reports in Los Angeles USD, Hillsborough County Public Schools, and Tulsa Public Schools, Value Added and Comparative Growth Measures Reports in Houston ISD among others where embargo periods are established based on user roles. In the case of Vermont, the following phases are suggested:

- Open System to Vermont AOE Staff: During this phase data will only be visible to Vermont AOE staff upon login to the system. This provides an opportunity for verification and functional validation of the data being presented. Vermont AOE will be able to visualize both suppressed and unsuppressed data. Upon approval from AOE the following phase will be initiated.
- Open System to superintendents: Superintendents will be able to see their district reports cards upon login to the system. The system will provide the ability to see both suppressed and unsuppressed report cards. Superintendents will not be able to see report cards from any other district.

- Open System to Principals: The next phase allows principals to see their school report card upon login to the system in either suppressed or unsuppressed mode. They will also be able to see suppressed data report cards for other schools within their district.
- Open System to Public in General: The last phase, after going through all the validation phases, is to open the system to the public in general. All report cards (showing suppressed data) will be available to the public.

BFK indicates that variations to the model described above can be accommodated, such as allowing school principals to see their school report card before, superintendents, or allowing superintendents to see reports cards for all districts with the appropriate suppression logic.

Technical Documentation and Knowledge Transfer

BFK will create and maintain development documentation of the system including: high level architecture diagrams, database diagrams, data dictionary, technical design documents, and hosting and network diagrams. Additionally, the source code will be self-documented with developer notes. A significant advantage to using the Ed-Fi technology components is the richness of the documentation already available to the public (https://techdocs.ed-fi.org/display/ETKB/Ed-Fi+Tech+Docs) including data standards, diagrams, data models, developers guide, API client developers guide, technical reference materials, etc.

Technical knowledge transfer sessions will be scheduled to train the Vermont AOE staff who will be responsible of maintaining the application in the future. This technical training will be inclusive of all components developed as part of the Online Report Card System including, architecture, database design, programming practices, application components, installation, and troubleshooting. It is expected that the Vermont AOE technical staff is knowledgeable and has prior experience developing in the application technology stack (e.g., Microsoft SQL Server, Visual Studio, C#, ASP.NET MVC, Bootstrap, etc.). As AOE staff is just starting use of this technology, this is noted in the Risk Register.

Technical Support

BFK support will be limited to providing 2nd-level technical support to application functionality (how to type of questions) and technical issues or difficulties using the system. The Vermont AOE will be responsible of managing first level line of support. Shall a support request need escalation to Battelle for Kids, the Vermont AOE support staff will be able to create support tickets 24x7 by going to the BFK technical support website, by sending an email or calling BFK technical support line.

In summary, the **Implementation** approach appears sound and adequate.

7. **Adequacy of support for design, development, conversion/migration, and implementation activities**

    a. **DESIGN/DEVELOPMENT:**
        i. Both Vendor and AOE demonstrate adequate support in this area.

    b. **CONVERSION/MIGRATION:**
        i. Both Vendor and AOE demonstrate adequate support in this area.

    c. **IMPLEMENTATION:**
        i. Both Vendor and AOE demonstrate adequate support in this area.

8. **Adequacy of agency and partner staff resources to provide management of the project and related contracts (i.e. vendor management capabilities)**
    a. Both Vendor and AOE demonstrate adequate support in this area. See section above regarding Project Management assignments from both Vendor and AOE.

9. **Adequacy of testing plan/approach**

    There was no clear testing approach defined in the Vendor proposal. As part of the IR process, the Vendor was asked to elaborate on their approach to testing, and provided the description below. This lack of detail is noted in the Risk Register.

    Vendor Testing Approach:
    1. **Unit Testing:** Developers will use a test-driven development approach. Unit tests will be written to validate individual units of logic. These tests will run automatically when the code is built to ensure potential bugs are captured early during the development phase and facilitate regression testing.
    2. **Load Testing:** Visual Studio Enterprise Edition will be used for load testing. Scripts will be created to step through critical pages within the application and the tool will run the script for a significant number of users at a time. During the test, key indicators such as Memory Usage, Average Page Time, Average Response Time, CPU utilization (web and SQL servers), and IIS Queue Size will be monitored.
    3. **Manual Testing:** This will be done by a set of individuals who will test the functionality of the application and ensure that it meets all of the requirements defined within the use cases.
    4. **User Acceptance Testing:**
        a. Will be done at all phases of the design and development process, beginning with the wireframes.
        b. Will continue throughout the development process to ensure that requirements are being met at each step of the development. This testing will be completed in the development and test environments.
        c. When the software is released in the production environment in beta version, additional UAT will be performed. This may potentially include some testing by members of the community.
    5. All testing will be tracked using Jira software.

    AOE Testing Approach:
    1. Once the Vendor unit testing is completed, the units are turned over the AOE for User Acceptance Testing.

    In summary, the **Testing Plan/Approach** has questions related to scope and responsibility that should be addressed in the Risk Register and Contract.

10. General acceptance/readiness of staff

The overall Acceptance and Readiness of staff is strong. The team is comprised of qualified and interested members, who are highly interested and motivated to deploy this solution.

Additional Comments on Implementation Plan:

None.

7.2 Risk Assessment & Risk Register

*After performing a Risk assessment in conjunction with the Business, please create a **Risk Register** as an **Appendix 2** to this report that includes the following:*

1. ***Source of Risk**: Project, Proposed Solution, Vendor or Other*
2. ***Risk Description**: Provide a description of what the risk entails*
3. ***Risk ratings to indicate**: Likelihood and probability of risk occurrence; Impact should risk occur; and Overall risk rating (high, medium or low priority)*
4. ***State's Planned Risk Strategy**: Avoid, Mitigate, Transfer or Accept*
5. ***State's Planned Risk Response**: Describe what the State plans to do (if anything) to address the risk*
6. ***Timing of Risk Response**: Describe the planned timing for carrying out the risk response (e.g. prior to the start of the project, during the Planning Phase, prior to implementation, etc.)*
7. ***Reviewer's Assessment of State's Planned Response**: Indicate if the planned response is adequate/appropriate in your judgment and if not what would you recommend.*

See **Appendix 2.**

Additional Comments on Risks:

None.

8. Cost Benefit Analysis

This section involves four tasks:

1) *Perform an independent Cost Benefit Analysis.*

2) ***Create a Lifecycle Cost Benefit Analysis spreadsheet*** *as an* ***Appendix 3*** *to this report. A sample format is provided.*

a) The cost component of the cost/benefit analysis will include all one-time acquisition costs, on-going operational costs (licensing, maintenance, refresh, etc.) plus internal costs of staffing and "other costs". "Other costs" include the cost of personnel or Vendors required for this solution, enhancements/upgrades planned for the lifecycle, consumables, costs associated with system interfaces, and any costs of upgrading the current environment to accept the proposed solution (new facilities, etc.).

b) The benefit side of the cost/benefit will include: 1. Intangible items for which an actual cost cannot be attributed. 2. Tangible savings/benefit such as actual savings in personnel, Vendors or operating expense associated with existing methods of accomplishing the work which will be performed by the proposed solution. Tangible benefits also include additional revenue which may result from the proposed solution

c) The cost benefit analysis will be for the IT activity's lifecycle.

d) The format will be a column spreadsheet with one column for each year in the lifecycle. The rows will contain the itemized costs with totals followed by the itemized benefits with totals.

e) Identify the source of funds (federal, state, one-time vs. ongoing). For example, implementation may be covered by federal dollars but operations will be paid by State funds.

3) *Perform an analysis of the IT ABC form (Business Case/Cost Analysis) completed by the Business.*

4) *Respond to the questions/items listed below.*

1. **Analysis Description:** Provide a narrative summary of the cost benefit analysis conducted: The approach used was to gather all costs associated with project for a **5 year period**, identify revenue sources for the project, and identify tangible and intangible benefits that might also be used as revenue sources or expense reductions.

    a. COST COMPONENT: See the attached spreadsheet referenced in **Appendix 3** to gain an understanding of:
        i. Source of Funds
        ii. Use of Funds
        iii. Change in Operating Costs

    b. BENEFIT COMPONENT:
        i. See the Tangible and Intangible Benefits described below.

2. **Assumptions:** List any assumptions made in your analysis.
    a. Staff reductions are not expected or contemplated through the implementation of this solution.
    b. There is no revenue recovery anticipated.
    c. Costs are segmented into **Project Costs** and **Operational Costs**.

3. **Funding:** Provide the funding source(s). If multiple sources, indicate the percentage of each source for both Acquisition Costs and on-going Operational costs over the duration of the system/service lifecycle.
    a. The primary source of funds include the following, the detailed amount from which are specified in the attached Project Cost spreadsheet referenced in **Appendix 3**:

Funding Source(s) and Percentage Breakdown if Multiple Sources:

FUNDING SOURCE	% of TOTAL	FUNDING SOURCE DESCRIPTION	FUNDING APPLIED TO (Implementation or Operations)	FUNDING AMOUNT
STATE FUNDING: Implementation: Operating Budget	37.67%	State Medicaid Special Fund	Implementation	$748,536
STATE FUNDING: Operations: Operating Budget	6.07%	State Medicaid Special Fund/General Fund	Operations	$120,652
Grant Funding: Implementation	4.28%	Nellie Mae Contribution	Implementation	$85,000
Grant Funding: Operations	0.00%	Nellie Mae Contribution	Operations	$0
FEDERAL FUNDING: Implementation	10.07%	SLDS Reallocation	Implementation	$200,000
FEDERAL FUNDING: Implementation	31.82%	SARA Funding/Title I Assessment Fund	Implementation	$632,187
FEDERAL FUNDING: Operations	10.10%	SARA Funding/Title I Assessment Fund	Operations	$200,652
TOTAL:	**100.00%**			**$1,987,027**

Implementation Costs and Funding:	**$1,665,723**
Operational Costs and Funding:	**$321,304**

4. **Tangible Benefits:** Provide a list and description of the tangible benefits of this project. Tangible benefits include specific dollar value that can be measured (examples include a reduction in expenses or reducing inventory, with supporting details).
    a. There are no tangible benefits that can be monetized through this project.

5. **Intangible Benefits:** Provide a list and description of the intangible benefits of this project. Intangible benefits include cost avoidance, the value of benefits provided to other programs, the value of improved decision making, public benefit, and other factors that become known during the process of analysis. Intangible benefits must include a statement of the methodology or justification used to determine the value of the intangible benefit.
    a. Ability to leverage BFK's technical expertise in the education arena to build a web-based State Report Card without having to staff in-house team and incur associated hiring processes and costs.
    b. Scalability: BFK will be able to help build out this technology to the degree specified by AOE at a quicker pace than if AOE needed to recruit, hire, and train its own team.
    c. The technology will be built using open standards such as HTML5, XML, JQuery UI, JSON, Bootstrap, and perhaps Ed-Fi technology components, etc. that reduce the overall cost of the technology investment.
    d. The application will be built using proven enterprise level technologies familiar to Vermont AOE technology staff minimizing learning curves and training costs.
    e. Support for Vermont AOE staff as they focusing their efforts to advance educational reform in the state of Vermont.
    f. Vermont schools will benefit from a streamlined and consistent reporting system aligned to state and federal standards.

6. **Costs vs. Benefits:** Do the benefits of this project (consider both tangible and intangible) outweigh the costs in your opinion? Please elaborate on your response.
    a. There are no tangible dollar benefits with this project.
    b. There is no monetary value assigned to the intangible benefits.
    c. Given current operating costs of $286K and the new expected operating costs of $321K, we expect operating cost changes to increase by $35K, with a $1.67M implementation cost to achieve that, $900K of which goes to Vendor, and $770K covering internal State costs.
    d. As such, the monetary benefits do not outweigh the costs. Monetary benefits should not be the reason to pursue this project.

7. **IT ABC Form Review:** Review the IT ABC form (Business Case/Cost Analysis) created by the Business for this project. Is the information consistent with your independent review and analysis? If not, please describe.
    a. Reviewed the IT ABC Form for this project and the project cost spreadsheet attached to this IR Report.
    b. It is a comprehensive and fairly detailed cost analysis. Both the Implementation and Operational cost totals were compared to the IR Project Cost Spreadsheet, and numbers are significantly different, per the following chart:

	IT ABC Form Implementation Costs	Project Cost Spreadsheet Implementation Costs	Delta: Implementation Costs IT ABC Form/(Project Cost Spreadsheet)		IT ABC Form Annual Operating Costs	Project Cost Spreadsheet Annual Operating Costs	Delta: Operating Costs IT ABC Form/(Project Cost Spreadsheet)
Configuration/Installation/ Implementation	$827,044	$827,044	$0		$0		
Contracted Services for Project Management	$0				$0		
Other Contracted Professional Services for Implementation	$0	$0			$0		
State Labor for Project Management	$31,191	$114,400	-$83,209		$0		
Other State Labor to Implement the Solution	$111,301	$629,200	-$517,899		$0		
Software/Licenses	$0				$5,400	$0	$5,400
Hosting Provider	$32,000	$32,000	$0		$40,000	$40,000	$0
Hardware	$0				$0		
Equipment or Supplies	$0				$0		
Vendor Annual Maintenance/Service Costs	$0				$0		
State Labor to Operate & Maintain the Solution	$0				$25,322	$53,768	-$28,446
Other Costs (please describe):	$0				$0		
Sub-total:	**$1,001,536**	**$1,602,644**	**-$601,108**		**$70,722**	**$93,768**	**-$23,046**
DII OPM	$30,046	$48,079	-$18,033		*3 years*	*3 years*	*3 years*
Independent Review	$25,000	$15,000	$10,000				
TOTALS:	**$1,056,582**	**$1,665,723**	**-$609,141**		**$212,166**	**$281,304**	**-$69,138**
TOTAL PROJECT COSTS (Impl plus Ops):	**$1,268,748**	**$1,987,027**					
TOTAL PROJECT COST DELTA: IT ABC Form/(Project Cost Spreadsheet):		**-$718,279.24**					

Additional Comments on the Cost Benefit Analysis:

No additional comments.

9. Impact Analysis on Net Operating Costs

1.) Perform a lifecycle cost impact analysis on net operating costs for the agency carrying out the activity, minimally including the following:
a) Estimated future-state ongoing annual operating costs, and estimated lifecycle operating costs. Consider also if the project will yield additional revenue generation that may offset any increase in operating costs.
b) Current-state annual operating costs; assess total current costs over span of new IT activity lifecycle
c) Provide a breakdown of funding sources (federal, state, one-time vs. ongoing)
2.) Create a table to illustrate the net operating cost impact.
3.) Respond to the items below.

As noted in **Section 1.1** above, the Cost Summary for this project is:

IT Activity Lifecycle:	5 Years
Total Lifecycle Costs:	**$1.987M**
PROJECT COSTS:	***$1.67M***
Software Costs:	***$0***
Implementation Services:	***$827K***
Internal Staffing:	***$744K***
Hosting:	***$30K***
Other (DII EA, IR):	***$63K***
OPERATING COSTS:	***$321K***
Software Costs:	***$0***
Maintain Software:	***$0***
Internal Staffing:	***$161K***
Hosting:	***$160K***
CURRENT OPERATING COSTS:	**$286K**
Difference Between Current and New Operating Costs:	**$35K increase:** **$22K decrease in State Funding** **$57K increase in Federal Funding**
Funding Source(s) and Percentage Breakdown if Multiple Sources:	See table below

Funding Source(s) and Percentage Breakdown if Multiple Sources:

FUNDING SOURCE	% of TOTAL	FUNDING SOURCE DESCRIPTION	FUNDING APPLIED TO (Implementation or Operations)	FUNDING AMOUNT
STATE FUNDING: Implementation: Operating Budget	37.67%	State Medicaid Special Fund	Implementation	$748,536
STATE FUNDING: Operations: Operating Budget	6.07%	State Medicaid Special Fund/General Fund	Operations	$120,652
Grant Funding: Implementation	4.28%	Nellie Mae Contribution	Implementation	$85,000
Grant Funding: Operations	0.00%	Nellie Mae Contribution	Operations	$0
FEDERAL FUNDING: Implementation	10.07%	SLDS Reallocation	Implementation	$200,000
FEDERAL FUNDING: Implementation	31.82%	SARA Funding/Title I Assessment Fund	Implementation	$632,187
FEDERAL FUNDING: Operations	10.10%	SARA Funding/Title I Assessment Fund	Operations	$200,652
TOTAL:	**100.00%**			**$1,987,027**

1. See the spreadsheet attached in **Appendix 3** to review impact to Operating Costs.
2. Provide a narrative summary of the analysis conducted and include a list of any assumptions.
    a. The detailed spreadsheet provided with this analysis breaks out costs as follows:
        i. Implementation (Project) Costs: Costs tied specifically to the Vendor. In other words, those costs that are incurred because we are undertaking the project.
        ii. Operating Costs: Internal costs, consisting of staffing and telecommunication costs, and external costs consisting of contracted services and on-going use of the software and related hosting.
        iii. Total Costs: Project Costs plus Operating Costs.
    b. The TOTAL COSTS are broken out as **IMPLEMENTATION (Project) COSTS** and **OPERATING COSTS**.
3. Explain any net operating increases that will be covered by federal funding. Will this funding cover the entire lifecycle? If not, please provide the breakouts by year.
    a. Given current operating costs of **$286K** and the new expected operating costs of **$321K**, we expect operating cost changes to **increase by $35K**, with a $1.67M implementation cost to achieve that, $900K of which goes to Vendor, and $770K covering internal State costs.
        i. Of that $35K increase in Operating Costs, State funding will decrease by $22.3K.
        ii. Of that $35K increase in Operating Costs, Federal Funding will increase by $57.6K.
        iii. See the attached Project Cost Detail spreadsheet for additional details.
4. What is the break-even point for this IT Activity (considering implementation and on-going operating costs)?
    a. With an implementation cost of $1.67M, $833K of which is State funding, using an annual savings to the State of $22.3K, it will take 37 years to break even.

Appendix 1A - System Integration

SYSTEM INTEGRATION/INTERFACES

System Integration for this project will center on ETL (Extract, Transform, and Load) activities in order to pull data out of systems and push it to the Operational Data Store from which the reports will be run. The SLDS (State Longitudinal Data System) will be the main data source for the ODS.

Other data sources include:

1. SBAC – Smarter Balanced Assessment Consortium
2. DLM – Dynamic Learning Maps
3. ALiS data source
4. SECT data source (Student Educator Course Transcript)
5. EdCensus VR
6. Teacher Climate Survey questions
7. CIRS data
8. New Vendor for Science Data
9. New Vendor for PE Data
10. Finance Data

Since the data will only be refreshed once or twice per year, the system will not include an interface or API to automatically pull from different data sources. Instead, the proposed approach is semi-automated and will use SFTP data transport.

However, should AOE wish to automate data load process, several tools are available from the vendor in supporting the ETL process including APIs, which are a set of secure and RESTful interfaces to the data stored in the ODS. These APIs are secured using the HTTPS protocol for communication and OAuth2 for authentication and provides a rich and customizable claimset model so the application can have fine-grained control over data being used. There are three sets of APIs:

- Bulk Data Load APIs: these APIs are provided by the Ed-Fi alliance and will be fully leveraged to streamline the loading of report card data into the system.
- ODS APIs: these APIs are provided by Ed-Fi as well for existing data elements in the database.
- ORCS APIs: additional APIs that need to be developed to support the extended tables.

This layer provides:

- REST Interface: this is the core of the Resource-Oriented architecture (ROA) of the system and represents a powerful set of secure RESTful client interfaces that will consume the server side APIs and provide a degree of separation from the Data layer. It also provides a scalable model where the API and Web applications could be farmed out to different servers if needed. This REST interface also provides an isolation level from the ORCS Web application allowing other future applications to communicate to the centralized Operational Data Store.
- OCRS Business Logic: implements all the required business logic for the application including, report card generation, data suppression algorithms, user roles and permissions logic, etc.
- OCRS Web Application: represents the secure and responsive Web user interface built with open standards such as HTML5, Bootstrap framework and jQuery UI components. All webpages will run on HTTPS for added security.

Appendix 1B – Data Migration

Data migration services are not expected nor requested of the Vendor.

Appendix 2 - Risk Register

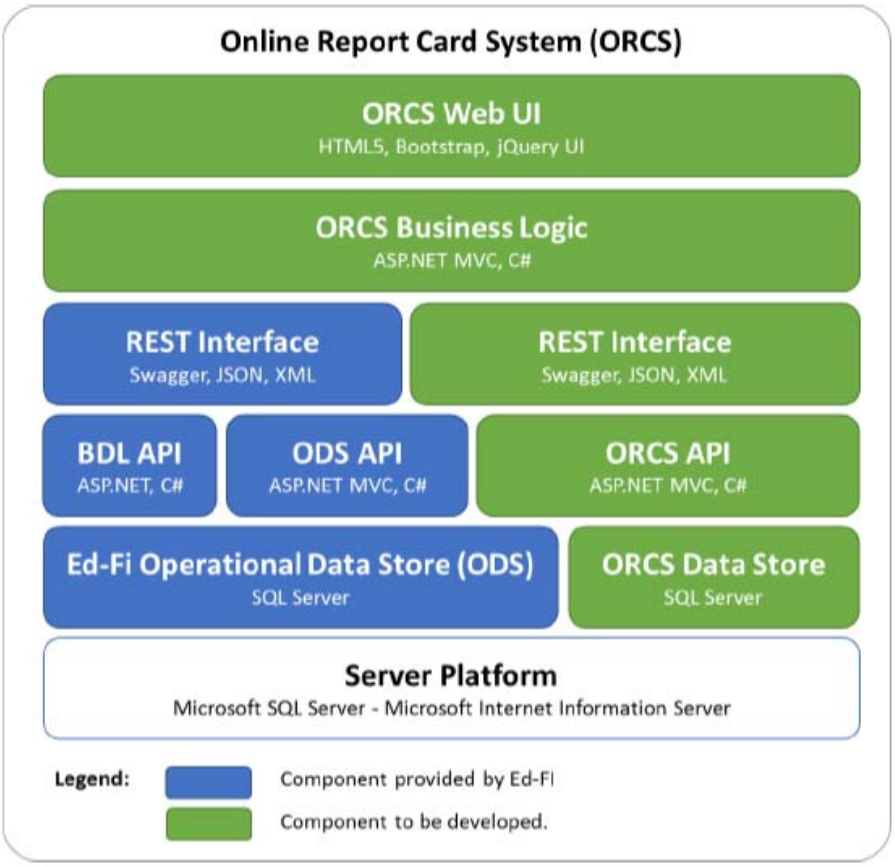
See attached document: FINAL-REVIEW-SOV-AOE-StateReportCard-IndependentReview-STS_Risk_Register_FINAL.pdf

Appendix 3 – Lifecycle Costs and Change in Operating Costs

See attached document: FINAL-REVIEW-SOV-AOE-StateReportCard-IndependentReview-STS_Cost_Detail_FINAL.xlsx

Appendix 4 – Technology Infrastructure

GRAPHIC OF PROPOSED INFRASTRUCTURE ENVIRONMENT:



Solution is *proposed* to be built on the open Ed-Fi 2.1 data standards platform. Ed-Fi is, among other things, a data standard for the Education industry that promotes data exchange and interoperability between systems, such as Student Information Systems and Learning Management Systems. The Ed-Fi Data Standard v2.1 aligns with Version 5.0 of the Common Education Data Standards (CEDS) developed by the National Center for Education Statistics (NCES). Ed-Fi provides a free of cost operational data store, REST APIs and report dashboards.

AOE will ensure that the solution aligns to Common Education Data Standards (CEDS); however, AOE is not anticipating to use the Ed-Fi platform, and will build the solution to meet AOE requirements, with an eye towards Ed-Fi compliance/alignment where feasible.

SERVER ARCHITECTURE

Summary:

- The solution will be hosted by Virtual Servers running on VMware ESX Enterprise Edition Version 6.0 Update 2;
- Host Platform: Dell PowerEdge Servers and EMC SANs using 2+1 redundancy;
- The application will be designed and developed to run on the Microsoft .NET platform. The minimum requirements include Microsoft Windows 2012 R2 Standard Edition (or later) running in a fully virtualized environment.

Web Server Configuration:

- Microsoft Server Standard 2012 R2 or 2016 (64-bit)
- .NET 4.6.2
- Internet Information Services 8.5
- 60 Gb System Disk
- 80 GB Data Disk

Database Server Standard Configuration:

- Database Version: Microsoft SQL Server 2014 Standard Edition (or later)
- Database Platform Version (OS): Windows 2012 R2 Standard Edition (or later)

Description of Hosted Environments:

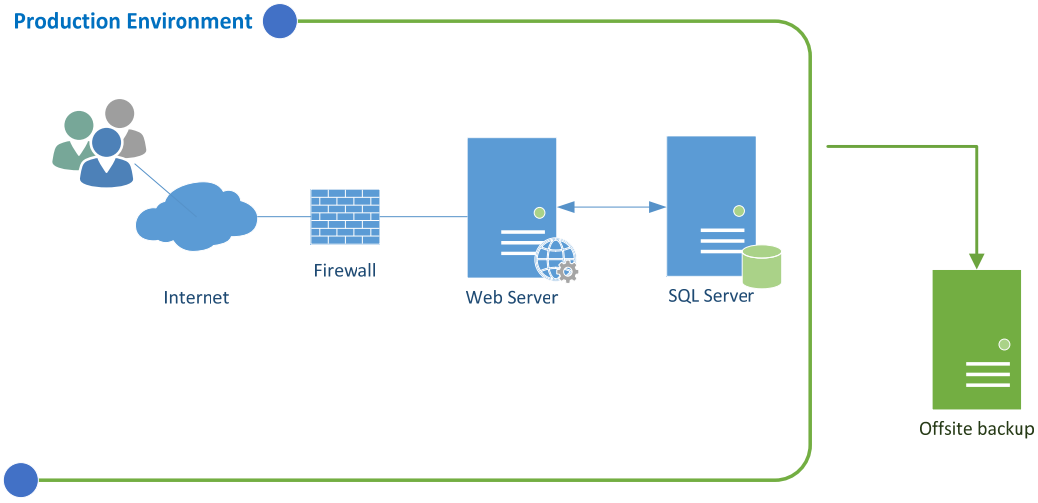
- **Production:** External public web and database servers available to the public and authenticated users.
- **Development:** Web and database servers used for internal development and testing.
- **Test:** Web and database servers used for stakeholder review and approval. This environment will also be used for performance testing.

Hosting includes these licenses:

Software	License Model	# of Servers	Comments
Microsoft Server Standard Edition	Core-based	6	2 Production, 2 Test and 2 Development servers
Microsoft SQL Server Standard	Per Core	3	Production, Test and Development

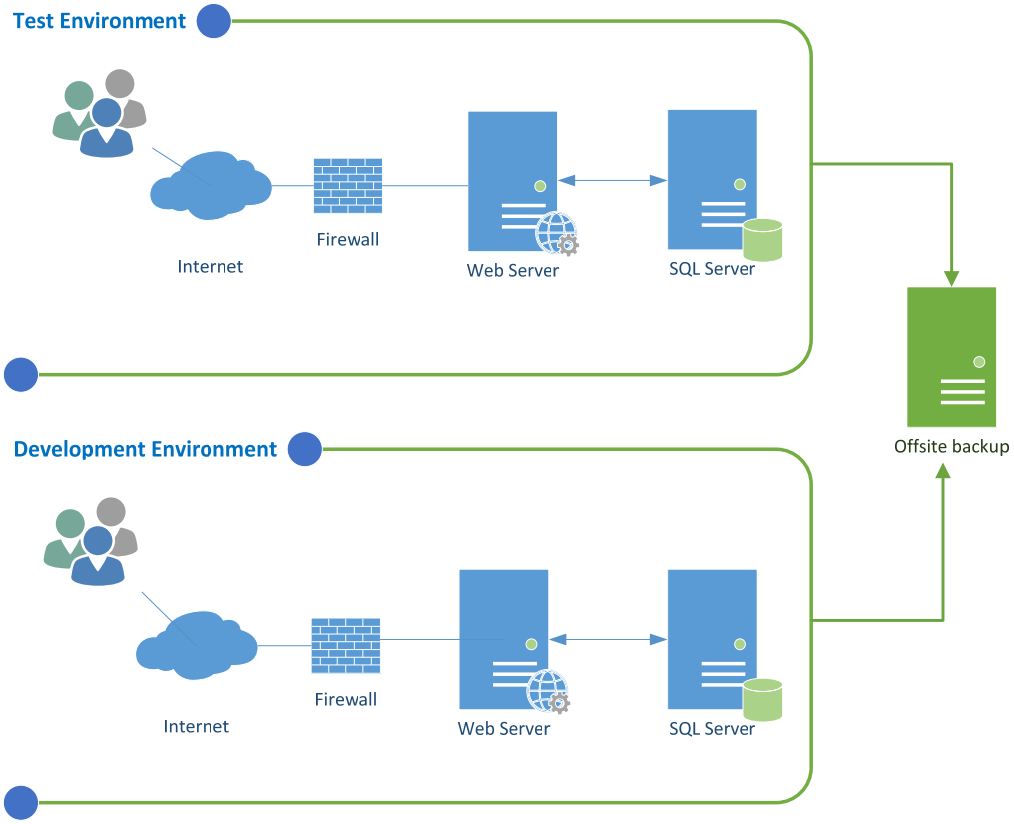
PRODUCTION ENVIRONMENT

- 1 virtual web server
- 1 virtual database server



NON-PRODUCTION ENVIRONMENTS

- Test
- Development



CLIENT

- The Report Card System will be developed using modern web technologies such as HTML5 and will be supported on the following internet browsers. Vendor recommends the use of Google Chrome for best experience.

Web Browser	Platform	Comments
Chrome Version 50 or later	Windows, Mac, iOS, Android	Previous versions may provide limited functionality
Firefox Version 46 or later	Windows, Mac, Android	Previous versions may provide limited functionality
Safari Version 10 or later	Mac, iOS	Previous versions may provide limited functionality
Internet Explorer Version 11 or later	Windows	
Microsoft Edge	Windows	

SOFTWARE DEVELOPMENT

- The development technology stack will be Microsoft based including Visual Studio, C#, ASP.NET MVC, Microsoft SQL Server and Internet Information Services. Other technologies used include Swagger API framework, HTML5, Bootstrap and jQuery UI components

- Software development methodology:
    - The application development cycle will follow a modified SCRUM based approach with 2 week sprints. The high level approach is defined as follows:
        - Upon identification and documentation of the functional requirements and approval of the high-level designs, the product backlog will be created and entered to Jira.
        - This product backlog is a prioritized list of all the features with approximate development estimates and timelines.
        - Once the Product Backlog is defined, the development team will schedule the work in two-week sprints.
        - Each sprint consists of a planning session, which takes place right before or at the beginning of the sprint.
        - During this planning meeting, the team determines what requirements will be worked on with input from the AOE product owner.
        - The development team breaks these requirements into specific tasks, enters these task into the Jira Sprint board and the work is scheduled.
        - During the Sprint, the team is constantly updating the board with progress, impediments and looking to product owners for immediate feedback if needed.
        - At the end of each sprint, a sprint review meeting is scheduled where the team shows the work accomplished to product stakeholders.

CHANGE MANAGEMENT

BFK proposes the following approach to Change Management:

- BFK will build a change management plan based on best practices from PMBOK (e.g., focused on the change curve and strategies to reduce time spent in a negative state). If AOE has an existing change management framework in place, BFK can build upon that template to provide consistency across projects.
- The testing and training tasks will be covered through a technical documentation deliverable and associated onsite training.
- Code is pushed to the development environment multiple times per day using an automated process.
- At the end of each sprint, the code will be pushed to the test environment using a semi-automated process for stakeholder review and additional functional testing.
- Once the code has been validated in the test environment, it will be pushed to production using a semi-automated process.
- Any bugs that are detected are logged in Jira to be addressed depending on the priority and severity of the bug.

HOSTING

The application is expected to be hosted at Expedient Data Centers, although BFK will entertain hosting with Microsoft Azure or internally.

Expedient Data Centers has been providing public cloud hosting services to BFK applications for the last 4 years. A summary of the Expedient attributes include:

- Expedient is a network of 12 nationwide (with all data residing within the continental US) enterprise-class data center monitored 24x7x365 offering a wide range of managed services and network connectivity.
- Reliable data center facilities interconnected with a private 10 Gbps network to deliver premier colocation, cloud computing, network and managed services to enterprise, commercial, education and government organizations.
- Provides contained and secure virtualized space with logical segmentation and N+2 physical redundancy.
- Expedient's approach complements a variety of industry and government compliance requirements, including SOX, PCI DSS, FISMA and HIPAA, supported by third-party SSAE16/SOC attestation reports.
- Technical Details:
  - HVAC: 350 tons of cooling
  - Electrical-on floor: breakers, conduit, A/B feed with AC power
  - (2) 750 kVA UPS
  - (2) 1.75 MW generators, 10,000 gallon diesel fuel tank
  - Fire suppression: FE-25, dry-pipe double interlocked pre-action sprinkler
  - Fire detection: Thermal and Particulate
  - Expedient engineers are on-site 24 hours a day, 7 days a week, 365 days a year
  - Multiple data centers connected by a private 10 Gbps fiber optic ring
  - Multiple internet providers (AT&T, XO Communications, Spectrum Cable, TW Telecom, OARnet)
- More information at https://www.expedient.com/services/infrastructure-as-a-service/cloud/public-cloud-computing/

SYSTEM MONITORING

1. Data Center monitoring
    a. Generator readiness and fuel supply
    b. Network performance and utilization
    c. Network availability and downtime
    d. CPU, memory, and disk utilization
    e. Temperature
    f. Centrally managed Antivirus
2. Performance monitoring
    a. New Relic provides real time performance monitoring and information.
3. External uptime monitor
    a. Site 24x7 monitors site uptime and availability. The service monitors the application from multiple sites in the U.S.

DISASTER RECOVERY/BUSINESS CONTINUITY

1. Primary data center is located at Expedient which has alternative available data centers connected by a private 10 Gbps fiber optic ring with multiple internet providers (AT&T, XO Communications, Spectrum Cable, TW Telecom, OARnet)
2. Recovery Point Objective (RPO): 1 day.
3. Recovery Time Objective (RTO): 24-36 hours.

DATA BACKUP/RESTORE

Backup Plan:

1. Backups:
    a. Virtual Servers
        i. Weekly full backup
        ii. Daily incremental backup
    b. SQL Databases
        i. Weekly full backup
        ii. Daily differential backup
        iii. Hourly transaction log backup

2. Retention:
    a. All of the server and database backups are stored at an offsite location. The data is backed up on a two-week rolling retention schedule. As the data is not expected to change more than once or twice annually, this light retention schedule is not an issue.

Restore Plan:

1. **Virtual Servers**: In the event of a server data loss, a new server will be restored from the last full back up and if needed the daily incremental backups will then be applied.
2. **SQL Database:** In the event of a database loss, the database will be restored from the last full backup. Vendor will then apply the daily differential database backups and the hourly transaction log.

APPENDIX 5 – CONTRACT ITEM: DELIVERABLE PAYMENT SCHEDULE

Consider including the following Deliverable Payment content in the Contract.

Acceptance criteria for each deliverable needs to be defined in the contract.

Deliverable	Invoice Date	Amount
Project kickoff, discovery, project documentation development (e.g., project charter)	July 2017	$34,225
Functional requirements and user experience and validation flow	July 2017	$71,268
Hosting – Year 1	July 2017	$32,000
Development Phase 1	August 2017	$74,134
Development Phase 1	September 2017	$74,133
Development Phase 1	October 2017	$74,133
Development Phase 1	November 2017	$74,133
Technical Documentation and Communications Materials Development	November 2017	$64,859
Development Phase 1 Data Load and Beta Testing	January 2018	$61,333
Help desk/support, maintenance, fixes	January 2018	$17,083
Development Phase 2	May 2018	$46,256
Development Phase 2	June 2018	$46,256
Development Phase 2	July 2018	$46,255
Development Phase 2 Data Load and Testing	July 2018	$49,866
Hosting – Year 2	July 2018	$40,000
Development Rollout	August 2018	$18,000
Help desk/support, maintenance, fixes	August 2018	$17,083
Knowledge Transfer, Training, Handoff Report, Final Project Report	February 2019	$58,027
Total		**$899,044**

APPENDIX 6 – CONTRACT ITEM: TESTING

Consider including the following Testing-related Scope of Work content in the Contract:

1. Unit Testing: Developers will use a test-driven development approach. Unit tests will be written to validate individual units of logic. These tests will run automatically when the code is built to ensure potential bugs are captured early during the development phase and facilitate regression testing.
2. Load Testing: Visual Studio Enterprise Edition will be used for load testing. Scripts will be created to step through critical pages within the application and the tool will run the script for a significant number of users at a time. During the test, key indicators such as Memory Usage, Average Page Time, Average Response Time, CPU utilization (web and SQL servers), and IIS Queue Size will be monitored.
3. Manual Testing: This will be done by a set of individuals who will test the functionality of the application and ensure that it meets all of the requirements defined within the use cases.
4. Testing Toolset: Jira Software will be used to track testing.
5. User Acceptance Testing:
    a. Will be done at all phases of the design and development process, beginning with the wireframes.
    b. Will continue throughout the development process to ensure that requirements are being met at each step of the development. This testing will be completed in the development and test environments.
    c. When the software is released in the production environment in beta version, additional UAT will be performed. This may potentially include some testing by members of the community.

APPENDIX 7 – CONTRACT ITEM: TRAINING

Consider including the following Training-related Scope of Work content in the Contract:

1. Training to Vermont AOE Technical Staff:
    a. Technical knowledge transfer sessions will be scheduled to train the Vermont AOE staff who will be responsible for maintaining the application in the future. This technical training will be inclusive of all components developed as part of the Online Report Card System including, architecture, database design, programming practices, application components, installation, and troubleshooting. It is expected that the Vermont AOE technical staff is knowledgeable and has prior experience developing in the application technology stack as described in this document (e.g., Microsoft SQL Server, Visual Studio, C#, ASP.NET MVC, Bootstrap, etc.).
    b. Other suggestions to Vermont AOE staff includes:
        i. Early participation in the project highly encouraged
        ii. Invited to participate in SCRUM meetings remotely
        iii. Invited to participate in Functional and Technical discussions
        iv. Participate in beta testing
        v. Invited to be part of the development team to get acquainted with the solution early
2. Technical Training Documentation
    a. Battelle for Kids will create and maintain development documentation of the system including: high level architecture diagrams, database diagrams, data dictionary, technical design documents, and hosting and network diagrams. Additionally, the source code will be self-documented with developer notes.
    b. Communication toolkit:
        i. User guide
        ii. Message map
        iii. Sample editorial calendar
        iv. FAQs
        v. Facilitation, parent, and educator guides
        vi. Power point presentation
        vii. Video screencast of application functionality (with narration and animation)
3. Training for the field
    a. BFK proposes to develop a customized toolkit for Vermont school district leaders and principals about the state report card being implemented across the state. The communications toolkit will be a resource to support district leaders and principals who are engaging teachers, parents, community, and other stakeholders in conversations about the report card and how the information can and will be used in the district. The toolkit will offer a comprehensive series of resources for all stakeholder groups to learn about the state report card conceptually, understand benefits of the information, and engage in activities to interpret and reflect on the information.

        BFK will work with the AOE to ensure all communication/training materials are effective, cohesive, and personalized, as appropriate to all audiences. BFK will develop all content and graphic design for these materials in partnership with the AOE's vision (specific materials to be included in the toolkit are described question #3 below). In addition, BFK will facilitate a strategy conversation with the AOE to inform implementation and recommended channels to reach all audiences (e.g., website, newsletter, social media).

APPENDIX 8 – CONTRACT ITEM: SERVICE LEVEL AGREEMENT

Consider including the following Service Level Agreement content in the Contract:

TECH SUPPORT - SERVICE LEVEL AGREEMENT:

BFK will provide 2nd-level technical support to application functionality ("how to" type of questions) and technical issues or difficulties using the system. Shall a support request need escalation to Battelle for Kids, the Vermont AOE support staff will be able to create support tickets 24x7 by going to the BFK technical support website, by sending an email or by calling our tech support line. Typical issues to be escalated include:

- Application errors.
- Access denied conditions to specific users and/or areas of the application that are not related to permissions.
- Unexpected behaviors to commonly used application functionality.
- Problems accessing specific pages or functionality in the system.
- System/website unavailable or unreachable to users.
- Other unusual situations.

In order to ensure prompt resolution to the case, issues will be escalated using the levels defined below:

Critical Errors – Application is unavailable or all users are unable to perform any tasks in the system.
***Business hours**:* Provide all available documentation and call the BFK Support Team number.
***After hours**:* Provide all available documentation and call the after-hours BFK Support number.
Target response time: 2 hours

High – Issue is affecting isolated areas of functionality with no work-around.
Please create a support ticket with all documentation available and email the Battelle for Kids support team indicating that the ticket is a high priority.
Target response time: 8 hours (within next business day)

Medium – Issue is affecting isolated areas of functionality but there is a work-around.
Please create a support ticket with all documentation available.
Target response time: 2 business days

SYSTEM RESPONSE TIME - SERVICE LEVEL AGREEMENT:

1. System response time will be measured using the 90th percentile method. Using this measurement, 90% of the web application pages will load in 5 seconds or less. The response time will be measured using automated testing tools.

SYSTEM AVAILABILITY - SERVICE LEVEL AGREEMENT (3 9s, 4 9s?):

1. The web application will provide uptime of 99.5% or higher.

BUG FIX – SERVICE LEVEL AGREEMENT:

1. Bug fixes will typically be reported through on of the following mechanisms:
    a. Error conditions identified as part of application development testing.
        i. Under this scenario, these bug fixes are identified prior to the functionality being available to end users and as such will be prioritized and put back into the sprint log and be addressed as part of the development cycle. Unit cases will be developed to ensure this condition is addressed before the functionality is released to the production environment.
    b. Error conditions identified as part of Support tickets troubleshooting
    c. In this situation, the bug fix SLA will follow the Tech Support SLA described above.

HOSTING SERVICE LEVEL AGREEMENT:

1. Expedient Datacenters provide uptime of 99.99% or higher.

DR/BC SERVICE LEVEL AGREEMENT:

1. RPO (recovery point objective): 1 day.
2. RTO (recovery time objective): 24-36 hours.

AGENCY OF EDUCATION: State Data Report Card Reporting Project
RISK REGISTER DESCRIPTION:

1. Risk Description: Provide a description of what the risk entails
2. Source of Risk: Project, Proposed Solution, Vendor or Other
3. Risk Rating: Risk ratings to indicate: Likelihood and probability of risk occurrence; Impact should risk occur; and Overall risk rating (high, medium or low priority)
4. Risk Strategy: State's Planned Risk Strategy: **Avoid, Mitigate, Transfer or Accept**
    a. Avoid: Avoid the activity; activities with a high likelihood of loss and large impact.
    b. Mitigate: Develop a plan to reduce risk to reduce the risk of potential loss; activities with a high likelihood of occurring, but impact is small.
    c. Transfer: Outsource risk (or a portion of the risk - Share risk) to third party or parties that can manage the outcome; activities with low probability of occurring, but with a large impact. Often times this is transferred back to vendor.
    d. Accept: Take the chance of negative impact, eventually budget the cost (i.e. a contingency budget line); activities where cost-benefit analysis determines the cost to mitigate risk is higher than cost to bear the risk, then the best response is to accept and continually monitor the risk.
5. Timing of Risk Response: Describes the suggested timing for carrying out the risk response (e.g. prior to the start of the project, during the Planning Phase, prior to implementation, etc.)
6. State's Planned Risk Response: Describe what the State plans to do (if anything) to address the risk (See Risk Response table)
7. Reviewer's Assessment of State's Planned Response: Indicate if the planned response is adequate/appropriate in your judgment and if not what would you recommend.

Department Action Step: Respond to the sections highlighted in yellow (Risk Strategy, State's Planned Risk Response) and send copy back to David Gadway for review

NOTE: Hyperlinks are used on the Risk ID. From the Risk Register, CTL-CLICK on a link to see the Risk Response, or from the Risk Response, CTL-CLICK on a link to go back to the Risk Register.

RISK REGISTER:

Risk #:	Risk Description	Source of Risk	Risk Rating: Impact	Risk Rating: Probability	Risk Rating: Overall Risk	State Risk Strategy Summary (Avoid, Mitigate, Transfer, Accept)	Timing of Response	Reviewer Assessment of Response
1a	Budget/Funding: No risks. Project funding is secure. Scope of work is fixed price.							
2a	Contract: There are a few contract-related items that warrant noting. 1. Define Deliverables Acceptance criteria and tie payments to those deliverables. See **Appendix A** for suggested starting point for Payment for Deliverables. Defining the acceptance criteria of each deliverable is needed. 2. Define Testing responsibilities as Vendor did not propose those. When asked during the IR, what the scope of work related to Testing is, Vendor provided detail outlined in **Appendix B**. Consider including that **Appendix B** content in the Scope of Work/Deliverables section of the Contract. 3. Define Training responsibilities as Vendor did not propose those. When asking during the IR, what the scope of work related to Training is, Vendor provided detail outlined in **Appendix C**. Consider including that **Appendix C** content in the Scope of Work/Deliverables section of the Contract. 4. Define Service Level Agreements in the Contract. See **Appendix D** for suggested content. 5. Ensure Vendor can support security of FERPA data. 6. Include Non-Functional Requirements.	Project	Medium	Low	Low	2.1 Mitigate 2.2 Mitigate 2.3 Mitigate 2.4 Mitigate	Prior to contract execution	Risk strategy accepted.
3a	Vendor Risk: As this is a custom software development project, the vendor cannot demonstration or point to an existing product, and can only promise that given their experience with similar projects, they can also deliver on this project.	Project	Medium	Medium	Medium	Accept	Prior to contract execution and during project	Risk strategy accepted.

4a	SOV Service Level/Staffing: Vendor suggests the following related to current technical knowledge: "*Technical knowledge transfer sessions will be scheduled to train the Vermont AOE staff who will be responsible for maintaining the application in the future. This technical training will be inclusive of all components developed as part of the Online Report Card System including, architecture, database design, programming practices, application components, installation, and troubleshooting. It is expected that the Vermont AOE technical staff is knowledgeable and has prior experience developing in the application technology stack as described in this document (e.g., Microsoft SQL Server, Visual Studio, C#, ASP.NET MVC, Bootstrap, etc.).*" AOE technical staff indicated they are just starting their training in this technology stack. As such, they are not yet able to meet this Vendor assumption. This impacts scope and potentially budget should AOE staff not be able to maintain solution and AOE needs additional Vendor support.	Project	Medium	Medium	Medium	Mitigate and/or Accept	Prior to contract execution and during project	Risk strategy accepted.
5a	Project Management Staffing: No risk noted. Adequate Project Management staffing identified for project from both AOE and BFK.							
6a	Project Schedule: No risk noted. Adequate time and resource to complete project.							
7a	Infrastructure: Backup/Restore Platform: No risk noted.							
7b	Infrastructure: Hardware Platform: Hosting: As the plan is to move off of Vendor hosting in 2 years to another hosting provider, either internal or other external (AWS, Azure, etc.), consider moving to that hosting environment now and holding BFK responsible for ensuring their solution works in that hosting environment, as part of this scope of work.	Project	Low	Low	Low	Mitigate	Prior to contract execution	Risk strategy accepted.

7c	Infrastructure: Business Continuity/Disaster Recovery: No risk noted.							
8a	Scope/Functional Requirements: The draft Vermont State Plan drives the scope of work but is not yet approved by Dept. of Education. There is a slight chance that the draft is not approved or the scope of work changes.	Project	Medium	Medium	Medium	Mitigate	Prior to contract execution and during project	Risk strategy accepted.
8b	Scope/Non-Functional Requirements: No risk noted.							
9a	Interoperability: No Vendor requirements in the Scope of Work related to Interoperability. There is the expectation that data sources are identified by AOE that will populate the reporting database. There is also the expectation that the SLDS (State Longitudinal Data System) System is in place, which is the primary data source. The SLDSs system is in progress/not yet completed. As such, there is a risk that that the SLDS is not fully available when needed. There is also a risk that there is some gap is data required vs. data available from SLDS or other data sources.	Project	Medium	Medium	Medium	Accept and Mitigate	During project	Risk strategy accepted.
10a	Compliance/Regulatory: No risk noted.							
11a	Security: No risk noted. There is no personally identifiable data in play. The hosted data center is FISMA compliant.							
12a	Other: No Risk Noted.							

RISK RESPONSE:

Risk #:	State's Planned Risk Response and Reviewer's Assessment of State's Risk Response
1a	**STATE'S RISK RESPONSE:** N/A. No risk noted.
2a	**STATE'S RISK RESPONSE:** 1. Mitigate - We will define in the Contract both the Deliverables as well as a Payment Schedule based on those Deliverables aligned with those identified in Appendix A. The State will also define the Acceptance Criteria of each Deliverable during Phase I. 2. Mitigate - We will define in the Contract both Testing Deliverables and a Testing Plan with Schedule and Responsibilities aligned with those identified in Appendix B. 3. Mitigate - We will define in the Contract the Training Plan with Schedule and Responsibilities aligned with those identified in Appendix C. 4. Mitigate - We will define in the Contract the Service Level Agreements aligned with those identified in Appendix D. **REVIEWER'S ASSESSMENT:** Risk strategy accepted.
3a	**STATE'S RISK RESPONSE:** Disagree with Risk—While this is a unique project that will be designed to our specifications, the vendor was able to point to other similar projects it has developed in other locations. The AOE does not feel this is a risk. **STATE'S RISK RESPONSE #2:** Accept Risk—While this is a unique project that will be designed to our specifications, the vendor was able to point to other similar projects it has developed in other locations. **REVIEWER'S ASSESSMENT:** Any custom development effort is a risk, in that, a finished product is not demonstrable. Suggest accepting this risk vs. suggesting it is not a risk. **REVIEWER'S ASSESSMENT #2:** Risk strategy accepted.

4a	**STATE'S RISK RESPONSE:** Mitigate and/or accept-- AOE is in the process of hiring a developer; skills with this architecture will be an employment qualification. If AOE is unable to hire a developer with these skills the cost to continue in the hosted model is not exorbitant. **STATE'S RISK RESPONSE #2:** Mitigate and/or accept-- AOE is in the process of hiring a developer; skills with this architecture will be an employment qualification. If AOE is unable to hire a developer with these skills the cost to continue in either the vendor-supported/hosted model or to supplement in-house staff for what is expected to be minimal programming needs is not exorbitant. AOE specifically required the solution to be developed in non-proprietary platforms with the hopes that skills to maintain will be available in-house; however, this approach also allows the State to potentially tap into other available State resources, via the shared Agency of Digital Services model, or contract for temporary contractual services should in-house resources not be completely up-to-speed. The reality is that changes to this system will be infrequent and likely very minor in nature and the non-proprietary platforms and technologies on which it is to be built will give the State options regarding the best way to resource these changes. **REVIEWER'S ASSESSMENT:** This is less about the cost to host, as it is the cost to maintain (change or add functionality). Are you saying the alternative is to hire the vendor to maintain the solution? **REVIEWER'S ASSESSMENT #2:** Risk strategy accepted.
5a	**STATE'S RISK RESPONSE:** N/A. No risk noted.
6a	**STATE'S RISK RESPONSE:** N/A. No risk noted.
7a	**STATE'S RISK RESPONSE:** N/A. No risk noted.
7b	**STATE'S RISK RESPONSE:** Mitigate—AOE will discuss this approach with vendor to determine if implementation on one of these platforms fits timeline. We will build into contract if no significant delays or added cost is expected. **REVIEWER'S ASSESSMENT:** Risk strategy accepted.
7c	**STATE'S RISK RESPONSE:** N/A. No risk noted.

8a	**STATE'S RISK RESPONSE:** Mitigate—We believe that our plan meets all federal guidelines and should be accepted as submitted. The plan must be accepted within 120 days of April 3. As a result, the state should know the status of the plan by August 1. The federal plan covers approximately 50% of the total work effort in the project; while we are waiting for federal approval we can progress on the state accountability measures. We will also include in the contract the ability to pause the work if negotiations with the federal government stall. **REVIEWER'S ASSESSMENT:** Risk strategy accepted.
8b	**STATE'S RISK RESPONSE:** N/A. No risk noted.
9a	**STATE'S RISK RESPONSE:** Accept and Mitigate—While SLDS is primary source of data for Report Card, data are currently collected via other means. Thus, data is and will be available in some form or fashion and AOE will be able to compile data in needed formats regardless of SLDS status. AOE will work with vendor to establish plan for filling gaps of data not currently collected. **REVIEWER'S ASSESSMENT:** Risk strategy accepted.
10a	**STATE'S RISK RESPONSE:** N/A. No risk noted.
11a	**STATE'S RISK RESPONSE:** N/A. No risk noted.
12a	**STATE'S RISK RESPONSE:** N/A. No risk noted.

APPENDIX A – DELIVERABLE PAYMENT SCHEDULE

Consider including the following Deliverable Payment content in the Contract.

Acceptance criteria for each deliverable needs to be defined in the contract.

Deliverable	Invoice Date	Amount
Project kickoff, discovery, project documentation development (e.g., project charter)	July 2017	$34,225
Functional requirements and user experience and validation flow	July 2017	$71,268
Hosting – Year 1	July 2017	$32,000
Development Phase 1	August 2017	$74,134
Development Phase 1	September 2017	$74,133
Development Phase 1	October 2017	$74,133
Development Phase 1	November 2017	$74,133
Technical Documentation and Communications Materials Development	November 2017	$64,859
Development Phase 1 Data Load and Beta Testing	January 2018	$61,333
Help desk/support, maintenance, fixes	January 2018	$17,083
Development Phase 2	May 2018	$46,256
Development Phase 2	June 2018	$46,256
Development Phase 2	July 2018	$46,255
Development Phase 2 Data Load and Testing	July 2018	$49,866
Hosting – Year 2	July 2018	$40,000
Development Rollout	August 2018	$18,000
Help desk/support, maintenance, fixes	August 2018	$17,083
Knowledge Transfer, Training, Handoff Report, Final Project Report	February 2019	$58,027
Total		**$899,044**

APPENDIX B – TESTING

Consider including the following Testing-related Scope of Work content in the Contract:

1. Unit Testing: Developers will use a test-driven development approach. Unit tests will be written to validate individual units of logic. These tests will run automatically when the code is built to ensure potential bugs are captured early during the development phase and facilitate regression testing.
2. Load Testing: Visual Studio Enterprise Edition will be used for load testing. Scripts will be created to step through critical pages within the application and the tool will run the script for a significant number of users at a time. During the test, key indicators such as Memory Usage, Average Page Time, Average Response Time, CPU utilization (web and SQL servers), and IIS Queue Size will be monitored.
3. Manual Testing: This will be done by a set of individuals who will test the functionality of the application and ensure that it meets all of the requirements defined within the use cases.
4. Testing Toolset: Jira Software will be used to track testing.
5. User Acceptance Testing:
    a. Will be done at all phases of the design and development process, beginning with the wireframes.
    b. Will continue throughout the development process to ensure that requirements are being met at each step of the development. This testing will be completed in the development and test environments.
    c. When the software is released in the production environment in beta version, additional UAT will be performed. This may potentially include some testing by members of the community.

APPENDIX C – TRAINING

Consider including the following Training-related Scope of Work content in the Contract:

1. Training to Vermont AOE Technical Staff:
    a. Technical knowledge transfer sessions will be scheduled to train the Vermont AOE staff who will be responsible for maintaining the application in the future. This technical training will be inclusive of all components developed as part of the Online Report Card System including, architecture, database design, programming practices, application components, installation, and troubleshooting. It is expected that the Vermont AOE technical staff is knowledgeable and has prior experience developing in the application technology stack as described in this document (e.g., Microsoft SQL Server, Visual Studio, C#, ASP.NET MVC, Bootstrap, etc.).
    b. Other suggestions to Vermont AOE staff includes:
        i. Early participation in the project highly encouraged
        ii. Invited to participate in SCRUM meetings remotely
        iii. Invited to participate in Functional and Technical discussions
        iv. Participate in beta testing
        v. Invited to be part of the development team to get acquainted with the solution early
2. Technical Training Documentation
    a. Battelle for Kids will create and maintain development documentation of the system including: high level architecture diagrams, database diagrams, data dictionary, technical design documents, and hosting and network diagrams. Additionally, the source code will be self-documented with developer notes.
    b. Communication toolkit:
        i. User guide
        ii. Message map
        iii. Sample editorial calendar
        iv. FAQs
        v. Facilitation, parent, and educator guides
        vi. Power point presentation
        vii. Video screencast of application functionality (with narration and animation)
3. Training for the field
    a. BFK proposes to develop a customized toolkit for Vermont school district leaders and principals about the state report card being implemented across the state. The communications toolkit will be a resource to support district leaders and principals who are engaging teachers, parents, community, and other stakeholders in conversations about the report card and how the information can and will be used in the district. The toolkit will offer a comprehensive series of resources for all stakeholder groups to learn about the state report card conceptually, understand benefits of the information, and engage in activities to interpret and reflect on the information.

        BFK will work with the AOE to ensure all communication/training materials are effective, cohesive, and personalized, as

appropriate to all audiences. BFK will develop all content and graphic design for these materials in partnership with the AOE's vision (specific materials to be included in the toolkit are described question #3 below). In addition, BFK will facilitate a strategy conversation with the AOE to inform implementation and recommended channels to reach all audiences (e.g., website, newsletter, social media).

APPENDIX D – SERVICE LEVEL AGREEMENT

Consider including the following Service Level Agreement content in the Contract:

TECH SUPPORT - SERVICE LEVEL AGREEMENT:

BFK will provide 2nd-level technical support to application functionality ("how to" type of questions) and technical issues or difficulties using the system. Shall a support request need escalation to Battelle for Kids, the Vermont AOE support staff will be able to create support tickets 24x7 by going to the BFK technical support website, by sending an email or by calling our tech support line. Typical issues to be escalated include:

- Application errors.
- Access denied conditions to specific users and/or areas of the application that are not related to permissions.
- Unexpected behaviors to commonly used application functionality.
- Problems accessing specific pages or functionality in the system.
- System/website unavailable or unreachable to users.
- Other unusual situations.

In order to ensure prompt resolution to the case, issues will be escalated using the levels defined below:

Critical Errors – Application is unavailable or all users are unable to perform any tasks in the system.

***Business hours**:* Provide all available documentation and call the BFK Support Team number.

***After hours**:* Provide all available documentation and call the after-hours BFK Support number.

Target response time: 2 hours

High – Issue is affecting isolated areas of functionality with no work-around.

Please create a support ticket with all documentation available and email the Battelle for Kids support team indicating that the ticket is a high priority.

Target response time: 8 hours (within next business day)

Medium – Issue is affecting isolated areas of functionality but there is a work-around.

Please create a support ticket with all documentation available.

Target response time: 2 business days

SYSTEM RESPONSE TIME - SERVICE LEVEL AGREEMENT:

1. System response time will be measured using the 90th percentile method. Using this measurement, 90% of the web application pages will load in 5 seconds or less. The response time will be measured using automated testing tools.

SYSTEM AVAILABILITY - SERVICE LEVEL AGREEMENT (3 9s, 4 9s?):

1. The web application will provide uptime of 99.5% or higher.

BUG FIX – SERVICE LEVEL AGREEMENT:

1. Bug fixes will typically be reported through on of the following mechanisms:

a. Error conditions identified as part of application development testing.
    i. Under this scenario, these bug fixes are identified prior to the functionality being available to end users and as such will be prioritized and put back into the sprint log and be addressed as part of the development cycle. Unit cases will be developed to ensure this condition is addressed before the functionality is released to the production environment.
b. Error conditions identified as part of Support tickets troubleshooting
c. In this situation, the bug fix SLA will follow the Tech Support SLA described above.

HOSTING SERVICE LEVEL AGREEMENT:

1. Expedient Datacenters provide uptime of 99.99% or higher.

DR/BC SERVICE LEVEL AGREEMENT:

1. RPO (recovery point objective): 1 day.
2. RTO (recovery time objective): 24-36 hours.

AGENCY OF EDUCATION: State Report Card Reporting Project - 5 Year Life Cycle

STATEMENT OF: Use of Funds (Expenses), Source of Funds (Revenue), Cash Flow, and Net Change in Operating Cost

Click on the links to the left to go to that data

CASH FLOW ANALYSIS: Click Here

SUMMARY:	
Total Cost:	$1,987,027
Total Funding:	$1,987,027
State Funding:	$954,188
Federal Funding:	$1,032,839
Potential Revenue Recovery:	$0
Funding Excess/(Shortage):	($0)

IMPLEMENTATION and OPERATING COSTS:	
Implementation Costs:	$1,665,723
New Operating Costs:	$321,304
Current Operating Costs:	$286,024
	$
NET CHANGE IN OPERATING COSTS-Decr./(Incr.):	($35,280)
State Decrease/(Increase):	$22,360
Federal Decrease/(Increase):	-$57,640

USE OF FUNDS - START

Description	Note	Unit Price	Impl/Ops	Total		Prior Costs	IMP Year 1 (FY18)	IMP Year 2 (FY19)	IMP Year 3 (FY20)	M&O Year 4 (FY21)	M&O Year 5 (FY22)	M&O Year 6 (FY23)	M&O Year 7 (FY24)	M&O Year 8 (FY25)	M&O Year 9 (FY26)	M&O Year 10 (FY27)	Software Total	Source
EXTERNAL-RELATED COSTS																		
VENDOR COSTS																		
SOFTWARE AND SERVICES																		
SOFTWARE ❶																		
Software Being Licensed:																		
Implementation: No NEW software expected to be licensed, rather, considered upgrade/operational costs and noted below			I				$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	IT ABC Form
Operations: No NEW software expected to be licensed, rather, considered upgrade/operational costs and noted below			O				$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0 $0	IT ABC Form
SOFTWARE TOTAL							**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	
SERVICES																		
			Impl/Ops			**Prior Costs**												
Implementation Services	**19 months**																	
Total Hours:	**5076**	**Total Fees:**	**$761,100**															
Project Manager	1185		I				$88,840	$88,840	$0	$0	$0	$0	$0	$0	$0	$0	$177,680	Vendor Proposal
Developers and Data Analysts, including Training	3214		I				$240,955	$240,955	$0	$0	$0	$0	$0	$0	$0	$0	$481,910	Vendor Proposal
Communications	248		I				$18,593	$18,593	$0	$0	$0	$0	$0	$0	$0	$0	$37,185	Vendor Proposal
Subject Matter Experts	210		I				$15,744	$15,744	$0	$0	$0	$0	$0	$0	$0	$0	$31,488	Vendor Proposal
Help Desk	219		I				$16,419	$16,419									$32,837	Vendor Proposal
Travel:	8 Trips		I				$32,972	$32,972	$0	$0	$0	$0	$0	$0	$0	$0	$65,944	Vendor Proposal
Other																		
Contingency	Nothing allocated at present		I				$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	
TOTAL: IMPLEMENTATION SERVICES						**$0**	**$413,522**	**$413,522**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$827,044**	
Other Services:																		
							$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	
Other Services Total:							**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	
SERVICES TOTAL						**$0**	**$413,522**	**$413,522**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$827,044**	
SOFTWARE AND SERVICES TOTAL						**$0**	**$413,522**	**$413,522**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$827,044**	
MAINTENANCE AND OPERATIONS SUPPORT																		
Maintenance fees not expected; Solution expected to be maintained internally							$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0 **$0**	
MAINTENANCE AND OPERATIONS SUPPORT TOTAL				**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	
HARDWARE																		
Hardware for Implementation	No additional hardware expected		I	$0			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	
Hardware for Operations	No additional hardware expected		O	$0			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	
HARDWARE TOTAL							**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	
				$0			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	
HOSTING FEES		**Impl/Ops**																
Hosting Fee via Expedient			I	$0			$32,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$32,000	Vendor Proposal
Hosting Fee via Expedient			O	$0			$0	$40,000	$40,000	$40,000	$40,000	$0	$0	$0	$0	$0	$160,000	Vendor Proposal
HOSTING TOTAL							**$32,000**	**$40,000**	**$40,000**	**$40,000**	**$40,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$192,000**	
OTHER FEES																		
			I				$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0 $0	
OTHER TOTAL				**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	

TOTAL VENDOR COSTS				**$0**		**$0**	**$445,522**	**$453,522**	**$40,000**	**$40,000**	**$40,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$1,019,044**	
TOTAL EXTERNAL-RELATED COSTS			TotlO			**$0**	**$445,522**	**$453,522**	**$40,000**	**$40,000**	**$40,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$1,019,044**	
INTERNAL COSTS																		
DEPARTMENTAL INTERNAL COSTS			**Impl/Ops**															
Staffing Costs: ❷																		
Project Management:																		
Internal Project Manager: Patrick Halladay	.5 FTE@$55@2080 hours for 2 years	100% funded by State Funds	I				$57,200	$57,200	$0	$0	$0	$0	$0	$0	$0	$0	$114,400	IT ABC Form
Subject Matter Experts: Data Management:		50% funded by State Funds, 50% Federal Indirect																
Data team: Wendy Geller	0.25 FTE@$55@2080 hours for 2 years		I				$28,600	$28,600	$0	$0	$0	$0	$0	$0	$0	$0	$57,200	
Data team: Glenn Bailey	0.25 FTE@$55@2080 hours for 2 years		I				$28,600	$28,600	$0	$0	$0	$0	$0	$0	$0	$0	$57,200	
Data team: Jennifer Perry	0.25 FTE@$55@2080 hours for 2 years		I				$28,600	$28,600	$0	$0	$0	$0	$0	$0	$0	$0	$57,200	
Data team: Beth-Ann Willey	0.25 FTE@$55@2080 hours for 2 years		I				$28,600	$28,600	$0	$0	$0	$0	$0	$0	$0	$0	$57,200	
Data team: David Kelley	0.25 FTE@$55@2080 hours for 2 years		I				$28,600	$28,600	$0	$0	$0	$0	$0	$0	$0	$0	$57,200	
Data team: Dan Shepard	0.25 FTE@$55@2080 hours for 2 years		I				$28,600	$28,600	$0	$0	$0	$0	$0	$0	$0	$0	$57,200	
Data team: Rachel Stanger	0.25 FTE@$55@2080 hours for 2 years		I				$28,600	$28,600	$0	$0	$0	$0	$0	$0	$0	$0	$57,200	
Data team: Mike Bailey	0.25 FTE@$55@2080 hours for 2 years		I				$28,600	$28,600	$0	$0	$0	$0	$0	$0	$0	$0	$57,200	
Data team: Wendy Geller	0.02 FTE@$55@2080 hours per year		O				$0	$0	$2,288	$2,288	$2,288	$0	$0	$0	$0	$0	$6,864	
Data team: Glenn Bailey	0.075 FTE@$55@2080hours per year		O				$0	$0	$8,580	$8,580	$8,580	$0	$0	$0	$0	$0	$25,740	
Data team: Jennifer Perry	0.02 FTE@$55@2080 hours per year		O				$0	$0	$2,288	$2,288	$2,288	$0	$0	$0	$0	$0	$6,864	
Data team: Beth-Ann Willey	0.02 FTE@$55@2080 hours per year		O				$0	$0	$2,288	$2,288	$2,288	$0	$0	$0	$0	$0	$6,864	
Data team: David Kelley	0.02 FTE@$55@2080 hours per year		O				$0	$0	$2,288	$2,288	$2,288	$0	$0	$0	$0	$0	$6,864	
Data team: Dan Shepard	0.02 FTE@$55@2080 hours per year		O				$0	$0	$2,288	$2,288	$2,288	$0	$0	$0	$0	$0	$6,864	
Data team: Rachel Stanger	0.075 FTE@$55@2080hours per year	Based ongoing maintenance on hours included in vendor's powerpoint and knowledge of SME areas of expertise. Assuming that one statistician will be primarily responsible for loading/maintenance with support from other SMEs including slightly greater lift from assessment/accountability SME annually.	O				$0	$0	$8,580	$8,580	$8,580	$0	$0	$0	$0	$0	$25,740	
Data team: Mike Bailey	0.02 FTE@$55@2080 hours per year		O				$0	$0	$2,288	$2,288	$2,288	$0	$0	$0	$0	$0	$6,864	
LEA Trainers:		50% funded by State Funds, 50% Federal Indirect																
Training team	.25 FTE@$55@2080 hours for 2 years		I				$28,600	$28,600	$0	$0	$0	$0	$0	$0	$0	$0	$57,200	IR
Software Development Team		50% funded by State Funds, 50% General																
Software Developers: Janelle Gallison	.25 FTE@$55@2080 for 2 years during implementation		I				$28,600	$28,600	$0	$0	$0	$0	$0	$0	$0	$0	$57,200	
Software Developers: Bill Schwartz	.25 FTE@$55@2080 for 2 years during implementation		I				$28,600	$28,600	$0	$0	$0	$0	$0	$0	$0	$0	$57,200	
Software Developers: Janelle Gallison	.1 FTE@$55@2080 per year		O				$0	$0	$11,440	$11,440	$11,440	$0	$0	$0	$0	$0	$34,320	
Software Developers: Bill Schwartz	.1 FTE@$55@2080 per year		O				$0	$0	$11,440	$11,440	$11,440	$0	$0	$0	$0	$0	$34,320	
Other Internal Costs:																		
WAN Costs			O				$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	
Other 3rd Party Software			I				$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	
DEPARTMENTAL INTERNAL COSTS TOTAL							**$371,800**	**$371,800**	**$53,768**	**$53,768**	**$53,768**	**$0**	**$0**	**$0**	**$0**	**$0**	**$904,904**	
TOTAL INTERNAL COSTS			TotlO				$371,800	$371,800	$53,768	$53,768	$53,768	$0	$0	$0	$0	$0	$904,904	
DII FEES																		
Project Implementation Costs Summary:							**$817,322**	**$785,322**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$1,602,644**	
3% Charge for DII PMO/EA Services Project Implementation Costs:			I				$24,520	$23,560	$0	$0	$0	$0	$0	$0	$0	$0	$48,079	
Independent Review			I				$15,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$15,000	
DII FEES TOTAL			**TotlO**				**$39,520**	**$23,560**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$63,079**	
TOTAL COSTS (IMPLEMENTATION and OPERATIONS)						**$0**	**$856,842**	**$848,882**	**$93,768**	**$93,768**	**$93,768**	**$0**	**$0**	**$0**	**$0**	**$0**	**$1,987,027**	

COST BREAKOUT (IMPLEMENTATION and OPERATIONS)

Implementation	**$0**	**$856,842**	**$808,882**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$1,665,723**
Operations	**$0**	**$0**	**$40,000**	**$93,768**	**$93,768**	**$93,768**	**$0**	**$0**	**$0**	**$0**	**$0**	**$321,304**

COST BREAKOUT TOTALS (IMPLEMENTATION and OPERATIONS)			$0	$856,842	$848,882	$93,768	$93,768	$93,768	$0	$0	$0	$0	$0	$1,987,027	$0

USE OF FUNDS - END

SOURCE OF FUNDS - START

Revenue Source:				Prior	Year 1 (FY18)	Year 2 (FY19)	Year 3 (FY20)	Year 4 (FY21)	Year 5 (FY22)	Year 6 (FY23)	Year 7 (FY24)	Year 8 (FY25)	Year 9 (FY26)	Year 10 (FY27)	TOTAL
															$0
Assume Year 1 and 2 are Implementation related, Years 3-x are Operations related															
❸															
STATE FUNDING: Implementation: Operating Budget	37.67%	State Medicaid Special Fund	I	$0	$512,237	$236,299	$0	$0	$0	$0	$0	$0	$0	$0	$748,536
STATE FUNDING: Operations: Operating Budget	6.07%	State Medicaid Special Fund/General Fund	O	$0	$0	$10,000	$36,884	$36,884	$36,884	$0	$0	$0	$0	$0	$120,652
Grant Funding: Implementation	4.28%	Nellie Mae Contribution	I	$0	$85,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$85,000
Grant Funding: Operations	0.00%	Nellie Mae Contribution	O	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
FEDERAL FUNDING: Implementation	10.07%	SLDS Reallocation	I	$0	$200,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$200,000
FEDERAL FUNDING: Implementation	31.82%	SARA Funding/Title I Assessment Fund	I	$0	$285,072	$347,115	$0	$0	$0	$0	$0	$0	$0	$0	$632,187
FEDERAL FUNDING: Operations:	10.10%	SARA Funding/Title I Assessment Fund	O	$0	$0	$0	$66,884	$66,884	$66,884	$0	$0	$0	$0	$0	$200,652
TOTAL:	100.00%			$0	$1,082,309	$593,414	$103,768	$103,768	$103,768	$0	$0	$0	$0	$0	$1,987,027

Summary by State and Federal:

State Funding:	**$954,188**		0	$597,237	$246,299	$36,884	$36,884	$36,884	$0	$0	$0	$0	$0	
Federal Funding:	**$1,032,839**		$0	$485,072	$347,115	$66,884	$66,884	$66,884	$0	$0	$0	$0	$0	
Implementation Funds:	**$1,665,723**	**Funding Overage/(Shortage):**												
Implementation Costs:	**$1,665,723**	**($0)**												
Operational Funds:	**$321,304**													
Operational Costs:	**$321,304**	**$0**												

SOURCE OF FUNDS - END

PROJECT CASH FLOW - START

IMPLEMENTATION	Prior	Year 1 (FY18)	Year 2 (FY19)	Year 3 (FY20)	Year 4 (FY21)	Year 5 (FY22)	Year 6 (FY23)	Year 7 (FY24)	Year 8 (FY25)	Year 9 (FY26)	Year 10 (FY27)	TOTAL
Use	$0	$856,842	$808,882	$0	$0	$0	$0	$0	$0	$0	$0	$1,665,723
Source	$0	$797,237	$236,299	$0	$0	$0	$0	$0	$0	$0	$0	$1,033,536
Net Cash by Fiscal Year:	$0	($59,605)	($572,583)	$0	$0	$0	$0	$0	$0	$0	$0	($632,187)
Cash Flow:	**$0**	**($59,605)**	**($632,187)**	**($632,187)**	**($632,187)**	**($632,187)**	**($632,187)**	**($632,187)**	**($632,187)**	**($632,187)**	**($632,187)**	**($632,187)**

OPERATIONS	Prior	Year 1 (FY18)	Year 2 (FY19)	Year 3 (FY20)	Year 4 (FY21)	Year 5 (FY22)	Year 6 (FY23)	Year 7 (FY24)	Year 8 (FY25)	Year 9 (FY26)	Year 10 (FY27)	TOTAL
Use	$0	$0	$40,000	$93,768	$93,768	$93,768	$0	$0	$0	$0	$0	$321,304
Source	$0	$285,072	$357,115	$36,884	$36,884	$36,884	$0	$0	$0	$0	$0	$752,839
Net Cash by Fiscal Year:	$0	$285,072	$317,115	($56,884)	($56,884)	($56,884)	$0	$0	$0	$0	$0	$431,535
Cash Flow:	**$0**	**$285,072**	**$602,187**	**$545,303**	**$488,419**	**$431,535**	**$431,535**	**$431,535**	**$431,535**	**$431,535**	**$431,535**	**$431,535**

CASH FLOW - END

NET CHANGE IN OPERATING COSTS - START

			Year 1 (FY18)	Year 2 (FY19)	Year 3 (FY20)	Year 4 (FY21)	Year 5 (FY22)	Year 6 (FY23)	Year 7 (FY24)	Year 8 (FY25)	Year 9 (FY26)	Year 10 (FY27)	TOTAL
Proposed Operating Costs:													
Total Operating Costs	*See COST BREAKOUT section above*		$0	$40,000	$93,768	$93,768	$93,768	$0	$0	$0	$0	$0	$321,304
Total: Proposed Operating Costs:			**$0**	**$40,000**	**$93,768**	**$93,768**	**$93,768**	**$0**	**$0**	**$0**	**$0**	**$0**	**$321,304**
Current Operating Costs:	For purposes of comparing operating costs to new operating costs, we only include years 3-5 as those are the years the new operating costs will exist, except for hosting which shows years 2-5												
Software Licenses	Per IT ABC Form				$5,400	$5,400	$5,400	$0	$0	$0	$0	$0	$16,200
Hosting	Per IT ABC Form			$40,000	$40,000	$40,000	$40,000	$0	$0	$0	$0	$0	$160,000
State Labor:	Per Brian Townsend	Current operating costs largely understated on ABC form as existing activities for piecemealed report card web page not fully considered.											
Subject Matter Experts: Data Management:													
Data team: Wendy Geller	0.02 FTE@$55@2080 hours per year				$2,288	$2,288	$2,288	$0	$0	$0	$0	$0	$6,864
Data team: Glenn Bailey	0.05 FTE@$55@2080hours per year				$5,720	$5,720	$5,720	$0	$0	$0	$0	$0	$17,160
Data team: Jennifer Perry	0.02 FTE@$55@2080 hours per year				$2,288	$2,288	$2,288	$0	$0	$0	$0	$0	$6,864
Data team: Beth-Ann Willey	0.02 FTE@$55@2080 hours per year				$2,288	$2,288	$2,288	$0	$0	$0	$0	$0	$6,864
Data team: David Kelley	0.02 FTE@$55@2080 hours per year				$2,288	$2,288	$2,288	$0	$0	$0	$0	$0	$6,864
Data team: Dan Shepard	0.02 FTE@$55@2080 hours per year				$2,288	$2,288	$2,288	$0	$0	$0	$0	$0	$6,864
Data team: Rachel Stanger	0.05 FTE@$55@2080hours per year				$5,720	$5,720	$5,720	$0	$0	$0	$0	$0	$17,160
Data team: Mike Bailey	0.02 FTE@$55@2080 hours per year				$2,288	$2,288	$2,288	$0	$0	$0	$0	$0	$6,864
Software Development Team													
Software Developers: Bill Schwartz	.1 FTE @$55@2080 per year				$11,440	$11,440	$11,440	$0	$0	$0	$0	$0	$34,320
					$0	$0	$0	$0	$0	$0	$0	$0	$0
Total: Current Operating Costs:			***$0***	***$40,000***	***$82,008***	***$82,008***	***$82,008***	***$0***	***$0***	***$0***	***$0***	***$0***	***$286,024***
Net Operating Cost Decrease/(Increase)			**$0**	**$0**	**($11,760)**	**($11,760)**	**($11,760)**	**$0**	**$0**	**$0**	**$0**	**$0**	**($35,280)**
New Operating Costs funded by SOV Sources	Source: See above		$0	$10,000	$36,884	$36,884	$36,884	$0	$0	$0	$0	$0	$120,652
Current Operating Costs funded by SOV Sources	Source: General fund @ 50%		$0	$20,000	$41,004	$41,004	$41,004	$0	$0	$0	$0	$0	$143,012
❹ **Net SOV Operating Cost Decrease/(Increase)**			**$0**	**$10,000**	**$4,120**	**$4,120**	**$4,120**	**$0**	**$0**	**$0**	**$0**	**$0**	**$22,360**
New Operating Costs funded by Federal Sources	Source: See above		$0	$66,884	$66,884	$66,884	$0	$0	$0	$0	$0	$0	$200,652
Current Operating Costs funded by Federal Sources	Source: SARA/Title I assessment funds @ 50%		$0	$20,000	$41,004	$41,004	$41,004	$0	$0	$0	$0	$0	$143,012
❺ **Net Federal Operating Cost Decrease/(Increase)**			**$0**	**($46,884)**	**($25,880)**	**($25,880)**	**$41,004**	**$0**	**$0**	**$0**	**$0**	**$0**	**($57,640)**

NET CHANGE IN OPERATING COSTS - END

NOTES / ASSUMPTIONS:

❶ No new license costs allocated as this is a custom solution; Relicense of existing software expected
❷ Staffing levels anticipated through this project
❸ Funding Sources
❹ Net State Operating Cost Changes
❺ Net Federal Operating Cost Changes

Revised State Template for the Consolidated State Plan

The Elementary and Secondary Education Act of 1965, as amended by the Every Student Succeeds Act

U.S. Department of Education
Issued: March 2017

OMB Number: XX
Expiration Date:

Introduction

Section 8302 of the Elementary and Secondary Education Act of 1965 (ESEA), as amended by the Every Student Succeeds Act (ESSA),[1] requires the Secretary to establish procedures and criteria under which, after consultation with the Governor, a State educational agency (SEA) may submit a consolidated State plan designed to simplify the application requirements and reduce burden for SEAs. ESEA section 8302 also requires the Secretary to establish the descriptions, information, assurances, and other material required to be included in a consolidated State plan. Even though an SEA submits only the required information in its consolidated State plan, an SEA must still meet all ESEA requirements for each included program. In its consolidated State plan, each SEA may, but is not required to, include supplemental information such as its overall vision for improving outcomes for all students and its efforts to consult with and engage stakeholders when developing its consolidated State plan.

Completing and Submitting a Consolidated State Plan

Each SEA must address all of the requirements identified below for the programs that it chooses to include in its consolidated State plan. An SEA must use this template or a format that includes the required elements and that the State has developed working with the Council of Chief State School Officers (CCSSO).

Each SEA must submit to the U.S. Department of Education (Department) its consolidated State plan by one of the following two deadlines of the SEA's choice:

- **April 3, 2017**; or
- **September 18, 2017**.

Any plan that is received after April 3, but on or before September 18, 2017, will be considered to be submitted on September 18, 2017.

Alternative Template

If an SEA does not use this template, it must:

1) Include the information on the Cover Sheet;
2) Include a table of contents or guide that clearly indicates where the SEA has addressed each requirement in its consolidated State plan;
3) Indicate that the SEA worked through CCSSO in developing its own template; and
4) Include the required information regarding equitable access to, and participation in, the programs included in its consolidated State plan as required by section 427 of the General Education Provisions Act. See Appendix B.

Individual Program State Plan

An SEA may submit an individual program State plan that meets all applicable statutory and regulatory requirements for any program that it chooses not to include in a consolidated State plan. If an SEA intends to submit an individual program plan for any program, the SEA must submit the individual program plan by one of the dates above, in concert with its consolidated State plan, if applicable.

Consultation

Under ESEA section 8540, each SEA must consult in a timely and meaningful manner with the Governor, or appropriate officials from the Governor's office, including during the development and prior to submission of its consolidated State plan to the Department. A Governor shall have 30 days prior to the

[1] Unless otherwise indicated, citations to the ESEA refer to the ESEA, as amended by ESSA.

SEA submitting the consolidated State plan to the Secretary to sign the consolidated State plan. If the Governor has not signed the plan within 30 days of delivery by the SEA, the SEA shall submit the plan to the Department without such signature.

Assurances

In order to receive fiscal year (FY) 2017 ESEA funds on July 1, 2017, for the programs that may be included in a consolidated State plan, and consistent with ESEA section 8302, each SEA must also submit a comprehensive set of assurances to the Department at a date and time established by the Secretary. In the near future, the Department will publish an information collection request that details these assurances.

For Further Information: If you have any questions, please contact your Program Officer at OSS.[State]@ed.gov (e.g., OSS.Alabama@ed.gov).

Cover Page

Contact Information and Signatures	
SEA Contact (Name and Position): Rebecca Holcombe Secretary, Vermont Agency of Education	Telephone: 802-479-1030
Mailing Address: 219 North Main Street, Suite 402 Barre. VT 05641	Email Address: rebecca.holcombe@vermont.gov
By signing this document, I assure that: To the best of my knowledge and belief, all information and data included in this plan are true and correct. The SEA will submit a comprehensive set of assurances at a date and time established by the Secretary, including the assurances in ESEA section 8304. Consistent with ESEA section 8302(b)(3), the SEA will meet the requirements of ESEA sections 1117 and 8501 regarding the participation of private school children and teachers.	
Authorized SEA Representative (Printed Name)	Telephone:
Signature of Authorized SEA Representative	Date:
Governor (Printed Name) Phil Scott	Date SEA provided plan to the Governor under ESEA section 8540: 1 March 2017
Signature of Governor	Date:

Programs Included in the Consolidated State Plan

Instructions: Indicate below by checking the appropriate box(es) which programs the SEA included in its consolidated State plan. If an SEA elected not to include one or more of the programs below in its consolidated State plan, but is eligible and wishes to receive funds under the program(s), it must submit individual program plans for those programs that meet all statutory and regulatory requirements with its consolidated State plan in a single submission.

☒ Check this box if the SEA has included all of the following programs in its consolidated State plan.

or

If all programs are not included, check each program listed below that the SEA includes in its consolidated State plan:

☐ Title I, Part A: Improving Basic Programs Operated by Local Educational Agencies

☐ Title I, Part C: Education of Migratory Children

☐ Title I, Part D: Prevention and Intervention Programs for Children and Youth Who Are Neglected, Delinquent, or At-Risk

☐ Title II, Part A: Supporting Effective Instruction

☐ Title III, Part A: English Language Acquisition, Language Enhancement, and Academic Achievement

☐ Title IV, Part A: Student Support and Academic Enrichment Grants

☐ Title IV, Part B: 21st Century Community Learning Centers

☐ Title V, Part B, Subpart 2: Rural and Low-Income School Program

☐ Title VII, Subpart B of the McKinney-Vento Homeless Assistance Act: Education for Homeless Children and Youth Program (McKinney-Vento Act)

Instructions

Each SEA must provide descriptions and other information that address each requirement listed below for the programs included in its consolidated State plan. Consistent with ESEA section 8302, the Secretary has determined that the following requirements are absolutely necessary for consideration of a consolidated State plan. An SEA may add descriptions or other information, but may not omit any of the required descriptions or information for each included program.

The Vermont Agency of Education has reordered our state plan to accommodate and facilitate ease of review. The Vermont State Plan as presented to the public is available be following this link.

A. Title I, Part A: Improving Basic Programs Operated by Local Educational Agencies (LEAs)

1. Challenging State Academic Standards and Assessments *(ESEA section 1111(b)(1) and (2) and 34 CFR §§ 200.1−200.8.)*[2]

Standards

Vermont's Education Quality Standards specify seven Curriculum Content Areas and the Transferable Skills that are critical for student success (2120.5). The Vermont Agency of Education (VT-AOE) considered whether or not an assessment was necessary for each of these areas. Stakeholder input expressed a strong preference for focusing on fewer areas to reduce the need for additional state testing. The result is that four of seven areas have assessment measures designed to satisfy ESSA requirements, with the remaining areas being assessed through the qualitative component of our Education Quality Reviews. English language arts, math and science are described below; physical education is addressed later in our description of a 5th indicator.

1) English Language Arts (ELA)

Adopted Standards:

ESSA requires that states select challenging career and college ready standards in English-Language Arts/Reading. In 2010, the Vermont State Board of Education adopted the Common Core State Standards as our definition of what students in each grade level should know and be able to do in the Education Quality Standards (EQS) curriculum area of literacy. These standards have been used to satisfy federal expectations under *No Child Left Behind,* and maintaining these as Vermont's standards provides for continuity in schools.

Under section 1111(b)(1)(B) of ESSA, the state has the option to select alternate standards for students with significant disabilities. Vermont has opted not to pursue this option, as we seek to provide all students with access to a rich educational experience. Individual determinations for how best to meet these students' specific learning needs is delegated to local IEP teams, which collaboratively set learning targets that are aligned to the grade-level general education curriculum. This process includes students (where appropriate) and their families, in consultation with school-based educators. This decision is supported by past practice in Vermont.

[2] The Secretary anticipates collecting relevant information consistent with the assessment peer review process in 34 CFR § 200.2(d). An SEA need not submit any information regarding challenging State academic standards and assessments at this time.

Assessment:
ESSA requires that states select assessments that measure the full breadth of adopted standards and meet technical requirements for validity and reliability for students in grades 3-8 and in grades 9-12.

Vermont intends to meet this requirement for 99% of students by using the computer adaptive Smarter Balanced Assessment for reading in grades 3 through 9. This test has been used for two years in Vermont and has been submitted to the federal peer review process. All studies of the Smarter Balanced Assessment have demonstrated that it is a valid and reliable tool for assessing the Common Core State Standards. The assessment includes reports to parents and schools that clearly articulate student performance on the assessment. Data can be disaggregated and used for accountability purposes.

For the 1% of students with the most severe cognitive disabilities, Vermont will continue using the Dynamic Learning Map (DLM) that is developed and used by a multi-state consortium. The assessment is given in reading/language arts and mathematics. The DLM assessment has been created to align with the state's common core standards in reading/language arts and mathematics. It has been peer reviewed and has been shown to meet the technical qualities of assessment.

2) Mathematics

Adopted Standards:
ESSA requires that states select challenging career and college ready standards in Mathematics. In 2010, the Vermont State Board of Education adopted the Common Core State Standards as our definition of what students in each grade level should know and be able to do in the Education Quality Standards curriculum area of mathematical content and practices. These standards have been used to satisfy federal expectations under *No Child Left Behind,* and maintaining these as Vermont's standards provides for continuity in schools.

Under section 1111(b)(1)(B) of ESSA, the state has the option to select alternate standards for students with significant disabilities. Vermont has opted not to pursue this option, as we seek to provide all students with access to a rich educational experience. Individual determinations for how best to meet these students' specific learning needs is delegated to local IEP teams to collaboratively set learning targets that are aligned to the grade level general education curriculum. This process includes students (where appropriate) and their families, in consultation with school-based educators. This decision is supported by past practice in Vermont.

Assessment:
ESSA requires that states select assessments that measure the full breadth of adopted standards and meet technical requirements for validity and reliability for students in grades 3-8 and grades 9-12.

Vermont intends to meet this requirement by using the computer adaptive Smarter Balanced Assessment for reading in grades 3 through 9. This test has been used for two years in Vermont and has been submitted to the federal peer review process. All studies of Smarter Balanced Assessment have demonstrated that it is a valid and reliable tool for assessing the Common Core State Standards.

Under section 1111(b)(2)(C)(iii) of ESSA, the state has the option to allow students in grade 8 to take the end of course exam for the advanced mathematics course they are taking, rather than taking the 8th grade assessment. As Vermont has opted to only assess mathematics once in high school, no end of course assessments exist; therefore, this option is not available in Vermont.

The assessment includes reports to parents and schools that clearly articulate student performance on the assessment. Data can be disaggregated and used for accountability purposes.

3) Science

Adopted Standards:

ESSA requires that states select challenging career and college ready standards in science. In 2013, the Vermont State Board of Education adopted the Next Generation Science Standards (NGSS) as our definition of what students in each grade level should know and be able to do in the Education Quality Standards curriculum area of scientific inquiry and content knowledge. These standards have been used to satisfy federal expectations under *No Child Left Behind* and maintaining these as Vermont's standards provides for continuity in schools.

Under section 1111(b)(1)(B) of ESSA, the state has the option to select alternate standards for students with significant disabilities. Vermont has opted not to pursue this option, as we seek to provide all students with access to a rich educational experience. Individual determinations for how best to meet these students' specific learning needs are delegated to local IEP teams to collaboratively set learning targets that are aligned to the grade level general education curriculum. This process includes students (where appropriate) and their families, in consultation with school-based educators. This decision is supported by past practice in Vermont.

Assessment:

ESSA requires that states select assessments that measure the full breadth of adopted standards and meet technical requirements for validity and reliability for students in three grade levels- elementary, middle, and high school.

For at least 99% of students, Vermont intends to meet this requirement by using a new science assessment that is under development with a consortium of other states. We intend for this test to be administered via computer to students in 5th, 8th, and 11th grades and eventually include simulations or performance tasks that will allow for the assessment of the full breadth of the NGSS standards. We have released a Request for Proposals (RFP) to identify the vendor who will be our partner in this work and are assessing proposals that have been submitted. As the

assessment is developed, it will be peer-reviewed to ensure it meets standards of technical quality. The assessment includes reports to parents and schools that clearly articulate student performance. Data can be disaggregated and used for accountability purposes.

For the less than 1% of students who require an alternate assessment due to extreme cognitive disabilities, Vermont will use the New England Common Assessment Program (NECAP) alternate assessment until the state moves to an NGSS aligned assessment for science. The current peer-reviewed assessment is aligned to state science standards and has been shown to meet the technical qualities of assessment. In seeking a new vendor for this assessment, the state intends to make its determination based on the same criteria.

2. Eighth Grade Math Exception (*ESEA section 1111(b)(2)(C) and 34 CFR § 200.5(b)(4)*):
    i. Does the State administer an end-of-course mathematics assessment to meet the requirements under section 1111(b)(2)(B)(v)(I)(bb) of the ESEA?
        - □ Yes
        - ⊟ No

    ii. If a State responds "yes" to question 2(i), does the State wish to exempt an eighth-grade student who takes the high school mathematics course associated with the end-of-course assessment from the mathematics assessment typically administered in eighth grade under section 1111(b)(2)(B)(v)(I)(aa) of the ESEA and ensure that:
        a. The student instead takes the end-of-course mathematics assessment the State administers to high school students under section 1111(b)(2)(B)(v)(I)(bb) of the ESEA;
        b. The student's performance on the high school assessment is used in the year in which the student takes the assessment for purposes of measuring academic achievement under section 1111(c)(4)(B)(i) of the ESEA and participation in assessments under section 1111(c)(4)(E) of the ESEA;
        c. In high school:
            1. The student takes a State-administered end-of-course assessment or nationally recognized high school academic assessment as defined in 34 CFR § 200.3(d) in mathematics that is more advanced than the assessment the State administers under section 1111(b)(2)(B)(v)(I)(bb) of the ESEA;
            2. The State provides for appropriate accommodations consistent with 34 CFR § 200.6(b) and (f); and
            3. The student's performance on the more advanced mathematics assessment is used for purposes of measuring academic achievement under section 1111(c)(4)(B)(i) of the ESEA and participation in assessments under section 1111(c)(4)(E) of the ESEA.

        - □ Yes
        - □ No

    iii. If a State responds "yes" to question 2(ii), consistent with 34 CFR § 200.5(b)(4), describe, with regard to this exception, its strategies to provide all students in the State the opportunity to be prepared for and to take advanced mathematics coursework in middle school.

Click here to enter text.

3. Native Language Assessments *(ESEA section 1111(b)(2)(F) and 34 CFR § 200.6(f)(2)(ii))*:
    i. Provide its definition for "languages other than English that are present to a significant extent in the participating student population," and identify the specific languages that meet that definition.
    Click here to enter text.

Vermont has a very small population of English Learners, less than 1% of the student population which tested in 2016. Of these, no language is represented with greater than 0.2% frequency of all students assessed.

While the numbers of students are low, Vermont believes that whenever possible students should be afforded opportunities to assess or be supported in their native language. As a result, we define the minimum threshold for a required assessment in a language other than English at 10% of the testing population, significantly lower than the 30% threshold recommended by the Center on Standards and Assessment Implementation[3]. Currently, no language meets Vermont's threshold; the most common language other than English is Portuguese at 0.20% of the overall student population. Likewise, no languages other than English are present to a significant extent in the student population.

Table 1: Most common home languages and the percent of all test takers in 2016.

Language	Percent of Test Takers
Portuguese	0.20%
Spanish	0.10%
Nepali	0.10%
Russian	0.10%
Norwegian	0.07%

    ii. Identify any existing assessments in languages other than English, and specify for which grades and content areas those assessments are available.
    Click here to enter text.

Fortunately, Vermont is part of the Smarter Balanced Consortium. As a result, we are able to offer stacked Spanish assessments for English language arts and mathematics in all tested grades. We also provide single-language glossaries in 11 languages and 10 English-Language translation glossaries for all SBAC tests and subjects, including:

[3] (http://www.csai-online.org/sites/default/files/Updated%20Inclusion%20of%20ELL%20in%20Assessment%20201604.pdf)

Table 2: Single-Language and English-Language Translation Glossaries Available in Vermont

Single-language Glossaries	English-Language Translation Glossaries
1. Spanish Glossary	1. English & Spanish Glossary
2. Arabic Glossary	2. English & Arabic Glossary
3. Cantonese Glossary	3. English & Cantonese Glossary
4. Mandarin Glossary	4. English & Mandarin Glossary
5. Filipino Glossary (Ilokano & Tagalog)	5. English & Filipino Glossary (Ilokano & Tagalog)
6. Korean Glossary	6. English & Korean Glossary
7. Punjabi Glossary (Eastern & Western)	7. English & Punjabi Glossary (Eastern & Western)
8. Russian Glossary	8. English & Russian Glossary
9. Ukrainian Glossary	9. English & Ukrainian Glossary
10. Vietnamese Glossary	10. English & Vietnamese Glossary

Our testing procedures allow for additional accommodations for English learners. Individual schools may choose to provide glossaries in languages in addition to those listed in Table 2 or use a human interpreter for those additional languages. These additional supports are available at all test grade levels.

iii. Indicate the languages identified in question 3(i) for which yearly student academic assessments are not available and are needed.
Click here to enter text.

Currently, no language meets Vermont's threshold recommended by the Center on Standards and Assessment Implementation and no additional assessments are needed. See Section A.3.i for more information.

iv. Describe how it will make every effort to develop assessments, at a minimum, in languages other than English that are present to a significant extent in the participating student population including by providing
   a. The State's plan and timeline for developing such assessments, including a description of how it met the requirements of 34 CFR § 200.6(f)(4);
   b. A description of the process the State used to gather meaningful input on the need for assessments in languages other than English, collect and respond to public comment, and consult with educators; parents and families of English learners; students, as appropriate; and other stakeholders; and
   c. As applicable, an explanation of the reasons the State has not been able to complete the development of such assessments despite making every effort.
   Click here to enter text..

Currently, no language meets Vermont's threshold recommended by the Center on Standards and Assessment Implementation and no additional assessments are needed. As a result, no assessments in languages other than English need to be developed. Should the percent of students speaking a language other than English exceed 10% and be a language for which we do not already have an assessment, VT-AOE will work with our assessment vendors to produce assessments in students' native language as expeditiously as possible.

4. Statewide Accountability System and School Support and Improvement Activities *(ESEA section 1111(c) and (d))*:
    i. Subgroups *(ESEA section 1111(c)(2))*:
        a. List each major racial and ethnic group the State includes as a subgroup of students, consistent with ESEA section 1111(c)(2)(B). Click here to enter text.

Student Groups

ESSA requires that Vermont track the performance of several student groups. In some cases, the information on the performance of these student groups must be used for reporting. In other cases, the data must be used for reporting and to make accountability determinations about schools.

A cornerstone of Vermont education has long been a commitment to equitable outcomes for all students. By disaggregating the data for different student groups, we better understand if all students are experiencing school in the same way or if some students are not being served as well as others. It is the examination of this data which helps us to guide and shape our improvement efforts as we seek ever more equitable outcomes.

Table 3: Student groups, data source, and number of students in Vermont for each group and whether or not those student groups will be measured for reporting, accountability, or both purposes (preK-12 enrollment in 2015-16).

Student Group	Number	Percent	Data Used in Reporting	Data used in Accountability
All Students	77,130		X	X
Accountability Categories				
Ethnic and Racial Categories:				
American Indian or Alaskan Native	195	0.3%	X	X
Asian	1,549	2.0%	X	X
Black	1,584	2.1%	X	X
Hispanic	1,408	1.8%	X	X
Native Hawaiian or other Pacific Islander	49	0.1%	X	X
White	69,933	90.7%	X	X
English Learners	1,298	1.7%	X	X
Students with Free and Reduced Lunch	30,118	39.1%	X	X
Students with Disabilities	11,553	15.0%	X	X
Historically Marginalized Students	37,861	49.1%	X	X
Historically Privileged Students	39,269	50.9%	X	X
Additional Reporting Categories				
Female	37,333	48.4%	X	
Male	39,797	51.6%	X	
Migrant Students*	346	0.5%	X	
Military-Affiliated Students	*	*	X	
Homeless Students	*	*	X	
Students in Foster Care	*	*	X	

b. If applicable, describe any additional subgroups of students other than the statutorily required subgroups (*i.e.*, economically disadvantaged students, students from major racial and ethnic groups, children with disabilities, and English learners) used in the Statewide accountability system.
Click here to enter text.

Vermont has opted to include two additional groups to the required student groups: Historically Marginalized Students and Historically Privileged Students. Historically Marginalized Students are those students who have been historically underserved by educational institutions for any one, or more than one, characteristic including ethnic and racial minorities, English Learners, students with Free and Reduced Lunch, students with disabilities, and students who are migrant, foster, or homeless. Historically Privileged Students are those students who have none of the characteristics that are associated with being underserved.

We have opted to include these two additional groups primarily to increase transparency around student performance. Vermont's small schools and relatively low levels of diversity often mean that student groups are too small to show data which might point to inequities in experience. By creating a larger group that accounts for many characteristics, we will be able to share with the public more information about equitable learning experiences in Vermont.

The Historically Marginalized Student group will not take the place of any single disaggregated group. For example, if a school had sufficient numbers of students who receive free and reduced lunch, have disabilities, and are Black, the school would receive data for each of the specific student groups and the Historically Marginalized Student group. However, if a school had students of the same groups in numbers too small to be individually reported, there is higher likelihood that taken together these students could be represented in publically reported data for the aggregated group. As with all data, school systems would have access to their unsuppressed data for planning purposes.

c. Does the State intend to include in the English learner subgroup the results of students previously identified as English learners on the State assessments required under ESEA section 1111(b)(2)(B)(v)(I) for purposes of State accountability (ESEA section 1111(b)(3)(B))? Note that a student's results may be included in the English learner subgroup for not more than four years after the student ceases to be identified as an English learner.
□ Yes
~~X~~ No

d. If applicable, choose one of the following options for recently arrived English learners in the State:
~~☒~~ Applying the exception under ESEA section 1111(b)(3)(A)(i); or
☐ Applying the exception under ESEA section 1111(b)(3)(A)(ii); or
☐ Applying the exception under ESEA section 1111(b)(3)(A)(i) or under ESEA section 1111(b)(3)(A)(ii). If this option is selected, describe how the State will choose which exception applies to a recently arrived English learner.
Click here to enter text.

ii. Minimum N-Size *(ESEA section 1111(c)(3)(A))*:

a. Provide the minimum number of students that the State determines are necessary to be included to carry out the requirements of any provisions under Title I, Part A of the ESEA that require

disaggregation of information by each subgroup of students for accountability purposes.
Click here to enter text.

Vermont is a very small state with very small schools. As a result, data suppression to protect student privacy and to ensure reliability of results is a frequent issue.

Virtually none of the student characteristics of concern under ESSA can be reported at the school level. In fact, we are not able to report data for the vast majority of our schools in any disaggregated field (highest is male/female and then students qualifying for free and reduced lunch (FRL)). As a state, we can see that the persistent achievement gaps reported nationally occur in Vermont as well. However, unlike larger schools in other parts of the nation, the small size of our school units prohibits the release of data to hold schools accountable for results.

Likewise, we are troubled by producing accountability determinations on a number deemed too small to be reliable. As a result, Vermont has set the "minimum-N" to 25 unique students, identified over three consecutive years, for ***accountability purposes***. This would likely mean that schools would need to have roughly 8 students per year in any given group of students being analyzed to produce accountability data. The minimum N of 25 will be applied to all students and student groups in a consistent manner.

A Second Tier of Accountability

In order to bring more schools into the state's accountability system, Vermont proposes to initiate additional school accountability at the Supervisory Union/Supervisory District (SU/SD) level. Vermont's Supervisory Union/Supervisory District are akin to school districts in other states. They have superintendents and central office staff who support the principals and teachers in their jurisdictions. However, it is important to note that even our SU/SDs are small: the smallest includes a single school with 183 students, the largest has just over 4,000 students and 5 schools. Vermont has none of the larger urban or county districts typical of many states. Our largest Supervisory Union/Supervisory District would be considered a moderate-sized high school in most states.

While the size of our schools is a factor in this decision, it is not the sole reason for this determination. Vermont prides itself on local control and the ability of local groups to identify, name, and solve the problems which face their communities. As a state, we have been moving to explicitly build preK-12 pathways that support student learning at all levels. By examining the systemic student achievement for the entire Supervisory Union/Supervisory District, we seek to build a deep commitment to support efforts on behalf of all of our students in a manner that showcases the strong commitment to community and neighbors that Vermonters are rightfully proud of.

By examining at the Supervisory Union/Supervisory District level, we will be able to produce accountability results for 98% of communities in Vermont in the first year of accountability for the "all student group." More importantly, by initiating analysis at the SU/SD level, we will be able to see the performance of student groups where they would have otherwise been

suppressed. At the Supervisory Union/Supervisory District, we will be able to report and hold systems accountable for students on free and reduced lunch (73%), students with disabilities (17%), students learning English (<1%). We will still rarely report data for students of racial minority groups including students who are American Indian (0%), Asian (<1%), Black (<1%), Hispanic, (<1%), Native Hawaiian or Pacific Islander <1%, and white (98%). However, by including the previously discussed Historically Marginalized Student group, we are able to hold 81% of school systems accountable for students who have one or more characteristic commonly associated with negative educational outcomes.

b. Describe how the minimum number of students is statistically sound.
Click here to enter text.

We weighed the relative benefits of a larger or smaller N-size, understanding that a higher N would allow for greater statistical reliability while limiting the number of schools in Vermont that were able to report out their accountability data. Conversely, a smaller N-size would allow for greater accountability at the school level, at the cost of statistical reliability.

Ultimately, we are proposing an N-size that allows for a high level of reliability, while maintaining some ability to report out accountability data in a single year. We believe that an N-size smaller than 25 as proposed would lead to misinterpretations of the data caused by a small number of outlier results.

An N size of 25 is sufficiently statistically sound for making accountability determinations at the school and LEA level. In all statistical analysis, the larger the sample size the greater the reliability. By selecting a minimum of N, Vermont has done so to increase the likelihood that differences between schools are due to actual difference in school quality rather than differences in cohorts or individual teachers. In most cases, a minimum N will be achieved by a single school over multiple years thereby reducing the effect of any particular cohort of students. In larger schools, the larger cohorts will also have multiple teachers as our teacher-to-student ratio is currently 1:7.

Current school configurations suggest that with an N-size of 25, the vast majority of Vermont's schools will not have large enough student enrollment to produce data for accountability in a single year. In the first year of accountability, only 42% percent of elementary schools and 67% of our secondary schools will have sufficient numbers of students to be held accountable for results for the "***all students***" group. In looking at student groups, almost no schools will be held accountable for any of the ethnic and racial categories at either the elementary or secondary level in the first year. Only one school (secondary) will be held accountable for English Learners. For students qualifying for free and reduced lunch, approximately 10% of elementary schools will be held accountable, while 37% of secondary schools will. For students with disabilities, approximately 1% of elementary schools will be held accountable for student results compared to 12.5% of secondary schools. Racial and ethnic groups are not large in Vermont

(≈10%) and less than 1% of elementary and secondary schools will be held accountable for the performance of any non-white student group.

c. Describe how the minimum number of students was determined by the State, including how the State collaborated with teachers, principals, other school leaders, parents, and other stakeholders when determining such minimum number.
Click here to enter text.

The additional information below focuses on public involvement in this discussion.

Table 4: Number and percent of schools with grades 3-6 able to annually report data and participate in the accountability system with a minimum N of 25.

Grades 3-6	Schools with No Accountability Determination N<25		Schools with Accountability Determination N≥25	
	#	%	#	%
All Students	121	57.9%	89	42.1%
Accountability Categories				
Ethnic and Racial Categories:				
American Indian or Alaskan Native	210	100.0%	0	0.0%
Asian	210	100.0%	0	0.0%
Black	210	99.9%	0	0.1%
Hispanic	210	100.0%	0	0.0%
Native Hawaiian or other Pacific Islander	210	100.0%	0	0.0%
White	129	61.4%	82	38.6%
English Learners	210	100.0%	0	0.0%
Students with Free and Reduced Lunch	187	89.1%	23	10.9%
Students with Disabilities	208	99.1%	2	0.9%
Historically Marginalized Students	177	84.1%	33	15.9%
Historically Privileged Students	180	85.7%	30	14.3%
Additional Reporting Categories				
Female	N/A	N/A	N/A	N/A
Male	N/A	N/A	N/A	N/A
Migrant Students	N/A	N/A	N/A	N/A
Military-Affiliated Students	N/A	N/A	N/A	N/A
Homeless Students	N/A	N/A	N/A	N/A
Students in Foster Care	N/A	N/A	N/A	N/A

* These student classifications have not been previously reported and we do not have data to present at this time.

Table 5: Number and percent of schools with grades 7-9 able to annually report data and participate in the accountability system with a minimum N of 25

Grades 7-9	Schools with No Accountability Determination N<25		Schools with Accountability Determination N≥25	
	#	%	#	%
All Students	37	33.4%	63	66.6%
Accountability Categories				
Ethnic and Racial Categories:				
American Indian or Alaskan Native	101	100.0%	0	0.0%
Asian	100	99.4%	1	0.6%
Black	100	99.4%	1	0.5%
Hispanic	101	100.0%	0	0.0%
Native Hawaiian or other Pacific Islander	101	100.0%	0	0.0%
White	39	35.0%	61	65.0%
English Learners	100	99.4%	1	0.6%
Students with Free and Reduced Lunch	69	63.5%	32	36.5%
Students with Disabilities	92	88.5%	8	11.5%
Historically Marginalized Students	61	55.7%	40	44.3%
Historically Privileged Students	58	53.3%	43	46.7%
Additional Reporting Categories				
Female	N/A	N/A	N/A	N/A
Male	N/A	N/A	N/A	N/A
Migrant Students	N/A	N/A	N/A	N/A
Military-Affiliated Students	N/A	N/A	N/A	N/A
Homeless Students	N/A	N/A	N/A	N/A
Students in Foster Care	N/A	N/A	N/A	N/A

* These student classifications have not been previously reported and we do not have data to present at this time.

Table 6: Number and percent of Supervisory Union/Supervisory Districts able to annually report data and participate in the accountability system with a minimum N of 25.

Student Subgroup	Schools with No Accountability Determination N<25		Schools with Accountability Determination N≥25	
	#	%	#	%
All Students	1	1.7%	58	98.3%
Accountability Categories				
Ethnic and Racial Categories:				
American Indian or Alaskan Native	59	100.0%	0	0.0%
Asian	58	98.3%	1	1.7%
Black	58	98.3%	1	1.7%
Hispanic	59	100.0%	0	0.0%
Native Hawaiian or other Pacific Islander	59	100.0%	0	0.0%
White	1	1.7%	58	98.3%
English Learners	58	98.3%	1	0.7%
Students with Free and Reduced Lunch	16	27.1%	43	72.9%
Students with Disabilities	49	83.1%	10	16.9%
Historically Marginalized Students	11	18.6%	48	81.4%
Historically Privileged Students	14	23.7%	45	76.3%
Additional Reporting Categories				
Female	N/A	N/A	N/A	N/A
Male	N/A	N/A	N/A	N/A
Migrant Students	N/A	N/A	N/A	N/A
Military-Affiliated Students	N/A	N/A	N/A	N/A

* These student classifications have not been previously reported and we do not have data to present at this time.

Three Year Accountability

After three years, Vermont will be able to provide accountability data at the school level for 86.5% of elementary and nearly 100% of secondary communities.

Table 7: Number and percent of schools with grades 3-6 able to triennially report data and participate in the accountability system with a minimum N of 25.

Grades 3-6	Schools with No Accountability Determination N<25		Schools with Accountability Determination N≥25	
	#	%	#	%
All Students	29	13.5%	186	86.5%
Accountability Categories				
Ethnic and Racial Categories:				
American Indian or Alaskan Native	15	100.0%	0	0.0%
Asian	68	96.1%	3	3.9%
Black	79	97.5%	2	2.5%
Hispanic	106	100.0%	0	0.0%
Native Hawaiian or other Pacific Islander	10	100.0%	0	0.0%
White	10	14.0%	184	86.0%
English Learners	61	94.9%	3	5.1%
Students with Free and Reduced Lunch	106	49.7%	107	50.3%
Students with Disabilities	184	87.4%	27	12.6%
Historically Marginalized Students	88	41.1%	126	58.9%
Historically Privileged Students	97	45.3%	117	54.7%
Additional Reporting Categories				
Female	N/A	N/A	N/A	N/A
Male	N/A	N/A	N/A	N/A
Migrant Students	N/A	N/A	N/A	N/A
Military-Affiliated Students	N/A	N/A	N/A	N/A
Homeless Students	N/A	N/A	N/A	N/A
Students in Foster Care	N/A	N/A	N/A	N/A

* These student classifications have not been previously reported and we do not have data to present at this time.

Table 8: Number and percent of schools with grades 7-9 able to triennially report data and participate in the accountability system with a minimum N of 25.

Grade 7-9	Schools with No Accountability Determination N<25		Schools with Accountability Determination N≥25	
	#	%	#	%
All Students	4	0.1%	100	99.9%
Accountability Categories				
Ethnic and Racial Categories:				
American Indian or Alaskan Native	16	93.9%	1	6.1%
Asian	46	90.1%	5	9.9%
Black	54	94.7%	3	5.3%
Hispanic	64	99.0%	1	1.0%
Native Hawaiian or other Pacific Islander	8	100.0%	0	0.0%
White	4	3.9%	102	96.1%
English Learners	38	93.4%	3	6.6%
Students with Free and Reduced Lunch	30	28.8%	73	71.2%
Students with Disabilities	58	57.0%	44	43.0%
Historically Marginalized Students	22	21.0%	81	79.0%
Historically Privileged Students	28	27.2%	75	72.8%
Additional Reporting Categories				
Female	N/A	N/A	N/A	N/A
Male	N/A	N/A	N/A	N/A
Migrant Students	N/A	N/A	N/A	N/A
Military-Affiliated Students	N/A	N/A	N/A	N/A
Homeless Students	N/A	N/A	N/A	N/A
Students in Foster Care	N/A	N/A	N/A	N/A

* These student classifications have not been previously reported and we do not have data to present at this time.

Table 9: Number and percent of Supervisory Union/Supervisory Districts able to triennially report data and participate in the accountability system with a minimum N of 25.

Student Subgroup	Schools with No Accountability Determination N<25		Schools with Accountability Determination N≥25	
	#	%	#	%
All Students	0	0.0%	59	100.0%
Accountability Categories				
Ethnic and Racial Categories:				
American Indian or Alaskan Native	58	98.3%	1	1.7%
Asian	54	92.0%	5	8.5%
Black	58	98.3%	1	1.7%
Hispanic	58	98.3%	1	1.7%
Native Hawaiian or other Pacific Islander	59	100.0%	0	0.0%
White	0	0.0%	59	100.0%
English Learners	47	79.7%	12	20.3%
Students with Free and Reduced Lunch	2	3.4%	57	96.6%
Students with Disabilities	12	20.3%	47	79.7%
Historically Marginalized Students	2	3.4%	57	96.6%
Historically Privileged Students	2	3.4%	57	96.6%
Additional Reporting Categories				
Female	N/A	N/A	N/A	N/A
Male	N/A	N/A	N/A	N/A
Migrant Students	N/A	N/A	N/A	N/A
Military-Affiliated Students	N/A	N/A	N/A	N/A

* These student classifications have not been previously reported and we do not have data to present at this time.

Stakeholder Engagement

Throughout 2016, Vermont engaged stakeholders in the development of the Vermont State Plan, with opportunities for public input occurring monthly—often multiple times each month—through November of 2016.

Public Involvement in the minimum N conversation began with the Field Input Team (FIT), a standing and diverse team of roughly 20 public stakeholders who met every six weeks throughout 2016 to discuss the plan's development and the role of the public in that work. FIT

recommendations led to further public input that included additional stakeholders suggested by FIT members, and confirmed (and often expanded upon) by the VT-AOE.

FIT members included, but were not limited to, participants representing the following groups:

- Title Community of Practitioners
- Community leaders and advocates
- English Learner educators
- Institutions of higher education
- Vermont Association for School Business Officials
- Vermont Curriculum Leaders' Association
- Vermont National Education Association (including Special Educators)
- Vermont Principals' Association
- Vermont State Board of Education
- Vermont State Legislature
- Vermont Superintendents' Association

FIT meetings were held on February 29, April 18, May 31, July 11, August 22, and November 14, all in 2016.

On May 31, the question of Vermont's minimum N-size, for accountability purposes, was presented to FIT. FIT recommended that the Agency take this question out for additional public input.

On June 16, the Agency convened an input session specifically around the topic of N size. It was attended by roughly 20 people consisting of a mix of educators and non-educators, including teachers, administrators, policy-makers, and community stakeholders. The group members split their recommendations between high to low N sizes, but consistently expressed a desire for the VT-AOE to adopt a solution that would protect student privacy while ensuring that Vermont's exceptionally small minority student groups wouldn't slip through our accountability system unnoticed.

Based on this input, the VT-AOE developed the proposal described above. It was shared with the public for additional input, in draft form, at the following events and meetings:

- Public Input Retreat at Jay Peak Resort (10-11 August 2016—roughly 135 attendees)
- NAACP Rutland chapter meeting (February 1, 2017—roughly 20 attendees)

Input from these meetings was used to revise the proposal, and to clarify the text framing this proposal in the public comment version of the Vermont State Plan.

The public comment version of the plan was published on the VT-AOE's website on January 11, 2017. The plan was divided up into sections allowing readers to comment on each section individually. N-size was featured in a dedicated plan section. 16 people responded

anonymously with comments, with input being relatively evenly split between people supporting the proposal, people who felt that the proposed N-size was too high, and people who felt that it was too low. And, again, the driving desire expressed in the comments was that Vermont's N-size solution allow historically underserved students in the state to be represented in the accountability system. Vermont used this feedback to help frame a communications plan for this proposal that will be a part of the implementation phase of this plan, upon approval.

d. Describe how the State ensures that the minimum number is sufficient to not reveal any personally identifiable information.[4]
Click here to enter text.

As a small state with small schools, Vermont has always had a challenge when balancing the need to protect student privacy with the need to be transparent and support public accountability efforts.

Vermont has long recognized its responsibility to protect individual students' data privacy within an accountability framework when disseminating information to the public about Vermont schools and students. In 2008, the Vermont State Board of Education approved a policy (The Data Suppression Policy for Student Information) that formalized the VT-AOE practices of suppressing data when cell values linked to sensitive data (e.g. FRL, IEP status or Assessment outcome data) fell below 11.

This policy has evolved over time and reflects guidance issued by Institute of Educational Sciences (IES) (https://nces.ed.gov/pubs2017/2017147.pdf) and is currently practiced as follows:

- Cell suppression is applied whenever cell values reflecting sensitive data (e.g. FRL or IEP status or Assessment outcome data) fall below 11 or, when cross-tabulated or cross-referenced with other publicly reported data, could be used to back-calculate the suppressed cell value.
- Additional complementary suppression is also applied if the data product which contains the sensitive data include column or row totals which would facilitate back-calculation of a single suppressed cell. Complementary suppression is a practice by which the second and or third lowest cell values (until the threshold of 11 is met) must also be suppressed so as to prevent back calculation and reidentification of a suppressed cell value

[4] Consistent with ESEA section1111(i), information collected or disseminated under ESEA section 1111 shall be collected and disseminated in a manner that protects the privacy of individuals consistent with section 444 of the General Education Provisions Act (20 U.S.C. 1232g, commonly known as the "Family Educational Rights and Privacy Act of 1974"). When selecting a minimum n-size for reporting, States should consult the Institute for Education Sciences report "Best Practices for Determining Subgroup Size in Accountability Systems While Protecting Personally Identifiable Student Information" to identify appropriate statistical disclosure limitation strategies for protecting student privacy.

These data protection practices apply to all reports which are generated by the Vermont Agency of Education and/or by VT-AOE's contractors and/or by third parties working on VT-AOE's behalf.

For the purposes of this policy

- **"Personally identifiable information"** is information which alone or in combination with other information is linked, or is linkable, to a specific student and which would thereby allow a reasonable person in the school or its community, who does not have personal knowledge of the relevant circumstances, to identify the student with reasonable certainty.
- **"Sensitive information"** is any information which is protected under federal and/or state statute.
- **"Suppression"** is a disclosure limitation method which involves removing data (e.g., from a cell or a row in a table) to prevent the identification of individuals in small groups or those with unique characteristics. See pages 6-7 of this document: http://ptac.ed.gov/sites/default/files/data_deidentification_terms.pdf
- **"Confidential information"** is any information which is both "sensitive information" and "personally identifiable information."

e. If the State's minimum number of students for purposes of reporting is lower than the minimum number of students for accountability purposes, provide the State's minimum number of students for purposes of reporting.
Click here to enter text.

For the purposes of annually reporting, the state's minimum number of students is 11. This number for reporting is reflects guidelines issued by IES and referenced in Section A.4.ii.d.

iii. Establishment of Long-Term Goals *(ESEA section 1111(c)(4)(A))*:

Long Term Goals Overview
ESSA requires that states establish long term goals for each measure. Vermont has selected long-term goals based on input from stakeholders and our aspirations for our students. Vermont stands behind high standards and expectations for students. We want all students to achieve the same level of proficiency, the same positive outcomes, and the greatest opportunities for success. Setting high standards and then failing to meet them is not equivalent to being a failing school. Rather, schools that have yet to meet the extremely high standards we have set for our students simply have room to grow. The Agency of Education, our school systems, and our public are committed to moving from a language that focuses on schools as "failing to meet" targets to one that focuses on continuous improvement for all.

Long Term Goals

Long term goals are set in relation to the standards we hold for ourselves and our students. Generally, the long-term goal is a "Bull's Eye." These goals are intended to be aspirational, and we hope to achieve them within 3 accountability cycles or 9 years.

a. Academic Achievement. *(ESEA section 1111(c)(4)(A)(i)(I)(aa))*
   1. Describe the long-term goals for improved academic achievement, as measured by proficiency on the annual statewide reading/language arts and mathematics assessments, for all students and for each subgroup of students, including: (1) the timeline for meeting the long-term goals, for which the term must be the same multi-year length of time for all students and for each subgroup of students in the State, and (2) how the long-term goals are ambitious.
      Click here to enter text.

In describing our long term goals, we begin first by providing a picture of where our school level performance is currently and, then, describing our long term goal.

Vermont intends to meet this requirement for 99% of students by using the computer adaptive Smarter Balanced Assessment for English language arts and mathematics in grades 3 through 9. This test has been used for two years in Vermont and has been submitted to the federal Peer Review process. All studies of Smarter Balanced Assessment have demonstrated that it is a valid and reliable tool for assessing the Common Core State Standards. The assessment includes reports to parents and schools that clearly articulate student performance on the assessment. Data can be disaggregated and used for accountability purposes.

For the 1% of students with the most severe cognitive disabilities, Vermont will continue using the Dynamic Learning Map (DLM) that is developed and used by a multi-state consortium. The assessment is given in reading/language arts and mathematics. The DLM assessment has been created to align with the state's common core standards in reading/language arts and mathematics. It has been peer reviewed, and has been shown to meet the technical qualities of assessment.

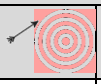
In 2015, current ELA and mathematics performance levels for all students in the State of Vermont on the Smarter Balanced Assessment are as follows:

Table 10: Current ELA SBAC Performance Levels

English Language Arts	Number of Test Takers	State Average Scale Score	State Performance Level	Number of Schools in Each Level			
							
Grade 03	6,089	2,438		19	44	58	43
Grade 04	5,867	2,477		27	51	47	43
Grade 05	6,043	2,515		14	40	71	40
Grade 06	5,953	2,539		11	49	59	25
Grade 07	5,834	2,562		9	36	39	13
Grade 08	5,916	2,580		11	26	45	24
Grade 09	*5,950*	*2,608*		*15*	*41*	*53*	*31*

*There is currently no SBAC ELA testing at ninth grade. The numbers for ninth grade are based on average performance for third though with grades.

Table 11: Current Mathematics SBAC Performance Levels

Mathematics	Number of Test Takers	State Average Scale Score	State Performance Level	Number of Schools in Each Level			
							
Grade 03	6,106	2,443		22	42	69	31
Grade 04	5,867	2,482		23	70	49	26
Grade 05	6,065	2,509		50	66	34	15
Grade 06	5,969	2,522		54	58	20	13
Grade 07	5,844	2,548		31	39	25	9
Grade 08	5,914	2,564		36	32	25	13
Grade 09	*5,961*	*2,589*		*36*	*51*	*37*	*18*

*There is currently no SBAC mathematics testing at ninth grade. The numbers for ninth grade are based on average performance for third though with grades.

Vermont's long-term goal is that by 2025, 100% of our schools will show an average scale score that is at the mid-point of the proficiency range for each grade level they serve for both English language arts and mathematics (Bull's Eye). This goal applies to all subgroups of students in

both ELA and mathematics. Such a goal establishes high expectations for all students and unites the community behind all students improving their performance.

There is no current ELA or mathematics assessment data for ninth grade. We have engaged with our contractor to establish the benchmark scores for each level of performance in ninth grade. Once we receive those scores, the midpoint of the proficient scale will become the long-term goal for ninth grade and interim goals will be based upon that goal in a manner consistent with determinations for all other grades, with 100% of Vermont's students being expected to reach this goal by 2025.

As yet, however, we do not have benchmark scores; therefore, in tables 38 and 39 of Appendix A, we have included preliminary estimates for the current ninth grade performance level for all students and all subgroups on the ELA and mathematics SBAC assessments. To determine the estimates, we found the differences in growth from one grade level to the next on each assessment. We then found the average of those differences to approximate the performance for ninth graders. We repeated this process for all students and for each student subgroup.

Allow us to use the "All Students" group on the SBAC ELA assessment as an explanatory example. Please note all numbers bracketed by asterisks are approximations only.

Table 11a: Determination of Predicted Ninth Grade Current Performance

Accountability Question	**Grade**	**Current Performance (2016)**	**Difference in Current Performance from the previous grade**
How well are students performing in ELA/ reading in 3rd-9th grade? SCALE	All Students		
	3rd	2438	N/A
	4th	2477	39 (2477-2438)
	5th	2515	38 (2515-2477)
	6th	2539	24 (2539-2515)
	7th	2562	23 (2562-2539)
	8th	2580	18 (2580-2562)
	9th	*2608*	*28*

The predicted difference in performance for ninth grade represents the average of the differences in performance for the previous grade levels, or (39+38+24+23+18)/5=28.4. The average of the differences was added to the eighth grade current performance to approximate ninth grade current performance, or 2580+28=2608. The current performance score for the Historically Marginalized Student subgroup represents the averages of current performance for all students included in this group.

We followed a similar method to approximate the mid-point of the proficiency range for ninth graders on each assessment, first finding the differences between the mid-point of the proficiency range from one grade level to the next and, then, averaging those differences. The mid-point of the proficiency range will become the ambitious target for all students and all subgroups of students.

Again, allow us to return to the example of the SBAC assessment for "All Students."

Table 11b: Determination of Predicted Ninth Grade Mid-Point of Proficient Scale

Accountability Question	**Grade**	**Long term Goal** *Mid Point of Proficient Scale*	**Difference in Mid-point of Proficient scale from the previous grade**
How well are students performing in ELA/ reading in 3rd-9th grade? SCALE	All Students		
	3rd	2460	N/A
	4th	2502	42 (2502-2460)
	5th	2541	39 (2541-2502)
	6th	2574	33 (2574-2541)
	7th	2600	26 (2600-2574)
	8th	2617	17 (2617-2600)
	9th	*2648*	*31*

Following the method outlined in the current performance estimation above, we determined the predicted difference in the mid-point of the proficient scale moving from eighth to ninth grade, or (42+39+33+26+17)/5=31.4. The average of the differences was then added to the eighth grade mid-point of proficient scale to derive the approximate ninth grade mid-point of proficient scale, or 2617+31=2648.

The same process will be used to determine the ambitious target for ninth grade Mathematics, with 100% of Vermont's students being expected to reach this goal by 2025.

Additional tables, including tables for student groups, can be found in Tables 38 and 39 of Appendix A. At this time, the vast majority of schools are not performing at this level, making this an ambitious and important goal.

2. Provide the measurements of interim progress toward meeting the long-term goals for academic achievement in Appendix A.

Tables showing the measurements of interim progress towards meeting the long-term goals are provided in Table 38 and 39 of Appendix A.

As we do not yet have data for ninth grade SBAC ELA or mathematics scores. To approximate the interim targets for ninth grade we found the difference between the predicted ninth grade current performance and the predicted ninth grade mid-point of the proficiency range. As we are setting interim targets every three years, we divided that difference by three. We added the quotient to the expected level of current student performance to achieve the first interim goal for year 2019. We added the quotient a second time to achieve the second interim goal for year 2022. We added the quotient a third time to derive the final long-term goal for year 2025.

Again, we will return to "All Students" on the SBAC ELA assessment as an example.

Table 11c: Determination of Predicted Ninth Grade Interim Goals

Accountability Question	**Grade**	**Current Performance (2016)**	**Long term Goal** *Mid Point of Proficient Scale*	**Difference between Mid-point of proficient scale and current progress**	**Interim Targets**		
					2019 1	**2022 2**	**2025 3**
How well are students performing in ELA/ reading in 3rd-9th grade? SCALE	All Students						
	9th	*2608*	*2648*	*40*	*2621*	*2634*	*2648*

As the difference between the long term goal and the current performance was 40 (2648-2608), we divided the 40-point improvement needed to achieve the mid-point of the proficient scale across three the interim targets. Therefore, we predicted a 13-point growth for each interim period so that all students arrive at the mid-point of the proficient scale by 2025.

3. Describe how the long-term goals and measurements of interim progress toward the long-term goals for academic achievement take into account the improvement necessary to make significant progress in closing statewide proficiency gaps.
   Click here to enter text.

Similar to other states, Vermont has struggled to meet the needs of vulnerable populations. We have set interim targets for all students and for each sub-group that allow for meaningful growth and improvement in reducing achievement gaps.

The state-identified goals and targets represent the growth that the state is asking each school to make to achieve our shared goals. School systems will examine their local data to determine

their annual interim targets and will be report these targets to the state. Local systems will identify their commitments to:

1. **Exceed the state-specified goal**: based on local commitments and efforts, school systems may seek to exceed the state specified goal.
2. **Meet the state specified goal**: meet but not exceed the goal.
3. **Maintenance of the state-specified goal**: for any school currently performing above the long-term goal, that school may establish a unique improvement goal to maintain its current performance level.

Establishing a series of state-specified goals as a common point of reference gives local education systems a shared reference point in establishing local continuous improvement goals. The VT-AOE is then able to support LEAs in implementing their continuous improvement plans through specific technical assistance and networking of schools and LEAs with similar goals. Schools identified for Comprehensive and Targeted Supports will receive more state assistance, but all schools will receive cyclical evaluations within Vermont's Education Quality Review framework to ensure that continuous improvement efforts are aligned with state and locally-identified goals and targets.

b. Graduation Rate. *(ESEA section 1111(c)(4)(A)(i)(I)(bb))*
   1. Describe the long-term goals for the four-year adjusted cohort graduation rate for all students and for each subgroup of students, including: (1) the timeline for meeting the long-term goals, for which the term must be the same multi-year length of time for all students and for each subgroup of students in the State, and (2) how the long-term goals are ambitious.
      Click here to enter text.

ESSA requires that States hold schools accountable for the graduation rate using the federal definition of a 4-year cohort calculation. Vermont will meet this objective, but we also want to measure the percentage of students graduating within a 6-year extended graduation rate. In 2014, the Vermont State Board of Education adopted the Education Quality Standards, which requires a proficiency-based graduation requirement that emphasizes mastery rather than time as the critical factor in determining if a student has met career and college ready expectations. As such, students are encouraged to pursue flexible pathways that allow them to take full advantage of work-based learning, early college opportunities, and personalized learning experiences that enrich their learning and better prepare them for positive post-secondary outcomes. Consistent with this legislation, Vermont places greater value on completion of high school with mastery of critical skills than completion within a traditional time frame.

Table 12: 2015 4-year graduation rate for all Vermont students

Graduation Rate (4 year)	Number of Students in Cohort	State Average Grad Rate	State Performance Level	Number of Schools in Each Level			
							
All Students	6,172	87.6%		2	4	44	11

(Data for student groups is found in Appendix A.)

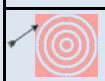
It is our goal that by 2025, 100% of our schools will have 90% of their students graduate within 4 years. This goal applies to all subgroups of students. Baseline data and a timeline for each subgroup are included in Table 40 of Appendix A. The interim goals vary by subgroups in order to ensure that all subgroups will reach the overall graduation goal at the same time.

As part of the New England Secondary School Consortium (NESSC), Vermont has joined with other New England states in aspiring to a 90% 4-year adjusted cohort graduation rate. In the current economy, it is critical that each young person graduate high school with a diploma that signals career and college readiness if they are to obtain sufficient financial security, and fully participate in their communities.

We considered setting a more ambitious target given that many of our student groups are currently graduating at this rate. However, in consultation with our stakeholders we learned that as school systems switch to a proficiency based graduation system where students must fully demonstrate their skill in key learning areas this would create a disincentive to insuring that students are not artificially promoted if their skills have not met standards.

2. If applicable, describe the long-term goals for each extended-year adjusted cohort graduation rate, including (1) the timeline for meeting the long-term goals, for which the term must be the same multi-year length of time for all students and for each subgroup of students in the State; (2) how the long-term goals are ambitious; and (3) how the long-term goals are more rigorous than the long-term goal set for the four-year adjusted cohort graduation rate.

Table 13: 2015 6-year graduation rate for all Vermont students

Graduation Rate (6 year)	Number of Students in Cohort	State Average Grad Rate	State Performance Level	Number of Schools in Each Level			
							
All Students	6,538	90.7%		2	3	40	16

It is our goal that by 2025, 100% of our schools will have 100% of their students meet graduation proficiencies within 6 years and Vermont opts to include an additional measure for the

percentage of students graduating within a 6-year extended graduation rate. The higher target of 100% is set above the target for the 4-year rate to provide a more rigorous standard.

This goal applies to all subgroups of students. Baseline data and a timeline for each subgroup are included in Table 41 of Appendix A. The interim goals vary by subgroups in order to ensure that all subgroups will reach the overall graduation goal at the same time.

3. Provide the measurements of interim progress toward the long-term goals for the four-year adjusted cohort graduation rate and any extended-year adjusted cohort graduation rate in Appendix A.

Please see Tables 40 and 41 of Appendix A.

4. Describe how the long-term goals and measurements of interim progress for the four-year adjusted cohort graduation rate and any extended-year adjusted cohort graduation rate take into account the improvement necessary to make significant progress in closing statewide graduation rate gaps.
Click here to enter text.

Establishing a series of state-specified goals as a common point of reference gives local education systems a shared reference point in establishing local continuous improvement goals. The VT-AOE is then able to support LEAs in implementing their continuous improvement plans through specific technical assistance and networking of schools and LEAs with similar goals. Schools identified for Comprehensive and Targeted Supports will receive more state assistance, but all schools will receive cyclical evaluations within Vermont's Education Quality Review framework to ensure that continuous improvement efforts are aligned with state and locally-identified goals and targets.

The interim goals vary by subgroups in order to ensure that all subgroups will reach the overall graduation goal at the same time.

c. English Language Proficiency. *(ESEA section 1111(c)(4)(A)(ii))*
   1. Describe the long-term goals for English learners for increases in the percentage of such students making progress in achieving English language proficiency, as measured by the statewide English language proficiency assessment, including: (1) the State-determined timeline for such students to achieve English language proficiency and (2) how the long-term goals are ambitious.
   Click here to enter text.

All other assessments and accountability measures are administered to every student in the same grade level, regardless of the student groups to which they belong. This measure is different. Beginning with ESSA, schools are required to examine both the rate at which students who are English learners gain proficiency and whether or not they have met progress targets

along the way to proficiency. This used to be done under the Title III accountability system, but is now embedded within the Title I accountability system.

Long Term Goal and Interim Target:

Vermont's ambitious long-term goal is that by 2025, 100% of our schools will have 100% of students attain English Proficiency within the time frame defined when they are first identified as learners of English.

Gaining English Proficiency:
ESSA allows states to identify specific student characteristics to associate with the length of time students have to gain proficiency. Vermont considered several characteristics with our stakeholder groups and ultimately determined that the most significant determinant of how long it takes to learn English is the students initial level of English proficiency. As a result, students who enter school with the lowest level of proficiency in English will have the most time to become proficient. This measure seeks to determine if students are gaining proficiency as measured by the ACCESS 2.0 assessment in time to enjoy the full benefits of their educational experience.

The timeline for students to gain proficiency is as follows:

- Students identified as Level 1 using ACCESS would have 5-years to attain proficiency;
- Students identified as Level 2 using ACCESS would have 4-years to attain proficiency;
- Students identified as Level 3 using ACCESS would have 3-years to attain proficiency;
- Students identified as Level 4 using ACCESS would have 2-years to attain proficiency;
- Students identified as Level 5 and 6 using ACCESS have already demonstrated proficiency in their use of the English language and are considered English Proficient.

Current Performance:
The current Vermont framework in place during NCLB does not mandate a minimum or maximum number of years for students to become proficient. We expect that this new proposal, which accounts for entry level proficiency in determining goals for attaining full proficiency as measured by ACCESS, will provide a better scaffolding for the provision of ELP supports and will lead to improved student and SU/SD performance on this measure.

Because Vermont does not currently assign time frames associated with ELP acquisition, baseline data was calculated by examining the percentage of Vermont students taking the ACCESS in 2009-10 and attaining proficiency within the number of years associated with that ACCESS score, using the proposed timeline described above. We used 2009-10 data, as it was the most recent year that would allow us to fully use the proposed timeline. According to this data, 55% of Vermont's English Learners attained ELP within this state-proposed timeline. Vermont used this percentage when describing current state performance and when describing interim targets in the next section of this proposal.

When calculating this percentage, the state did not include:

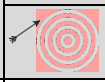
- Students who graduated before the expiration of their state-allotted time to attain English proficiency;
- Students who transferred out of state before the expiration of their state-allotted time to attain proficiency;
- Students who were misidentified as English Learners in 2009-10 (example: students identified as English Learners and as Students With Disabilities, who were later identified as solely being Students With Disabilities) and whose English Learner identification was changed before the expiration of their state-allotted time to attain proficiency.

When assigning values to school performance levels relative to student English Proficiency, Vermont looked at the state's current performance, our long term goal of 100% of students achieving ELP within a state-determined time frame, and the number of schools that had data to report with a minimum N of 4. Vermont will not be using a minimum N of 4 for any accountability or reporting calculations; they were only used to help determine percentages associated with ELP performance levels. Using this value for N, there were 48 schools in Vermont that had data for the 2009-10 academic year.

With this in mind:

- Level 1: Schools with 0%-49% of their English Learners attaining English Proficiency on time
- Level 2: Schools with 50%-74% of their English Learners attaining English Proficiency on time
- Level 3: Schools with 75%-94% of their English Learners attaining English Proficiency on time
- Level 4: Schools with 95%-100% of their English Learners attaining English Proficiency on time

Table 14: Current School Performance: English Learners Attaining Proficiency Within a State-Identified Time Frame

Percent Proficient	Number of Test Takers	State Average Percent Proficient	State Performance Level	Number of Schools in Each Level			
							
All grade levels	1140	55%	Level 2	16	16	16	0

2. Provide the measurements of interim progress toward the long-term goal for increases in the percentage of English learners making progress in achieving English language proficiency in Appendix A.

Vermont has used its limited data to identify interim targets for ELP performance. To calculate interim goals, Vermont took its current performance data (55% of students attaining ELP on time, statewide) and split the gap between our current performance and long term goals into three bands to identify interim goals for 2019 (70%), and 2022 (85%), with 2025 being the year that we intend to meet our long term proficiency goal of 100% of EL students attaining ELP on time. A table illustrating these goals can be found in table 42 of Appendix A.

iv. Indicators *(ESEA section 1111(c)(4)(B))*

a. Academic Achievement Indicator. Describe the Academic Achievement indicator, including a description of how the indicator (i) is based on the long-term goals; (ii) is measured by proficiency on the annual Statewide reading/language arts and mathematics assessments; (iii) annually measures academic achievement for all students and separately for each subgroup of students; and (iv) at the State's discretion, for each public high school in the State, includes a measure of student growth, as measured by the annual Statewide reading/language arts and mathematics assessments.

Click here to enter text.

In all cases, unless specifically mentioned, scores are averaged using a simple mean. When combining multiple grade levels, the scores are averaged with equivalent weights. When required to merge data over three years, we follow the same process of simple averages.

Levels of Performance Overview

This Levels of Performance overview applies to all of Vermont's identified performance indicators, within our accountability model.

VT-AOE has opted to leverage language consistent with our commitment to proficiency-based learning. For each measure and for the school as a whole, a scale is generated which describes the degree to which the school is meeting the "target." Our current terms and iconography are best thought of as place holders while the formal reporting tool is developed.

Table 15: Levels of Performance

Level	Proposed Term	Proposed Iconography
1	Off-Target	
2	Near Target	
3	On-Target	
4	Bull's Eye	

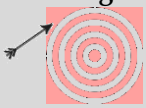
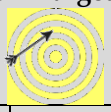
Both the ELA and mathematics indicator scores are determined through a combination of scale scores and growth. Generally—and it depends upon the grades taught at school (see weighting in section A.4.v.b for a full discussion)—the ELA and mathematics SBAC assessments each count as 20% of the total accountability score, or 40% in total. Using the ELA SBAC as an example, of that 20%, half (or 10% of the total accountability score) is determined by student scale scores and half is determined by student growth. Below is a discussion on the 10% deriving from scale scores. Please see the next section for a full discussion on the growth determination.

Table 16: Proposed Scale Score Cuts for ELA Performance Levels

Accountability Question	Grade	4 Levels of Performance					
		Off-Target 	Near Target 		On-Target 		Bull's Eye 
			Lower Bound	Upper Bound	Lower Bound	Upper Bound	
How well are students performing in ELA/reading in 3rd-9th grade? SCALE	All	*Below lower bound*	*Mid Point of Basic Score*	*Proficient Scale Score-1*	*Proficient Scale Score*	*Mid Point of Proficient Scale*	*Above upper bound*
	3rd	*<2399*	*2399*	*2431*	*2432*	*2460*	*>2460*
	4th	*<2444*	*2444*	*2472*	*2473*	*2502*	*>2502*
	5th	*<2471*	*2471*	*2501*	*2502*	*2541*	*>2541*
	6th	*<2493*	*2493*	*2530*	*2531*	*2574*	*>2574*
	7th	*<2515*	*2515*	*2551*	*2552*	*2600*	*>2600*
	8th	*<2526*	*2526*	*2566*	*2567*	*2617*	*>2617*
	9th	*<*2551**	**2551**	**2593**	**2594**	**2648**	*>*2648**

*The cut scores for SBAC ELA are projects only. They were calculated in the same manner as described in section A.4.iii.a.1 above. We will update the ninth grade numbers after we receive cut scores from our contractor.

Table 17: Proposed Scale Score Cuts for Mathematics Performance Levels

Accountability Question	Grade	4 Levels of Performance					
		Off-Target 	Near Target 		On-Target 		Bull's Eye 
			Lower Bound	Upper Bound	Lower Bound	Upper Bound	
How well are students performing in mathematics in 3rd-9th grade? SCALE	All	Below lower bound	Mid Point of Basic Score	Proficient Scale Score-1	Proficient Scale Score	Mid Point of Proficient Scale	Above upper bound
	3rd	<2408	2408	2435	2436	2468	>2468
	4th	<2447	2447	2484	2485	2516	>2516
	5th	<2491	2491	2527	2528	2553	>2553
	6th	<2512	2512	2551	2552	2580	>2580
	7th	<2525	2525	2566	2567	2600	>2600
	8th	<2544	2544	2585	2586	2619	>2619
	9th	<*2571*	*2571*	*2616*	*2617*	*2649*	>*2649*

*The cut scores for SBAC mathematics are projects only. They were calculated in the same manner as described in section A.4.iii.a.1 above. We will update the ninth grade numbers after we receive cut scores from our contractor.

As these scores are determined by the Smarter Balanced Assessment Consortium (SBAC) performance, they are valid and reliable, can meaningfully differentiate between schools, and can be disaggregated for all student groups. Additionally, the indicators are used consistently across schools and LEAs by grade level.

Vermont will inform communities of school performance in English Language arts and mathematics using scale scores rather than the "percent proficient" previously used under No Child Left Behind. We have made this determination due for two reasons. First, in 2015, the results of our Smarter Balanced administration resulted in data suppression 178 times (8% of all data), because the suppressed school or sub group attained either 0% proficiency or 100% proficiency (neither of which can be reported without violating student privacy protections). This data suppression was disproportionately applied to sub group populations, effectively removing the transparency that ESSA seeks to provide. We can neither celebrate the victory of 100% proficiency nor shine a light on places with 0% proficiency in these circumstances.

Second, we have found that a state-level focus on achieving proficiency has had the unintended consequence of narrowing school-level focus to support the students most near the proficiency-cut score, in hopes of pushing those students over the threshold. In a landscape of scarce resources, this strategy has made sense to many well-meaning educators, but it is not the desired goal of the accountability efforts.

Vermont will use scale scores with a reference to the proficiency cut score to communicate school level performance to parents. By choosing this approach we will be able to report all scores for all groups meeting the minimum N without fear of revealing personally identifiable information. In addition, it will rightfully focus schools on improving the educational outcomes of all students, so that gains made by students will be "counted" whether or not they cross an arbitrary line of proficiency

Vermont agrees that full participation in assessments is critical for making informed decisions. We will hold all schools to a 95% participation rate for all students and student groups. Please see Section A.4.vii.

This proposal reinforces expectations established in the Education Quality Standards and state law requiring that students are assessed annually. Vermont is also currently adopting proficiency based learning, which emphasizes that scores are for the learning demonstrated and not ancillary behaviors. By having participation named as a key variable and not hidden within a larger equation or weighting conversation we operate in parallel to that effort.

b. Indicator for Public Elementary and Secondary Schools that are Not High Schools (Other Academic Indicator). Describe the Other Academic indicator, including how it annually measures the performance for all students and separately for each subgroup of students. If the Other Academic indicator is not a measure of student growth, the description must include a demonstration that the indicator is a valid and reliable statewide academic indicator that allows for meaningful differentiation in school performance.
Click here to enter text.

Growth Score:
Vermont intends to measure student growth in both English language arts and mathematics using the Student Growth Percentile (SGP) method. This method requires three consecutive years of data, making it a valid measurement for 5th-9th grades. We plan to use the baseline data from Spring 2016 as the first year of data for determining the growth calculation, so that the first year of growth scores will be available following assessments administered in Spring 2018.

We have selected this model because it is capable of providing a measure of individual student growth as well as capturing movement toward a particular criterion-based attainment level, while avoiding erroneous causal inferences that other models (e.g. value added models) have

made in the past (Betebenner, 2009[5]). SGPs provide a means of illustrating a student's change in performance over time compared with students who share similar characteristics and who have performed in similar ways in the past (i.e. a student's academic peer group). They can be used with criterion-based reference points to predict the amount of growth students would need to attain in order to reach particular criteria levels in the future while still providing room for recognizing the growth students have made relative to their academic peers. In general, SGPs work as follows:

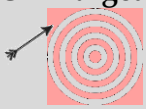
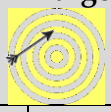
A student's current level of achievement is compared to that student's previous level of achievement in order to normatively determine the rate of achievement growth. The resultant percentile reflects the likelihood of a student achieving a certain outcome, given the student's prior achievement. The relationship between prior and current achievement scores for cohorts of students in the norm group can be used to generate growth trajectories based on historical and anticipated rates of growth to predict the likelihood of future achievement for students statewide (Betebenner, 2008, 2009) and may thereby enable assumptions regarding growth over time. (Kannan, 2016, p. 106)

Our intention is to model growth rates for Vermont and all of our schools, including high schools, using data gleaned in three assessments (2015, 2016, and 2017) to model the data. Following the analysis, we will convene stakeholders to review the data and assist in identifying the cut scores for the four levels of performance. We anticipate having this accomplished by December of 2017 and will provide an update to USED and stakeholders regarding the determination made at that point.

[5] Betebenner, D. W. (2009). Norm- and Criterion-Referenced Student Growth. Educational Measurement: Issues and Practice, 28(4), 42–51. https://doi.org/10.1111/j.1745-3992.2009.00161.x

[6] Kannan, P. (2016). Vertical Articulation of Cut Scores Across the Grades: Current Practices and Methodological Implications in the Light of the Next Generation of K–12 Assessments (ETS Research Report Series). DOI: 10.1002/ets2.12115: Educational Testing Service. Retrieved from http://onlinelibrary.wiley.com/doi/10.1002/ets2.12115/abstract

Table 18: Proposed Levels of Performance for Growth in ELA and Mathematics Assessments

Accountability Question	Grade	4 Levels of Performance					
		Off-Target 	Near Target 		On-Target 		Bull's Eye 
			Lower Bound	Upper Bound	Lower Bound	Upper Bound	
How well are students performing in ELA/reading in 5th-9th grade? GROWTH	All	**Below lower bound**	**25th**	**49th**	**50th**	**75th**	**Above upper bound**
How well are students performing in mathematics in 5th-9th grade? GROWTH	All	**Below lower bound**	**25th**	**49th**	**50th**	**75th**	**Above upper bound**

As with the scale scores, these scores are determined by SBAC performance, they are valid and reliable, can meaningfully differentiate between schools, and can be disaggregated. Additionally, the indicators are determined consistently across all schools and LEAs with grades 5-9.

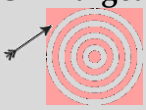
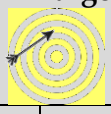
c. Graduation Rate. Describe the Graduation Rate indicator, including a description of (i) how the indicator is based on the long-term goals; (ii) how the indicator annually measures graduation rate for all students and separately for each subgroup of students; (iii) how the indicator is based on the four-year adjusted cohort graduation rate; (iv) if the State, at its discretion, also includes one or more extended-year adjusted cohort graduation rates, how the four-year adjusted cohort graduation rate is combined with that rate or rates within the indicator; and (v) if applicable, how the State includes in its four-year adjusted cohort graduation rate and any extended-year adjusted cohort graduation rates students with the most significant cognitive disabilities assessed using an alternate assessment aligned to alternate academic achievement standards under ESEA section 1111(b)(2)(D) and awarded a State-defined alternate diploma under ESEA section 8101(23) and (25).

Click here to enter text.

Vermont has selected as its graduation indicator for all schools with twelfth grade a simple average of the 4-year adjusted and 6-year adjusted cohort graduation rates. It is based on our long-term goal such that schools receive the highest rating when they near the goal. The indicator is calculated for all students and then disaggregated for each of the student groups in our accountability system.

Vermont uses the federal definition of a 4-year cohort calculation. This calculation will be the same for all schools and all LEAs in Vermont with a twelfth grade.

Table 19: Proposed Graduation Rate Levels of Performance Based on Long-Term Goals

Accountability Question	**Grade**	**4 Levels of Performance**					
		Off-Target 	**Near Target** 		**On-Target** 		**Bull's Eye** 
			Lower Bound	**Upper Bound**	**Lower Bound**	**Upper Bound**	
Are students staying in school until they *graduate*?	4-year	***Below lower bound***	***67%***	***79%***	***80%***	***90%***	***Above upper bound***
	6-year	***Below lower bound***	***67%***	***79%***	***80%***	***94%***	***Above upper bound***

The 4- and 6-year graduation rates for a given school will then be averaged to determine the overall graduation rate indicator score. For example, if a school is "near target" (a 2 on a 4-level scale) with its 4-year indicator and "on-target" (a 3 on a 4-level scale) with its 6-year indicator, the combined final score for graduation rate would be a 2.5. It is this final score that would be weighted under the formula outlined in Section A.4.v.b.

The graduation rate indicators are valid and reliable, can meaningfully differentiate between schools, and can be disaggregated. Additionally, the indicators are determined in a consistent manner for all high schools in Vermont.

Vermont does not have an alternative diploma for students with the most significant cognitive disabilities.

d. Progress in Achieving English Language Proficiency (ELP) Indicator. Describe the Progress in Achieving ELP indicator, including the State's definition of ELP, as measured by the State ELP assessment.
Click here to enter text.

English Language Proficiency

There are two dimensions to describing how well students are gaining English language proficiency. First, is how well schools are supporting students in becoming proficient within the time frame allotted. Second, is how well schools are supporting students in meeting annual proficiency benchmarks towards proficiency.

Gaining Proficiency

ESSA allows states to identify specific student characteristics to associate with the length of time students have to gain proficiency. Vermont considered several characteristics with our stakeholder groups and ultimately determined that the most significant determinant of how long it takes to learn English is the starting level of the student. As a result, students who enter school with the lowest level of proficiency in English will have the most time to become proficient. This indicator seeks to determine if students are gaining proficiency as measured by the ACCESS assessment in time to enjoy the full benefits of their educational experience.

- Students identified as Level 1 using ACCESS would have 6-years to attain proficiency;
- Students identified as Level 2 using ACCESS would have 5-years to attain proficiency;
- Students identified as Level 3 using ACCESS would have 4-years to attain proficiency;
- Students identified as Level 4 using ACCESS would have 3-years to attain proficiency;
- Students identified as Level 5 using ACCESS would have 2 years to attain proficiency.
- Students identified as Level 6 using ACCESS have already demonstrated proficiency in their use of the English language

Annual Proficiency Benchmarks

This indicator seeks to determine if students are gaining fluency at an annual rate that allows them to gain proficiency in English "in time."

Proficiency Benchmarks specific to EL students' ACCESS Level 1-5 categories will be calculated annually, and will serve as targets for educators supporting students in attaining English language proficiency**.** Benchmarks will be calculated using a combination of initial proficiency levels (identified using ACCESS), the state-determined number of years that students associated with that level have to attain proficiency, and the ACCESS proficiency cut scores associated with each student's grade level.

In order to determine whether an English Learner makes acceptable progress in achieving English language proficiency for each year (grade) tested, the following **Annual Growth to Target** formula would apply:

Target score - Current Score / # years = Observed scale score gain

- **Target Score** = overall proficient scale score for attainment in X years, based on initial proficiency level
- **Current Score** = overall scale score
- **Years** = # years that remain to attain proficiency in pre-determined time frame.

The **expected growth target(s)** would be reset every year until proficiency is attained and would be unique to each student. If a student does not attain proficiency within the time frame identified for them, based on their initial performance on the ACCESS assessment, the "Years" variable in the above equation would be set as "1".

As these scores are determined by ACCESS performance, they are valid and reliable, can meaningfully differentiate between schools, and can be disaggregated. Additionally, the indicators are determined consistently across schools and LEAs.

e. School Quality or Student Success Indicator(s). Describe each School Quality or Student Success Indicator, including, for each such indicator: (i) how it allows for meaningful differentiation in school performance; (ii) that it is valid, reliable, comparable, and statewide (for the grade span(s) to which it applies); and (iii) of how each such indicator annually measures performance for all students and separately for each subgroup of students. For any School Quality or Student Success indicator that does not apply to all grade spans, the description must include the grade spans to which it does apply.
Click here to enter text.

To reflect a broad range of measures of school performance, Vermont has elected to propose four "fifth" indicators for inclusion in our accountability system:

- Science
- Physical Education
- Career and college readiness
- Post-secondary outcomes

Each of these proposed indicators will be used for all schools in the grade span for which they apply and are calculated consistently across these schools.

"Fifth" Indicator 1: How well are student performing in science?

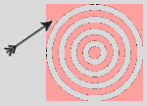
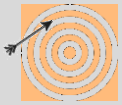
ESSA does not require that schools be held accountable for student outcomes in science. Vermont has elected to include science performance in our accountability plan. We have made this determination in response to stakeholder input which asked that if students are required to sit for assessments, those assessments ought to provide data that informs the assessment of school quality. Additionally, by including more indicators than are required to assess standards implementation under Education Quality Standards, we remind all schools of the value that we

place on all subjects and hope to avoid an over-narrowing of instruction to only literacy and mathematics.

Average Scale Score:
Consistent with our assessment of English-Language Arts and Mathematics, we intend to measure performance against scale scores.

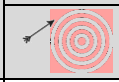
Levels of Performance:
As previously stated, all indicators will be linked to a 4-level label to describe performance. The currently proposed scale score cuts link directly to the current NECAP performance levels. While the new science test is not yet created, the Agency is providing data, in Table 17, reflecting continued use of the current New England Common Assessment Program assessment (NECAP-Science). This table will be replaced to reflect the new, NGSS-aligned assessment and submitted to USED and stakeholders prior to the field-test in 2018.

Table 20: Proposed Scale Score Cuts for Science Performance Levels

Accountability Question	Grade	4 Levels of Performance					
		Off-Target 1 	Near Target 2 		On-Target 3 		Bull's Eye 4 
			Lower Bound	Upper Bound	Lower Bound	Upper Bound	
How well are students performing in Science?	All	Below lower bound	Mid Point of Basic Score	Proficient Scale Score-1	Proficient Scale Score	Mid Point of Proficient Scale	Above upper bound
SCALE	4th	<433	433	439	440	471	>471
	8th	<834	834	839	840	867	>867
	11th	<1134	1134	1139	1140	1166	>1166

Current Performance:
In 2015, current performance levels for all students in the State of Vermont on the NECAP Science assessment are as follows:

Table 21: Current Science NECAP Performance Levels

Science	Number of Test Takers	State Average Scale Score	State Performance Level	Number of Schools in Each Level			
							
Grade 04	5898	439	2	9	87	88	0
Grade 08	5926	834	2	42	65	2	0
Grade 11	5853	1135	2	30	34	2	0

Long Term Goal and Interim Target:
Vermont's long-term goal is that by 2025, 100% of our schools will show an average scale score that is at the mid-point of the proficiency range for each grade level they serve. Such a goal establishes high expectations for all students and unites the community behind all students improving their performance.

As these scores will be determined by performance on the NGSS assessment under creation, they are valid and reliable, can meaningfully differentiate between schools, and can be disaggregated. Additionally, the indicator is used consistently across schools.

"Fifth" Indicator 2: How well are students performing in physical education?

ESSA does not require that schools be held accountable for student outcomes in physical education; however, this measure satisfies ESSA requirement for a 5th indicator.

Vermont has elected to include the physical fitness indicator in our accountability system in response to stakeholder input. Specifically, stakeholders value the idea of including an assessment of fitness because they believe it will provide incentives to maintain required time for activity, physical education, and health education as required by the Education Quality Standards. They also felt that including the physical fitness assessment would support schools in attending to the whole child and supporting school nutrition programs and instruction that will promote a life time of healthy living.

Adopted Standards:
Health and Physical Education are identified as two of Vermont's seven required Education Quality Standards Curriculum Content Areas (2120.5). In 2015, the Vermont State Board of Education adopted the National Health Education Standards (NHES) and 2014 SHAPE America National Standards and Grade-Level Outcomes for Physical Education to frame what Vermont students should know and be able to do in health and physical education.

Assessment:
We have begun the process of identifying a vendor for a physical fitness assessment that meets technical requirements for validity and reliability. We are not yet clear as to which grade levels we will assess, as this will largely depend on the cost of the assessment that we select. We prefer

to select a better assessment and administer to fewer grade levels, if given the option. In addition, we expect to select one elementary, middle, and high school grade. We hope to avoid assessment at the 5th, 8th and 11th grade levels as these grades are also participating in the science assessment.

The assessment will include reports to parents and schools that clearly articulate student performance, in alignment with policies that provide sufficient protection for privacy related to health information. Data can be disaggregated and used for accountability purposes.

a. Healthy or Becoming Healthy:

The specifics of the measure will depend on the vendor which we select through the procurement process. However, stakeholders have expressed a clear preference for including two specific measures:

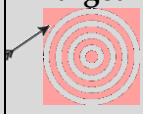
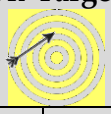
a. The percentage of students who are assessed as being within a Presidential Youth Fitness Program-aligned "healthy zone" and
b. The percentage of students who are assessed as making sufficient progress towards that "healthy zone"

These measures will be further defined in summer 2017 following the successful award of a contract to a specific vendor.

Levels of Performance:

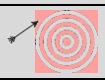
As previously stated, all indicators will be linked to a 4-level label to describe performance. The currently proposed scale score cuts are shown below.

Table 22: Proposed Scale Score Cuts for Heath Assessment Performance Levels

Accountability Question	Grade	4 Levels of Performance					
		Off-Target 	Near Target 		On-Target 		Bull's Eye 
			Lower Bound	Upper Bound	Lower Bound	Upper Bound	
How well are students performing in physical education? SCALE	All	**Below lower bound**	**Mid Point level 2 score**	**Healthy Zone Scale Score-1**	**Healthy Zone Scale Score**	**Mid Point of Healthy Zone Scale Score**	**Above upper bound**
Progress		To be determined when assessment is selected					

Current Performance:

Table 23: Current Health Assessment Performance Levels

Physical Education	Number of Test Takers	State Average Scale Score	State Performance Level	Number of Schools in Each Level			
							
TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD

Long Term Goal and Interim Target:

Vermont's long-term goal is that by 2025, 100% of our schools will have 100% of students in the healthy zone, or making progress towards the healthy zone.

Table 24: Proposed Heath Assessment Long Term Goals and Interim Targets

Accountability Question	Grade	Current Performance (2016)	Long term Goal Mid Point of Healthy Zone	Interim Targets		
				2019 1	2022 2	2025 3
How well are students performing in physical education? SCALE	All	To be determined when new assessment is available using the same procedures as used for Smarter Balanced Assessments.				

Central to the selection of the PE assessment is an assurance that the performance results are valid and reliable, can meaningfully differentiate between schools, and can be disaggregated. Additionally, the indicator will be used consistently across schools and LEAs.

Career and College Readiness:

We are proposing two indicators of Career and College Readiness that are averaged to create a single indicator of performance. The first looks at how students are performing while still in school and the second examines the experiences of alumni.

"Fifth" Indicator 3: Are students career and college ready prior to graduation?

Consistent with Vermont's Act 77 and the Education Quality Standards, stakeholders were interested in a summative measure that could capture the broad range of outcomes we work to prepare our graduates for. Building on our commitment to flexible pathways, we leveraged students personalized learning plans to identify the assessments students could take in order to demonstrate that they are career and college ready prior to graduation.

This indicator also meets ESSA goal for a unique indicator not used in other measures.

Assessment:
In establishing whether or not students are college and career ready, the Agency of Education has opted to include a broad measure that allows for flexibility depending on students' differing life goals and educational pathways. In this indicator, each year we will count the number of graduates in each school that have met an externally validated assessment of career and college readiness and divide by the total number of graduates. Assessments currently acceptable for meeting this requirement include:

Table 25: Acceptable Assessments of College and Career Readiness

Assessment	Link	Cut score for Career and College Readiness
College Course Completion	N/A	C or better in any accredited college course
SAT	https://collegereadiness.collegeboard.org/sat	R/W:480 Math 530
ACT	https://www.act.org/content/act/en.html	Composite 21
Advanced Placement Test	https://apstudent.collegeboard.org/home	Score of 3 or higher
IB Assessments	http://www.ibo.org/programmes/diploma-programme/assessment-and-exams/	Score of 24 points or higher
CLEP Assessments	https://clep.collegeboard.org/	Score of 50 or higher
ASVAB (military)	http://official-asvab.com/index.htm	Depending on branch minimum scores range from 31 to 36
Industry Recognized Credential (IRC)	http://education.vermont.gov/documents/career-tech-approved-industry-recognized-credentials	No Standardized Cut Score across certifications

This indicator is new for the state but based on analysis of variation in school level performance on SAT and ACT, we believe this indicator will meaningfully differentiate across schools and supervisory unions. The indicator is a valid assessment of career and college readiness as the component assessments developed by external entities have been found to correlate with student readiness for career and college pursuits. These externally developed assessments have met the technical standards associated with their administration and are widely accepted as reliable tools for measuring performance. Finally, all assessments can be disaggregated by all student groups. Additionally, the indicator will be used consistently across Vermont high schools.

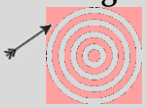
"Fifth" Indicator 4: Post-Secondary Outcomes: Are alumni participating in career and college outcomes within 16 months of graduation?
Consistent with Vermont's Act 77 and Education Quality Standards, stakeholders were interested in a summative measure that could capture the broad range of outcomes we want our graduates to pursue. We treat all college and career-related outcomes as being equal within this performance indicator.

Assessment:
In establishing whether or not students are participating in college and career ready outcomes, the Agency will be reviewing data from several sources, including the National Clearinghouse data set which provides student level information for college enrollment, data from the Department of Labor related to enrollment in trade schools and the work force, and data from the military for enlistments. In this indicator, we will count the number of graduates who have met the make and divide by the number of graduates at 16 months after graduation.

Accountability:

Levels of Performance:
As previously stated, all indicators will be linked to a 4-level label to describe performance.

Table 26: Proposed Post-secondary Outcomes Performance Levels

Accountability Question	Grade	4 Levels of Performance					
		Off-Target 	Near Target 		On-Target 		Bull's Eye 
			Lower Bound	Upper Bound	Lower Bound	Upper Bound	
How well did seniors perform on career and college ready assessments?	12th	**Below lower bound**	**45%**	**59%**	**60%**	**75%**	**Above upper bound**
Are alumni pursuing a career and college ready outcome within 16 months of graduation?	Alumni	**Below lower bound**	**45%**	**59%**	**60%**	**75%**	**Above upper bound**

Current Performance:
We anticipate having baseline data for review by August 1, 2017.

This indicator is also new for the state but based on analysis of variation in school level performance in graduation and college-going, we believe this indicator will meaningfully differentiate across schools and supervisory unions. The indicator is a valid assessment of career and college readiness as the employment and educational options alumni pursue are strong indicators of their readiness for those endeavors. As this indicator is a count of students,

reliability in a technical sense does not apply. Finally, this indicator can be disaggregated by all student groups and will be used consistently across high schools.

v. Annual Meaningful Differentiation *(ESEA section 1111(c)(4)(C))*

a. Describe the State's system of annual meaningful differentiation of all public schools in the State, consistent with the requirements of section 1111(c)(4)(C) of the ESEA, including a description of (i) how the system is based on all indicators in the State's accountability system, (ii) for all students and for each subgroup of students. Note that each state must comply with the requirements in 1111(c)(5) of the ESEA with respect to accountability for charter schools.

Click here to enter text.

Vermont's accountability system includes all indicators in our calculations for determining overall school and LEA performance. The indicators are weighted (see next section) depending on the grade span of the school and whether or not the specific indicator is present in the school. The formula is applied to "all students" and to each of the student groups identified for accountability in the same manner.

At this time, Vermont does not have charter schools.

The results of the calculation (described in the weighting section) are used to place schools and LEAs on the grid below taking into consideration both their current level of performance and the change over time.

The school report card will show four indicators. The first two will assess the performance of the school in total; the second two will look at the indicator we will use to focus Targeted Support. The report card will allow the public to drill down to each performance indicator and to access data for all student groups.

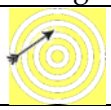
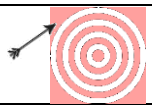
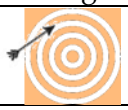
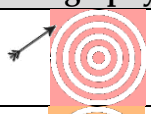
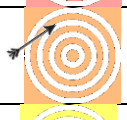
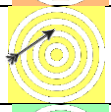
		All Students		Equity Index	
	Criteria	Current	Year-to-Year Change	Current	Year-to-Year Change
	Academic Proficiency				

Table 27: Proposed Point Distribution for Summative Scores of School Performance

Level	Proposed Term	Proposed Iconography	Current Score Range	Year-to-Year Change Range
1	Off-Target		1-1.88	>0.50
2	Near Target		1.89-2.75	0.25-0.50
3	On-Target		2.76-3.65	0.10-0.24
4	Bull's Eye		3.66-4.5	<0.10

b. Describe the weighting of each indicator in the State's system of annual meaningful differentiation, including how the Academic Achievement, Other Academic, Graduation Rate, and Progress in ELP indicators each receive substantial weight individually and, in the aggregate, much greater weight than the School Quality or Student Success indicator(s), in the aggregate.

Click here to enter text.

Weighting Overview

ESSA requires that states identify a summative evaluation for each school that is easily understood to the public and educators.

Weights

The following weights have been created to provide valid estimates across the numerous school configurations in Vermont.

In determining the distribution of weight, the Agency has signaled priorities. Literacy and mathematics performance and graduation rates each account for 20% of a school's overall performance rating, together accounting for 60% of the total score. We have opted for this weighting because all three indicators are critical for success in civic and economic life. It is the rare individual who finds a path out of poverty if they neither read, write, do math well, nor graduate from high school. A commitment to equity requires prioritizing these measures.

The remaining 40% of the summative rating is distributed to English language proficiency (10%) and the 5th indicators. ESSA stipulates that English language proficiency be of relatively substantial weight, however given that only 3% of schools in Vermont have English Learners in sufficient numbers for the indicator to count, the weight will frequently be distributed to other indicators. Vermont has determined that a 10% weight for the English proficiency indicator is substantial in setting the overall scope of assessment. At the same time, very few of our schools

have sufficient numbers of English Learners to give this indicator value; in 97% of cases, this value will not be populated and the weight will be distributed to other indicators.

Missing Measures

Because of the many school configurations and the relative scarcity of English Learners, the Agency of Education has described how weights will be shifted for schools with different grade configurations and the relative scarcity of English learners. In general, when an indicator is not available (e.g. a school with no high school grades would not have Career and College Readiness indicators), the resulting weight will be redistributed to the remaining indicators to maintain the remaining indicators' relative comparative value.

Table 28: Proposed Weighting of Academic Proficiency Measures

Criteria	Category	Accountability Question (Indicators)	School-Level Weights					
			High School Present		No High School Present			
					EL Present		No EL Present	
			EL Present	No EL Present	Science	No Sci.	Science	No Sci.
Academic Proficiency	Content Standards	How well are students performing in ELA/reading?	***20%***	***22%***	***35%***	***37.5%***	***37.5%***	***40%***
		How well are students performing in mathematics?	***20%***	***22%***	***35%***	***37.5%***	***37.5%***	***40%***
		How well are students performing in science?	***5%***	***6%***	***10%***	***0%***	***12.5%***	***0%***
		How well are students performing in physical education?	***5%***	***6%***	***10%***	***12.5%***	***12.5%***	***20%***
	English Language Proficiency	How well are English Learners gaining English proficiency?	***10%***	***0%***	***10%***	***12.5%***	***0%***	***0%***
	Graduation Rate	Are students staying in school until they *graduate*?	***20%***	***22%***	***0%***	***0%***	***0%***	***0%***
	College and Career Readiness	How well did seniors perform on career and college ready assessments?	***10%***	***11%***	***0%***	***0%***	***0%***	***0%***
		Are alumni pursuing a career and college ready outcome within 16 months of graduation?	***10%***	***11%***	***0%***	***0%***	***0%***	***0%***
		Organizational Examples	**PK-12, 6-12, 9-12**		**PK-5, PK-8, 6-8**	**PK-4**	**PK-5, PK-8, 6-8**	**PK-4**
		FY '16 Count by Structure*	**61**		**217**	**14**	**217**	**14**

*For seven schools, second grade is the highest student grade. For these schools their accountability will be determined through our second layer of accountability at the Supervisory Union/Supervisory District level.

Because not all indicators are available in each year, the weights used to make accountability determinations will vary in the first year of implementation. Table 46 shows the weights that will be used in 2017-18 to make initial determinations.

Table 29: Proposed 2017-18 Weights

Criteria	Category	Accountability Question (Indicators)	School-Level Weights			
			High School Present e.g., PK-12; 6-12; 9-12 N=61		No High School Present e.g., PK-4, PK-8, PK-5 N=231	
			EL Present	No EL Present	EL Present	No EL Present
Academic Proficiency	Content Standards	How well are students performing in ELA/reading?	***30%***	***35%***	***40%***	***50%***
		How well are students performing in mathematics?	***30%***	***35%***	***40%***	***50%***
		How well are students performing in science?	***Piloting***			
		How well are students performing in physical education?	***Piloting***			
	English Language Proficiency	How well are English Learners gaining English proficiency?	***15%***	***0%***	***20%***	***0%***
	Graduation Rate	Are students staying in school until they *graduate*?	***25%***	***30%***	***0%***	***0%***
	College and Career Readiness	How well did seniors perform on career and college ready assessments?	***Piloting***			
		Are alumni pursuing a career and college ready outcome within 16 months of graduation?	***Piloting***			

c. If the States uses a different methodology for annual meaningful differentiation than the one described in 4.v.a. above for schools for which an accountability determination cannot be made (*e.g.*, P-2 schools), describe the different methodology, indicating the type(s) of schools to which it applies.
Click here to enter text.

Small Schools

ESSA requires that states establish alternative protocols for assessing student performance when the number of students falls below minimum numbers required for assessment. This describes many schools in Vermont. By introducing our second tier of accountability at the Supervisory Union/Supervisory District level, we will be able to work with these leadership teams to identify which schools, including those too small to display through the previously-described model, are contributing to the overall performance of the system and which require Comprehensive or Target Supports.

Special Populations Schools

ESSA requires that states establish alternative protocols for assessing student performance when a public school exists for a specific population: for example, students receiving programming in non-traditional educational settings, students attending juvenile rehabilitation centers, students enrolled in state public schools for the blind, or schools exclusively serving recently arrived English learners. Currently Vermont does not have schools that meet these descriptions; however, all Vermont students who attend these types of independent institutions outside of Vermont must take Vermont's state assessments, and their data is linked back to the Supervisory Union/Supervisory District that pays their educational tuition. By creating the second tier of accountability at the SU/SD level, Vermont is able to include a larger number of these students when making accountability determinations.

Newly Opened Schools

ESSA requires that states establish alternative protocols for assessing student performance when a new public school opens. Currently, Vermont is experiencing declining enrollment in virtually all of our communities; opening large numbers of new schools due to increasing student enrollment is not a situation that we anticipate facing. A more likely experience in Vermont will be the merging of two existing schools into a new school with combined populations. In these circumstances, the standing of a new school within an accountability system is based on a weighted formula. For example, if 56% of the new school's students had attended a Priority 1 school, and 44% had attended a Priority 2 school, the new school would be a Priority 1 school. (Please see the following section for a full discussion on priority schools)

vi. Identification of Schools *(ESEA section 1111(c)(4)(D))*

a. Comprehensive Support and Improvement Schools. Describe the State's methodology for identifying not less than the lowest-performing five percent of all schools receiving Title I, Part A funds in

the State for comprehensive support and improvement.
Click here to enter text.

Calculating Scores

"All Students"

To calculate the overall score for all students, the Agency of Education will perform the process described below. A worked example is provided in Appendix B.

1. Each indicator's actual performance level will be converted into the corresponding conversion point value that aligns with the previously described 4 performance-level score.
2. If the indicator includes multiple entries for different grade levels, these performance-level scores will be averaged (mean) with equivalent weights to produce a value for the Accountability Question score.
3. Each Current Score will then be calculated using a weighted average of the Accountability Question Scores.
4. Each overall Current Score will then be converted to a range that describes overall performance. The table below defines the point distribution for each summative score.

Table 30: Proposed Point Distribution for Summative Scores of School Performance

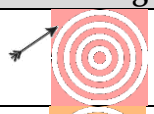
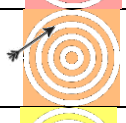
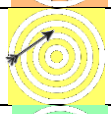
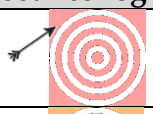
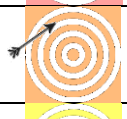
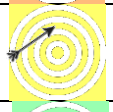
Level	Proposed Term	Proposed Iconography	Current Score Proposed Range
1	Off-Target		1-1.88
2	Near Target		1.89-2.75
3	On-Target		2.76-3.65
4	Bull's Eye		3.66-4.5

Table 31 (below) illustrates the annual overall change in a school's performance. It represents the difference in the summative score between the current year and the previous year. A positive score represents an improvement over the previous year's performance.

Table 31: Proposed Year-to-year score to Performance Level Conversion Scale

Level	Proposed Term	Proposed Iconography	Year-to-Year Proposed Range
1	Off-Target		≤0
2	Near Target		.01-.15
3	On-Target		0.16-0.3
4	Bull's Eye		≥0.30

Identification

Vermont had 234 Title I schools as of November 2016. Based on that number, we expect about 12 schools to attain Comprehensive Support status. After the scores have been calculated, schools will be placed on the grid in Table 32 (below) based on their performance against the state's accountability indicators. Once schools are placed, we will begin building our set of 12 comprehensive schools by starting with Priority 1 schools, and adding schools from each subsequent priority category until we have identified at least 12 schools. For example, if there were 3 schools in Priority 1, 6 in Priority 2, and 8 in Priority 3, then all 15 would be identified for Comprehensive Support, and we would not look to Priority 4 schools.

Table 32: Identification of School Priority for Comprehensive Supports

Criteria Level Scores		Year to Year Change			
		Off Target <0.0	**Near Target** 0.16-0.30	**On Target** 0.5-.99	**Bull' Eye** > 0.30
Current Score	Off Target 1-1.88	Priority 1	Priority 3	Priority 6	
	Near Target 1.89-2.75	Priority 2	Priority 4		
	On Target 2.76-3.65	Priority 5			
	Bull's Eye 3.66-4.50				

It is possible that such a methodology could lead to the identification of more schools for Comprehensive Supports than could be adequately served. For example, if there were 6 schools in Priority 1; 5 in Priority 2 and 14 in Priority 3, this would result in 25 schools being identified for Comprehensive Supports—more than Vermont's available fiscal resources would effectively support. In such a case, the VT-AOE would support all 11 Priority 1 and 2 schools. Priority 3 schools joining that cohort would be selected based on the number of priority points earned by each school with those serving the greatest number of students being most likely to be selected. A breakdown of how priority points will be calculated in this scenario, follows:

1. Number of students in the Historically Marginalized Student group (each student counts at 1 point)
2. Does a school count as a School-Wide Title I? (yes=10 points)
3. Does a school has a reportable EL student group? (yes=10 points)
4. Is the school a member of an SU/SD with another school in Comprehensive Support? (yes=10 points)

Schools will be identified for Comprehensive Support and improvement beginning in the 2018-19 academic year.

b. Comprehensive Support and Improvement Schools. Describe the State's methodology for identifying all public high schools in the State

failing to graduate one third or more of their students for comprehensive support and improvement.
Click here to enter text.

Once Vermont's 5% lowest performing schools have been identified using the process described above, we will add any as yet-unidentified high schools to the list that have an overall 4-year adjusted cohort graduation rate of less than 67%. Schools will first be identified for Comprehensive Supports and improvements in the 2018-19 school year.

c. Comprehensive Support and Improvement Schools. Describe the methodology by which the State identifies public schools in the State receiving Title I, Part A funds that have received additional targeted support under ESEA section 1111(d)(2)(C) (based on identification as a school in which any subgroup of students, on its own, would lead to identification under ESEA section 1111(c)(4)(D)(i)(I) using the State's methodology under ESEA section 1111(c)(4)(D)) and that have not satisfied the statewide exit criteria for such schools within a State-determined number of years.
Click here to enter text.

Section A.4.vi.f describes the process by which schools are identified as eligible for Targeted Supports, with Table 33 illustrating how schools can exit Targeted status. If a school continues to consistently underperform related to the same student group for over three consecutive years, in the fourth consecutive year that school will attain comprehensive status, and will be eligible to receive Comprehensive Supports. Targeted determinations are made annually, while Comprehensive determinations are made every three years; a school entering Comprehensive status through the Targeted school track would move through Targeted and Comprehensive status as described below:

Table 33: Number of Years and Related Identification Status for Schools Entering Comprehensive Status as Targeted Schools

Number of Years of Identification	Status
1	Targeted 1
2	Targeted 2—"Consistently Underperforming"
3	Targeted 3—"Consistently Underperforming"
4-6	Comprehensive 1
7-9	Comprehensive 2
10-12	Comprehensive 3

Schools will first be identified for Targeted Support and Improvements in the 2018-19 school year. As a result, the soonest that a school would be identified as requiring Comprehensive Support as a result of being a Targeted Support School would be the 2021-2022 academic year.

d. Year of Identification. Provide, for each type of schools identified for comprehensive support and improvement, the year in which the State will first identify such schools and the frequency with which the State will, thereafter, identify such schools. Note that these schools must be identified at least once every three years.
Click here to enter text.

Vermont will make its first identification of schools requiring Comprehensive Support in Fall of 2018 based on student performance on indicators collected during the 2017-18 school year. Schools will remain in this cohort until the next identification cycle in 2021. Future identification cycles will begin in 2024 and then again in 2027.

e. Targeted Support and Improvement. Describe the State's methodology for annually identifying any school with one or more "consistently underperforming" subgroups of students, based on all indicators in the statewide system of annual meaningful differentiation, including the definition used by the State to determine consistent underperformance. *(ESEA section 1111(c)(4)(C)(iii))*
Click here to enter text.

ESSA requires Vermont to identify schools with "consistently underperforming" subgroups of students. Vermont will make its first identification for Targeted Support in Fall of 2018 based on student performance on indicators collected during the 2017-18 school year. As a result, the soonest that a school would be identified as "consistently underperforming" would be the 2019-2020 academic year. These identifications will occur on an annual basis. As with all calculations, the summative scores will be based on all indicators through a formula consistently applied across all schools and LEAs.

Each year, schools will be re-assessed for Targeted Support. In any year where the school has moved to one of the yellow or green boxes in Table 34 (below), it is no longer deemed in need of Targeted Support for the next year. If a school does not move to one of the yellow or green boxes after a single year in targeted status, it will be labeled as a "chronically underperforming school" with a designation as a Targeted 2 school in its second Targeted year, and a Targeted 3 school in its third. Schools not exiting Targeted status after three consecutive years of chronically underperforming for the same student group will enter Comprehensive Supports.

f. Additional Targeted Support. Describe the State's methodology, for identifying schools in which any subgroup of students, on its own, would lead to identification under ESEA section 1111(c)(4)(D)(i)(I) using the State's methodology under ESEA section 1111(c)(4)(D), including the year in which the State will first identify such schools and the frequency with which the State will, thereafter, identify such schools. *(ESEA section 1111(d)(2)(C)-(D))*
Click here to enter text.

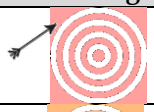
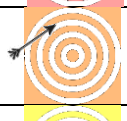
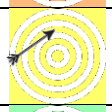
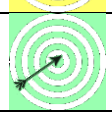
"Equity Index"

A high priority for the Vermont Board of Education and our community is ensuring equitable outcomes for all of our students. As such, an important piece of information to display for each school is the degree to which it is contributing to the state goal of eliminating gaps in educational opportunities for historically marginalized students.

To calculate the Equity Index, a similar process is followed for each student group in order to identify schools with consistently underperforming subgroups. The "equity index" applies the same weights for all indicators as is used in the summative score, but disaggregated by student group. The calculation is conducted for all student groups and is consistent across all schools and LEAs. That process is described below. An example of the application of this process is provided in Appendix C.

1. The "Current Score" for each reporting group is calculated in the same manner as the previously described "All Students" score (See Page 21).
2. The "Current Score" for each historically marginalized subgroup is subtracted from the corresponding "Current Score" for the historically advantaged subgroup. This number becomes the "Subgroup Performance Gap" for each subgroup. (Students with disabilities, English learners, students in poverty, students from a racial or ethnic group other than white are identified as historically marginalized students.)
3. The "Current Scores" for each historically marginalized student subgroup are weighted to reflect their prevalence in the school.
4. The "Current Score" for historically advantaged students is determined in the same manner.
5. The "Current Score" for historically marginalized students is subtracted from the "Current Score" of historically marginalized students.
6. The difference is the school "Equity Index."

Table 34: Proposed Equity Index Performance Levels

Level	Proposed Term	Proposed Iconography	Equity Index Proposed Range
1	Off-Target		>0.50
2	Near Target		0.25-0.50
3	On-Target		0.10-0.24
4	Bull's Eye		<0.10

Year-to-Year Score

The "Year-to-Year Score" is simply the aggregate change this year from last year for either the current score earned by "All Students" or as part of the Equity Index. It is our hope that all schools will show improvement each and every year; however, we recognize that this may not always be possible.

Calculating Scores

Year-to-Year scores will be calculated by subtracting last year's score from the corresponding score for this year. A negative number will appear when the performance in the more recent year is lower than the prior year.

Table 35: Identification of Targeted Status

Criteria Level Scores		Year-to-Year Change			
		Off Target <0.0	**Near Target 0.0-0.10**	**On Target 0.11-.20**	**Bull' Eye > .20**
Equity Gap	Off Target >.50	Targeted 1	Targeted 3		
	Near Target .24-.50	Targeted 2			
	On Target 0.10-.25				
	Bull's Eye <0.10				

Vermont's proposal is to replicate the assignment of schools based on the magnitude of their Equity Score, and the degree to which the gap between student groups is closing.

Schools will be categorized within the grid in Table 35 (above). Once schools are categorized, we will apply the label of "Targeted Support" to all schools in Targeted 1-3. These schools will be required to leverage federal dollars on activities that promote equity gap reductions.

g. Additional Statewide Categories of Schools. If the State chooses, at its discretion, to include additional statewide categories of schools, describe those categories.
Click here to enter text.

Vermont is not electing to include additional statewide categories of schools at this time.

vii. Annual Measurement of Achievement *(ESEA section 1111(c)(4)(E)(iii))*: Describe how the State factors the requirement for 95 percent student

participation in statewide mathematics and reading/language arts assessments into the statewide accountability system.
Click here to enter text.

Vermont schools' participation rates on the ELA and mathematics assessments currently consistently exceed the 95% threshold established by US ED.

If a school has lower than 95% participation, the school's preliminary summative score will be multiplied by the percentage of eligible students participating in the assessment. As a result, the score will be lowered if fewer than 95% of students tested.

- Example 1:
  - School A Preliminary Summative Score= 3.7
  - 82% of eligible students participating
  - Final Score= 3.03 (3.7 x 0.82=3.03)

- Example 2:
  - School B Preliminary Summative Score= 3.3
  - 94% of eligible students participating
  - Score= 3.10 (3.3 x 0.94=3.10)

The percent of students tested will be an average of all reportable student groups. For example, if a school had 97% of all students test, 93% of students with Free and Reduced Lunch test and 100% of students with disabilities test the average of these three groups would be 96.7% which is above the 95% threshold.

This proposal reinforces expectations established in Vermont policy (the Education Quality Standards) and state law requiring that students are assessed annually. Vermont is also currently adopting proficiency based learning, which emphasizes that scores are for the learning demonstrated and not ancillary behaviors. By having participation named as a key variable, and not hidden within a larger equation or weighting conversation, we operate in parallel to that effort.

viii. Continued Support for School and LEA Improvement *(ESEA section 1111(d)(3)(A))*

a. Exit Criteria for Comprehensive Support and Improvement Schools. Describe the statewide exit criteria, established by the State, for schools identified for comprehensive support and improvement, including the number of years (not to exceed four) over which schools are expected to meet such criteria.
Click here to enter text.

Three years after receiving their initial comprehensive identification, schools identified for Comprehensive Supports can exit identification by "moving" two squares down or one square diagonally and to the right of their initial designation within Table 32 above. In other words,

their annual performance has improved by two level or their performance has improved by one level and they also have significant positive improvement in scores over time. For example, a school that began as Priority 1 could exit Comprehensive Supports if it falls in Priority 5 or Priority 4 in the subsequent year of review. However, while the schools in this scenario would be improving, it is also possible that other schools in Vermont would be improving at the same time and that a school that would otherwise exit Comprehensive Supports might still find itself in the bottom 5% of schools in the state. In this scenario, an SU/SD may opt to continue their identification status as a Comprehensive Support 1 school and participate in the state's financial support and technical assistance or they may opt to exit identification entirely.

This model ensures that a school exists Comprehensive Supports and improvements based on demonstrating improved student performance, as measured by the year-to-year change in the matrix in section A.4.vi.a above.

If a school does not meet the exit criteria, additional technical support and monitoring occurs.

b. Exit Criteria for Schools Receiving Additional Targeted Support. Describe the statewide exit criteria, established by the State, for schools receiving additional targeted support under ESEA section 1111(d)(2)(C), including the number of years over which schools are expected to meet such criteria.
Click here to enter text.

Each year, schools will be re-assessed for Targeted Support. In any year where the school has moved to one of the yellow or green boxes, it is no longer deemed in need of Targeted Support for the next year.

If a school exits targeted status related to one subgroup, but retains targeted status for others, its targeted label will continue to scale up (Targeted 2, Targeted 3, Comprehensive). If a school exits Targeted Supports for all student groups and then is identified for targeted status the following year for a new student group, it will enter Targeted Supports again as a Targeted 1 school. If a school exits targeted status for some subgroups and retains Targeted Supports for other subgroups that were identified after the school first acquired targeted status, its label will reflect the greatest number of years that it has been identified for underserving any remaining student group. An example is provided below:

- Year 1: School is identified for underserving Students with Disabilities
    a. Status: Targeted 1 School (SWD)
- Year 2: School is identified for underserving Students with Disabilities and English Learners
    a. Status: Targeted 2 School (SWD, EL)
- Year 3: School is identified for underserving English Learners
    a. Status: Targeted 2 School (EL)

This model ensures that a school exits target supports and improvements based on demonstrating narrowed equity gaps and improved overall student performance, as measured by the year-to-year change in the matrix in section A.4.vi.e above.

c. More Rigorous Interventions. Describe the more rigorous interventions required for schools identified for comprehensive support and improvement that fail to meet the State's exit criteria within a State-determined number of years consistent with section 1111(d)(3)(A)(i)(I) of the ESEA.
Click here to enter text.

The most rigorous interventions, required for schools in years 7, 8, and 9 of Comprehensive Supports are drawn from current Vermont statute and reflect Vermont's interest in tailoring a solution to the needs of the challenge at hand while also having several intensive intervention options available to implement as is necessary.

Schools not exiting Comprehensive Support after their second three-year identification period will face state-determined action(s) drawn from the list cited in 16 V.S.A. 165(b).

1. Continue technical assistance;
2. Adjust Supervisory Union/Supervisory District boundaries or responsibilities of the superintendency;
3. Assume administrative control only to the extent necessary to correct deficiencies; or
4. Close the school and require that the school district pay tuition to another public school or an approved independent school pursuant to chapter 21 of this title.

d. Resource Allocation Review. Describe how the State will periodically review resource allocation to support school improvement in each LEA in the State serving a significant number or percentage of schools identified for comprehensive or targeted support and improvement.

Vermont is currently developing a Uniform Chart of Accounts and financial data reporting/collection system for use by all LEAs. When completed, this system will standardize the process for collecting and disaggregating per pupil expenditure data in compliance with the data collection requirements associated with ESSA. The project was started in 2014 in response to Vermont's Act 153; this ESSA requirement also reflects Vermont statutory requirements and our state's understanding of high quality practice around data collection and reporting.

Although the Uniform Chart of Accounts is currently under development, progress towards completion has been complicated by the implementation of Vermont's Act 46, an Act providing Vermont's LEAs with several merger options in the interest of reducing the expenses associated with our smallest education systems. Vermont's LEAs are currently in the process of weighing their consolidation options, proposing consolidations, and making the transition into new, merged systems. This merger activity will mean that many currently existing LEAs will no longer exist post-consolidation. Any new districts forming through this process will not have

per pupil expenditures to report until they begin operating. Additionally, there is usually a one-year transition for the former district to dissolve and the new district to be fully operational.

The number of transitions occurring at this time are making launching an LEA-level data collection system highly impractical. Vermont does not have the resources to create and then overhaul a data collection system over a short period of time, given that the content of the data collection system is dependent on the finalization of LEA structures post Act-46 implementation. Because of this, the VT-AOE needs to implement its Uniform Chart of Accounts beginning in Academic Year 2019-20, after the LEA consolidation process described in Act 46 is anticipated to have concluded.

Having said this, the unique nature of Vermont schools renders the likelihood of usable data to be quite small. In analyzing our data, we find that approximately 150 of 305 schools will have data to analyze. This is because 65 schools are smaller than the 100 student threshold and another 70 are the only school of their configuration in their grade span which excludes them from the requirement. In fact, 11 of our roughly 60 LEAs will have no schools with data and on the other end of the spectrum only 4 of the LEAs would have every school included in the data. Vermont applauds the goal of insuring that all students have equitable funding; this has long been our value. We support the effort to wisely allocate resources and given the current constraints we are prepared to meet this requirement in the future.

e. Technical Assistance. Describe the technical assistance the State will provide to each LEA in the State serving a significant number or percentage of schools identified for comprehensive or targeted support and improvement.
Click here to enter text.

Continuous Improvement Overview
Under Vermont's Education Quality Standards, all of the state's schools and school systems are in an iterative cycle of continuous improvement. In meeting the requirements of ESSA, we have built upon our longstanding practice and commitment to the differentiation of school and SU/SD supports to reflect the identified needs of those institutions' most vulnerable student populations.

The VT-AOE Education Quality Assurance Team has developed an Education Quality and Continuous Improvement Framework containing resources for identifying and selecting evidence-based interventions. Additionally, this team will support SU/SDs—who will in turn support schools—through the Continuous Improvement Plan (CIP) development, implementation, and review and revision process and will follow VT-AOE established CIP monitoring and evaluation protocols for all interim and long-term goals.

Overview of Comprehensive and Targeted School Supports
Vermont's Education Quality and Continuous Improvement Framework is designed, first and foremost, to ensure equitable opportunities for high-quality education. With this goal in mind,

the state has chosen to prioritize work with schools identified as being in need of Comprehensive Supports. School and SU/SD-specific goals for this work will be identified by data-rich comprehensive needs assessments and will reflect, in part, the requirements of Vermont's Education Quality Standards. This work will also be done in partnership with our local-level colleagues. By assisting SU/SDs with needs assessments, helping them to seize opportunities for high leverage interventions, and building these collaborations within efficient improvement science cycles, Vermont seeks to build capacity at the local level and to empower schools to improve in ways that are specific to the needs reflected through their identifications.

The table of school supports described below aligns with current Vermont policy and practice by bolstering a continuous improvement cycle with VT-AOE technical assistance. In response to the requirements of ESSA and the Education Quality Standards, the proposed model now includes a more involved approach to aiding schools through their continuous improvement processes with levels of support increasing over cumulative years of identification. This model also describes increasing levels of accountability for improvement with Agency staff conducting both remote and onsite monitoring of CIP implementation.

Table 36: Improvement Supports for Vermont Schools, Including Comprehensive and Targeted Schools

Strategy	Requirements
Support for Vermont Schools not Identified as Comprehensive or Targeted	All school systems not identified as Comprehensive or Targeted must complete ***bi-annual*** Continuous Improvement Plans (EQS 2126.1) in a manner that conforms to the procedures set forth in the Education Quality and Continuous Improvement Framework.
Support for Comprehensive 1 (C1) Schools (Years 1, 2, and 3 of consecutive Comprehensive Identification)	1. **CIP development:** Supervisory Union/Supervisory Districts and schools complete ***annual*** Continuous Improvement Plans or amendments with assistance from VT-AOE. 2. **Application of federal funding:** When using federal funds for school improvement efforts, SU/SDs and schools will choose, with the support of VT-AOE staff, from a State-identified menu of research-based practices designed to impact their area(s) of identification. When complete, this menu will be embedded in the Education Quality and Continuous Improvement Framework. 3. **Monitoring:** VT-AOE monitoring of Comprehensive 1 schools will happen twice annually, with ongoing monitoring by the schools' SU/SDs.
Support for Comprehensive 2 (C2) Schools (Years 4, 5, and 6 of consecutive Comprehensive Identification)	1. **CIP Development:** Supervisory Union/Supervisory Districts and schools complete ***annual*** Continuous Improvement Plans or amendments with more rigorous technical assistance from VT-AOE. 2. **Application of federal funding:** The VT-AOE will limit the menu of state-approved research-based strategies that the SU/SD and school can choose from when using federal funding for continuous improvement, and will participate in the strategy-selection process. • Continuous Improvement Plans must be reviewed and approved by a panel of educators composed of members recognized for outstanding practice in education. • Plan approval will be based on the perceived impact of the Plan on the challenges leading to the school's identification. 3. **Monitoring:** VT-AOE monitoring of Comprehensive 2 schools will happen quarterly, with ongoing monitoring by the schools' SU/SDs.
Support for Comprehensive 3 (C3) Schools (Years 7, 8, and 9 of consecutive Comprehensive Identification)	Schools not exiting Comprehensive status after their second three-year identification period will face state-determined action(s) drawn from the list cited in 16 V.S.A. 165(b). 5. Continue technical assistance; 6. Adjust Supervisory Union/Supervisory District boundaries or responsibilities of the superintendency; 7. Assume administrative control only to the extent necessary to correct deficiencies; or 8. Close the school and require that the school district pay tuition to another public school or an approved independent school pursuant to chapter 21 of this title.
Supports for Targeted Schools in their first (TI), second (T2), and third (T3) years of identification	1. **CIP Development:** Supervisory Union/Supervisory Districts and schools complete ***annual*** Continuous Improvement Plans or amendments 2. **Application of federal funding:** When using federal funds for school improvement efforts, schools must explicitly link investments to the equity gaps that placed them in Targeted status. 3. **Monitoring:** T2 and T3 schools will have additional monitoring of their implementation of their plans, with ongoing monitoring by the schools' SU/SDs.

f. Additional Optional Action. If applicable, describe the action the State will take to initiate additional improvement in any LEA with a significant number or percentage of schools that are consistently identified by the State for comprehensive support and improvement and are not meeting exit criteria established by the State or in any LEA with a significant number or percentage of schools implementing targeted support and improvement plans.
Click here to enter text.

VT-AOE anticipates that due to regional differences within the state, certain LEAs are more likely to have multiple schools in need of Comprehensive and Targeted Supports. As we expect schools to be concentrated in a few LEAs, this will allow the VT-AOE to invest in capacity building at the LEA level to a greater extent than if school are dispersed across the state. Unlike other states, the LEAs we are referencing frequently only have a single school at each grade span. As a result, we anticipate a focused investment across the LEA to have a substantive impact across the entire LEA.

5. Disproportionate Rates of Access to Educators (*ESEA section 1111(g)(1)(B)):* Describe how low-income and minority children enrolled in schools assisted under Title I, Part A are not served at disproportionate rates by ineffective, out-of-field, or inexperienced teachers, and the measures the SEA agency will use to evaluate and publicly report the progress of the State educational agency with respect to such description.[7]
Click here to enter text.

As indicated in Table 37, low income and minority students in Vermont schools are currently not being disproportionately served by ineffective, out-of-field, or inexperienced teachers:

[7] Consistent with ESEA section 1111(g)(1)(B), this description should not be construed as requiring a State to develop or implement a teacher, principal or other school leader evaluation system.

Table 37: Rates at which Low Income and Minority Students Are Being Served by Ineffective Teachers.

		Vermont	Poverty Comparisons			Minority Comparisons		
			High-poverty Quartile	Low Poverty Quartile	Dis - advantage ?	High Minority Quartile	Low Minority Quartile	Dis - advantage ?
		Mean	Mean	Mean		Mean	Mean	
Teacher Data	**Percent of 1st Year Teachers**	4.7%	5.9%	3.0%	High-poverty	3.5%	6.3%	Low Minority
	Percent of Teachers Not HQT	4.5%	5.2%	4.7%	High-poverty	2.7%	4.9%	Low Minority
	Percent of Teachers with Provisional	1.7%	1.6%	2.0%	Low Poverty	0.2%	0.8%	Low Minority
	Adjusted Average Salary	$47,821	$47,446	$48,638	High-poverty	$49,886	$46,578	Low Minority
	Student: Teacher Adjusted Average Salary	$4,664	$4,460	$4,813	High-poverty	$4,919	$4,551	Low Minority
Principal Data	**Number of Principals in last 5 years**	1.93	2.00	1.95	High-poverty	1.80	2.00	Low Minority
	Adjusted Average Principal Salary	$80,483	$78,244	$85,034	High-poverty	$84,154	$75,955	Low Minority
	Student: Principal Adjusted Average Salary	$551	$524	$475	Low Poverty	$429	$808	High Minority
	FTE:P Adjusted Average Salary	$5621	$5033	$5870	High-poverty	$5,097	$7,406	High Minority

Superintendent Data	**Number of Superintendents in last 5 years**	1.85	1.88	1.82	High-poverty	1.80	1.83	Low Minority
	Adjusted Average Salary	$101,975	$105,412	$99,131	Low Poverty	$106,029	$98,272	Low Minority
	Student: Superintendent Adjusted Average Salary	$88	$100	$65	Low Poverty	$64	$103	High Minority

As such, Vermont does not currently need to intervene to correct problems of disproportionate access to ineffective teachers, but we will continue to review a number of measures to ensure that this does not become an issue in our state.

The VT-AOE used the Educator Equity plan as an opportunity to ensure that historically marginalized students are not served at disproportionate rates by ineffective, out-of-field, or inexperienced teachers.

Definitions

We use several terms to describe conditions which might contribute to inequities in the teaching force across the state. These terms are employed throughout the Educator Equity Report to investigate whether there are schools where students may be receiving less effective instruction based upon teacher characteristics.

- **Ineffective teacher**—Teachers who are teaching out-of-field on an emergency or temporary license
- **Out-of-field teacher**—An educator currently assigned to teach a subject and/or grade that is outside the field specified by their full license, or those who hold a provisional, apprentice, or emergency license for a placement where they have been assigned students.
- **Inexperienced teacher**—An educator in his or her first year of teaching.
- **Low-income student**—Students who participate in the Free and Reduced Price Lunch program.
- **Minority student**—Students who have identified with any race or ethnicity that is not white/Caucasian (e.g., African American, Hispanic, Asian, Native American, and Pacific Islander/Alaskan Native)

Rates and Disproportionalities

In Vermont, like other rural states, the expected patterns of disadvantage do not always appear readily, and the solutions which work in urban contexts are not easily transferable. In Vermont, instructional practices supporting low-income and minority students are not necessarily correlated to teaching strategies associated with low performance. Many of our schools with

high percentages of minority students relative to state averages enjoy teachers with proportionally higher experience who are not teaching out-of-field. Only in schools that are both rural and poor do teaching characteristics associated with limited effectiveness begin to surface and, then, only marginally.

The educator characteristics Vermont is proposing to report are:

- Percentage of teachers in a school in their first year of teaching (experience indicator)
- Percentage of teachers in a school on a provisional or emergency license (out-of-field indicator)
- Percentage of teachers in a school new to their Supervisory Union/Supervisory District

These data are attempts to ensure that disadvantaged students are not taught disproportionately by teachers on a provisional or emergency license or who are new to the profession or the school. Research suggests that new educators and those teaching outside of their endorsement area lead to less effective student outcomes. If these characteristics cluster around individual schools, that would be evidence of educator inequity. These are data already being collected at the State as part of the educator equity plan. Additionally, rule 2121.2 of the Education Quality Standards requires staff to be properly licensed and prepared for their teaching assignment.

Though the data suggest that educator equity and mobility is a limited challenge across the state, our goal is the reduction of disproportionate rates by ineffective, out-of-field, or inexperienced teachers compared to non-low-income and non-minority students enrolled in schools not receiving funds under Title I, Part A.

6. School Conditions (*ESEA section 1111(g)(1)(C)):* Describe how the SEA agency will support LEAs receiving assistance under Title I, Part A to improve school conditions for student learning, including through reducing: (i) incidences of bullying and harassment; (ii) the overuse of discipline practices that remove students from the classroom; and (iii) the use of aversive behavioral interventions that compromise student health and safety.
   Click here to enter text.

The academic indicators proposed in this plan—indicators tied to ELA and Math performance, Science, PE, Career and College Readiness, Post-Secondary Outcomes, and Graduation Rate—are a critical part of Vermont's larger accountability system. But Vermont will also include other categories of performance measures its accountability framework—measures that would be challenging to use as a differentiation tool, but which represent ideas and goals that the state feels a need to support.

One of those categories of performance measures, Safe and Healthy Schools, will include school climate data. Local education systems who can link improved student academic outcomes to addressing bullying and harassment challenges will be encouraged to invest Title I, Part A

funding in interventions that will correct those problems, with school climate as a focus of that federally-funded work.

Vermont has long been actively working to reduce hazing, harassment and bullying in schools. EQS 2122.1 requires that each school maintain a safe, orderly, civil, flexible, and positive learning environment, which is free from hazing, harassment, and bullying and based on sound instructional and classroom management practices and clear discipline and attendance policies that are consistently and effectively enforced. Towards that end, we have established a statewide advisory council to address matters related to hazing, harassment, and bullying and required that each local LEA designate individuals in schools that respond to complaints made by victims, bystanders or advocates when incidents occur. Most schools participate in formal school climate programs like PBiS, SWIFT, or other programs to reduce negative school interactions and promote positive learning for all.

Another Safe and Healthy Schools indicator will examine the rate of exclusionary discipline in education systems. This measure is specifically designed to frame data-supported conversations about exclusionary discipline, as applied to all students, with an emphasis on their disproportionate application to Historically Disadvantaged Students. Within Vermont's continuous improvement framework, the VT-AOE will support LEAs and schools in identifying alternatives to these disciplinary measures, with an emphasis on ensuring that students stay on a school campus and have access to classroom supports, even when disciplinary action is warranted.

Vermont does not support the use of aversive behavioral interventions that compromise student health and safety in schools. The state has two ways to address this through its school improvement work—examining underlying causes contributing to any reported cases of aversive behavioral interventions and utilizing widespread preventative programs (like Positive Behavioral Interventions and Supports—or PBIS) to minimize the risk of these interventions occurring. If the need for preventing or finding alternatives to aversive behavioral interventions doesn't arise through examining data on reported incidents, it may come through as a result of reviewing school climate survey data. In that case, addressing this problem would become a part of a school or LEA's continuous improvement work and could be supported with Title funding and related VT-AOE monitoring supports, if it could be linked to improving students' academic outcomes.

7. School Transitions *(ESEA section 1111(g)(1)(D))*: Describe how the State will support LEAs receiving assistance under Title I, Part A in meeting the needs of students at all levels of schooling (particularly students in the middle grades and high school), including how the State will work with such LEAs to provide effective transitions of students to middle grades and high school to decrease the risk of students dropping out.
   Click here to enter text.

Vermont has a relatively small number of public schools, compared to other states, but there's a lot of organizational variety within those schools, including the grades that various Vermont schools serve. Examples include schools serving K-12 students, K-2, K-8, 6-8, 5-8, and 7-12, with schools serving different but overlapping grades (K-2, K-6) sometimes being housed within the same LEA.

Because of the organizational complexity that this creates, conversations about student transitions and graduation and dropout rates between schools have to be specifically tailored to the needs and circumstances of each LEA. Fortunately, Vermont has a continuous improvement framework that supports customized supports for LEAs and which specifically incorporates performance measures that would inform this conversation.

The current continuous improvement framework in Vermont revolves around examining systemic efficacy at every level: LEA, school, and classroom. It was developed on the back of a longstanding MTSS framework that included numerous culture and climate indicators, graduation indicators, and an indicator about supporting students transitioning from school to school within an LEA. Vermont's current continuous improvement model, which is framed by the Education Quality Review (EQR) process, feeds similar data sets into school and LEA-level conversations related to transitions and dropout: it currently includes data around graduation rates and will include climate data once Vermont identifies a statewide climate survey (a project that is currently in progress, with an anticipated 2017-18 pilot date).

These data would be discussed and drilled into as a part of the local-level conversations that make EQRs such an effective school improvement tool. Those conversations begin with a data-driven comprehensive needs assessment of the LEA under review and its schools, and include VT-AOE staff, as well as local-level school and LEA staff, community members, and students. Through these conversations, the graduation rate data that will be a part of our federally-required school accountability work will be examined more closely—if dropout rate and supporting student transitions are identified through the needs assessment and subsequent conversations as high-priority challenges, then LEAs and schools will address those challenges through their state-mandated improvement plans. Implementation of those plans would be monitored over time by VT-AOE staff.

Local education systems who can link improved student academic outcomes to addressing challenges stemming from school transitions will be encouraged to invest Title I, Part A funding in evidence based interventions that will correct those problems. The VT-AOE will review the use of that funding through its continuous improvement model, which includes monitoring and evaluation of the use of Title funds within local-level continuous improvement efforts.

Vermont State Board Rule 4500, The Use of Restraint and Seclusion in Vermont Schools, has been in effect since August, 2011. The purposes of Rule 4500 are to (a) create and maintain a positive and safe learning environment in schools, (b) promote positive behavioral interventions and supports in schools, and (c) ensure that students are not subjected to inappropriate use of restraint or seclusion. Rule 4500 is based upon Federal guidance and

Vermont has consistently ranked among the states receiving the highest ratings for the breadth and depth to which this rule provides safeguards for Vermont students. The report "How Safe is the Schoolhouse? An Analysis of State Seclusion and Restraint Laws and Policies," published by Jessica Butler (jessica@jnba.net) in July 2015 includes Vermont as one of 23 states that provide meaningful protection by law for all children regarding restraint and seclusion. The report also indicates that Vermont is one of 18 states that limits the use of restraint to emergency threats of physical harm for all children.

Under Rule 4500, the superintendent of a LEA must report the use of a restraint or seclusion to the **Secretary of the Agency of Education** within 3 school days of receipt of a report that includes any of the following:

- (a) The intervention results in death or injury (to the student or staff) that requires outside medical attention
- (b) The intervention was administered in violation of Rule 4500
- (c) The intervention lasted for a duration of more than 30 minutes

Relatively few instances occur each year, but all are investigated and VT AOE track data to ensure that LEAs with repetitive reports receive technical assistance and training in de-escalation strategies.

B. Title I, Part C: Education of Migratory Children

1. Supporting Needs of Migratory Children *(ESEA section 1304(b)(1))*: Describe how, in planning, implementing, and evaluating programs and projects assisted under Title I, Part C, the State and its local operating agencies will ensure that the unique educational needs of migratory children, including preschool migratory children and migratory children who have dropped out of school, are identified and addressed through:
   i. The full range of services that are available for migratory children from appropriate local, State, and Federal educational programs;
   ii. Joint planning among local, State, and Federal educational programs serving migratory children, including language instruction educational programs under Title III, Part A;
   iii. The integration of services available under Title I, Part C with services provided by those other programs; and
   iv. Measurable program objectives and outcomes.

   Click here to enter text.

Consistent with Vermont's overall commitment to equity for all students, Vermont takes meeting the needs of migratory children seriously. Essential to this process is collaboration with other agencies supporting Vermont's migrant population. The process of identification, enrollment, and determination of "priority for services" is outlined below. This process is a continuation of current practice.

The primary goal of the Vermont Migrant Education Program (VMEP) Identification and Recruitment is to find and enroll every migratory child and youth in the state under the age of

22 who has moved with a family member, a guardian, or independently in order to seek or obtain temporary or seasonal work in qualifying agricultural activities. To achieve this goal, VT-AOE partners with the University of Vermont Extension Program.

The Vermont Migrant Education Program recognizes that positive relationships between parents, students, and schools are essential to the success of every child's academic life. Furthermore, the VMEP recognizes that youth who are not formally enrolled in an academic institution yet lack a high school diploma or its equivalent are also entitled to receive quality educational opportunities. UVM Extension MEP Recruitment staff support this philosophy and recognize that without an efficient, comprehensive, and multi-tiered statewide recruitment plan, necessary educational services will not reach eligible migratory students. UVM Extension MEP Recruitment staff form the essential bridge of the program by locating eligible migrant families and individuals so they can receive the supplemental educational support and services VMEP offers.

UVM Extension MEP Recruitment staff works closely with Supervisory Union/Supervisory Districts, local schools, teachers, Vermont Adult Learning, parents, social service agencies, and the agricultural community to identify and recruit eligible migratory children and youth following the requirements in MEP legislation, regulations, and guidance. Statewide recruitment is carried out by a creative combination of staff arrangements; part-time seasonal staff, part-time year round staff, and a part-time State Identification and Recruitment Program Coordinator. The state is divided into five designated recruitment areas: the 3 higher density farming regions (Franklin and Addison County and the Northeast Kingdom) are covered by part-time year round staff while the 2 remaining regions are covered by part-time seasonal staff. Recruiters are expected to visit each school and farm in their regions at least annually. Farms that have an historically high turnover rate will be visited by recruiters more frequently. In addition, all schools disseminate an agricultural employment survey with school registration packets and those are then sent to UVM Extension to follow up on students potentially eligible for VMEP. The goal of Vermont's identification & recruitment program is to assure timely and accurate identification and recruitment of all eligible migratory students.

The recruiter completes a Certificate of Eligibility (COE) for the student once identified. The COE is checked for accuracy and eligibility by the State Identification & Recruitment Program Coordinator, reviewed by the VMEP Data Technician, and, finally, reviewed and signed by the State Director of VMEP. VMEP enters student information into the MIS2000 data system. Student COE information is checked against current information in that system and also in the national Migrant Student Records Exchange Initiative (MSIX) database. To ensure the accuracy of student data, each year a residency check is completed and a minimum of 10% of new COEs are selected for prospective re-interviews. Every 3 years, the State completes an intensive re-interview process to determine the accuracy of our recruitment system.

Assessing migrant student needs begins at identification and recruitment when the recruiters complete either an *Out-of-School Youth Profile* or an *In-School Youth Profile*. Both profiles are

modeled after the profile developed by the Out of School Youth (OSY) Consortium – a multi-state consortium funded to identify the needs of migrant out-of-school youth and to develop appropriate services for that population. The profiles contain information such as last grade completed, health issues, social issues, home language, and other data informing staff of the unique needs of each student. In addition, families and school staff are interviewed to determine needs and barriers that must be addressed so that each student can succeed academically. When available, state and local assessment data is used to further pinpoint students' academic needs.

The state needs assessment is a formal process directed by the Office of Migrant Education guidance that includes a committee comprised of people familiar with the migrant population in Vermont. The needs assessment includes an examination of efficacy in meeting individual student progress to determine effective programming, along with an analysis of various demographic data.

Vermont's service delivery plan focuses on our three groups of students with unique needs: migrant pre-school students, migrant in-school students, and migrant out-of-school youth. Pre-school students benefit from Vermont's newly implemented law, Act 166, subsidizing high-quality pre-school program to all 3 and 4 year olds and 5 year olds not yet in kindergarten. Our first goal is to enroll migrant preschoolers into those programs. Program mentors and teachers work with the families and schools to eliminate barriers to attendance. For our migrant families those barriers most commonly involve addressing transportation and home language barriers. For our migrant children under 3 years old, mentors and teachers work with the families using a research-based family literacy program.

Vermont's in-school migrant students benefit from a comprehensive continuum of services offered in the school and community. VMEP's first goal with in-school students is to assure that they are accessing all the services the school has to offer. Those services include Title I support, Title III and federally required ELL services, afterschool and summer learning programs, extracurricular activities, and other academic and social supports. VMEP's mentor/teachers work with both the families and schools to meet individual student needs and to enable the students to meet State academic achievement goals, including assisting secondary students in accruing credit towards high school graduation. If needed, the program will provide additional tutoring to assure student success. All enrolled preschool and in-school students receive all the benefits of federal child nutrition programs as a directly certified student.

Vermont's out-of-school migrant population presents the hardest challenges. Most have left school to work and many were disengaged from school when they did attend. VMEP hires tutors to assess the student's academic and English language acquisition needs. They then create and implement an educational plan. Some students receive individual tutoring each week while others attend classes jointly offered by VMEP and Vermont Adult Learning. Resources and tools developed by Vermont participation in the OSY Consortium are used to meet previously identified student needs.

VMEP is currently engaged in completing the work on our comprehensive needs assessment and service delivery plan. The plan will identify measurable program objectives and strategies to be adopted based on the needs summarized above.

Please see Appendix D. This is a draft of the assessment and plan; the final version will be completed in late spring 2017, with objectives incorporated into the final version of the Vermont state plan.

2. Promote Coordination of Services (*ESEA section 1304(b)(3)*): Describe how the State will use Title I, Part C funds received under this part to promote interstate and intrastate coordination of services for migratory children, including how the State will provide for educational continuity through the timely transfer of pertinent school records, including information on health, when children move from one school to another, whether or not such move occurs during the regular school year.
   Click here to enter text.

Educational continuity is the highest priority for Vermont's migratory students. Once a student or family is located, the first goal is to ensure that the family's children are enrolled in school. If needed, migrant staff will accompany the family to the appropriate school to register the children. Record transfer, health information including immunization records, and other requests from the school registrar is of secondary importance to enrollment. VMEP staff work with schools within the state to ensure all records are transferred in a timely manner. This is especially important for students experiencing homelessness, those in the process of or have been identified for special education services, and English learners. VMEP staff meet regionally each month to discuss common students following a case study design.

Through Vermont's participation in two Migrant Education Program consortia, staff have developed strong relationships with state leadership and program staff from other states. This is especially true within the New England region where students tend to be transitory across state lines. As soon as VMEP staff identify where a student resided previously, that state is contacted for all appropriate student information.

VMEP uses the MSIX to determine where a student previously attended school as well as other pertinent information. That information is passed along to the current school to make sure the student records are transferred in a timely manner. If leaving Vermont, a student or his or her family can inform VMEP of an impending move, allowing the VMEP staff to expedite the transition to the new school and minimize a student's time out of school.

VMEP recognizes that parents play a central role in the academic success of their children. As such, parent input into the design and implementation of the program is extremely important. Mentor/teachers are in frequent contact with parents to ascertain both a student's needs and to determine if the supports provided are helpful to the student's success. Parents are asked to

complete a parent survey (currently available in English and Spanish) annually, in which they are able to comment on the services they received and suggest improvements to the program.

Additionally, VMEP has implemented regional, day-long, family events at least twice a year. These events include family learning activities, student activities, and time reserved for a parent meeting. The parents select a topic of interest (that typically originates with a parent suggestion) and then spend time in a facilitated discussion on the planning and implementation of the VMEP. From the participating parents, representatives are nominated to represent the region in the annual statewide parent advisory meeting.

The agenda for the state-wide meeting includes team building activities and, most importantly, an opportunity for parents to register their thoughts on strengths and limitations of the VMEP's services for students. For example, the measureable program objectives and strategies will be presented to parents at the advisory council. Parents provide feedback. The feedback guides modifications to program objectives and strategies.

The VMEP In-School Coordinator's job description includes organizing the regional meetings, the annual meeting, and the responsibility for meeting the parent advisory council requirements of MEP under ESSA.

3. Use of Funds *(ESEA section 1304(b)(4))*: Describe the State's priorities for the use of Title I, Part C funds, and how such priorities relate to the State's assessment of needs for services in the State.
   Click here to enter text.

VMEP is currently engaged in completing a comprehensive needs assessment and service delivery plan. In the summer of 2016, VMEP contracted with META Associates to facilitate the comprehensive needs assessment following the guidance set forth by the Office of Migrant Education. A needs assessment committee was chosen, met, and reviewed the following data:

- Student demographics including recent changes
- State assessment data for participating migrant students
- Parent survey results
- Staff survey results
- Out of school youth performance and survey data
- Concerns expressed from committee members

The needs assessment process initially identified the following challenges for migrant students in Vermont.

- A low percentage of migratory students is proficient in reading and English language arts as measured by the State assessment. Additionally, there is a significant achievement gap between the performance of migratory students and non-migratory students in Vermont.

- A low percentage of migratory students is proficient in mathematics as measured by the State assessment. Additionally, there is a significant achievement gap between the performance of migratory students and non-migratory students in Vermont.
- VMEP is not currently assessing the ELA and mathematics skills of out-of-school youth.
- Migrant children under age 5 do not have consistent and sufficient early education due to lack of transportation, parental work schedules, limited of English proficiency, and limited access to available and appropriate PK programs.
- Parents who are migratory lack abundant strategies to support their pre-school and in-school children's academic success.
- Secondary students who are both migratory and OSY struggle to attain their educational goals.
- OSY who have limited English proficiency have commensurate limited access to education and other associated services, resources, and opportunities.

Under ESSA, students are identified as "priority for service" if they have made a qualifying move within the previous one-year period and are failing—or most at-risk of failing—to meet the challenging State academic standards or who have dropped out of school. To identify these students, a monthly list of all students who have a qualifying move within the previous twelve months is created from our MIS2000 database. All students who are currently out-of-school will be priority for service students. From the remaining names on the list, mentor/teachers are asked to identify which students are failing or at risk of failing by one or more of the following criteria:

- Scoring below proficient on the ELA, mathematics, or science state assessments
- Scoring below proficient on a valid local assessment in literacy or math
- Retention at any time in the last 3 years
- Previously dropped out of school
- Performing below grade level in literacy or math according to the classroom teacher
- Receiving one or more "D's" or below on the last student report card
- Missing 10 or more days of school since the beginning of the school year.

The responsibility of documenting priority for services determination ultimately falls to the State Director of Migrant Education, who uses the monthly list to prioritize services, beginning with out-of-school youth. The remainder of the list is sent to the mentor/teachers to make determinations based on the criteria listed above. After the initial determination is made, the VMEP program manager makes a final determination of priority status.

Priority for Service (PFS) students receive services immediately. Currently, VMEP has sufficient funds to serve all students, but PFS receive further support—more time, more services, more supplies—as needed to succeed academically or, in the case of a secondary student, to stay in school and progress to graduation.

VMEP is a year-round program. Each month, the State Director sends the Program Coordinator and the regional mentor/teachers the list of eligible students, the list of students needing PFS

determinations, and the list of students currently designated as PFS. The reports are run at the beginning of every month and made available to the Program Coordinator at that time. As Vermont moves to the MIS2000 web-based platform, field staff will receive training on how to create and run a report themselves, allowing a timely list of all currently eligible students with the PFS determination. VMEP's goal is to move to a system where information about our students is available immediately to all full and part-time staff that work with our students.

C. Title I, Part D: Prevention and Intervention Programs for Children and Youth who are Neglected, Delinquent, or At-Risk

1. Transitions Between Correctional Facilities and Local Programs *(ESEA section 1414(a)(1)(B))*: Provide a plan for assisting in the transition of children and youth between correctional facilities and locally operated programs.
   Click here to enter text.

Vermont has only two correctional facilities that serve eligible delinquent youth. Our adult correctional system has one educational program – the Community High School of Vermont serving students aged 18 and up who do not yet have a high school diploma. There is one facility for delinquent youth under the age of 18. This program maintains the student's enrollment in their home high school and offers a full range of classes so that students may continue their progression toward a high school diploma. The numbers of eligible students in both programs are low and has been declining over time, especially in the adult correctional facility. Both facilities offer transition counseling as part of the educational services offered to students. The counseling focuses on successful transition to their home high school, post-secondary courses, appropriate vocational programs, job-training, other educational programs, and employment.

2. Program Objectives and Outcomes *(ESEA section 1414(a)(2)(A))*: Describe the program objectives and outcomes established by the State that will be used to assess the effectiveness of the Title I, Part D program in improving the academic, career, and technical skills of children in the program.
   Click here to enter text.

Vermont Agency of Education's Title I, Part D program has two goals for youth in neglected or delinquent facilities:

1. Provide educational and support services for youth in neglected or delinquent programs so that they will achieve proficiency on the state assessments and progress towards a high school diploma.
2. Provide youth in institutions for neglected or delinquent programs with services to make a successful transition from institutionalization to further schooling or employment.

These goals will be achieved by:

1. Each student will be evaluated upon entry using student's records and a range of assessment designed to determine proficiency in math and literacy including their current status on progress towards a high school diploma.
2. Each student will have an individual educational plan based on their needs that includes both educational and other needed supports.
3. While in the institutions, students will achieve the goals of their plans and work towards a high school diploma (including if appropriate, successfully transitioning back to their home school).

D. Title II, Part A: Supporting Effective Instruction

1. Use of Funds *(ESEA section 2101(d)(2)(A) and (D))*: Describe how the State educational agency will use Title II, Part A funds received under Title II, Part A for State-level activities described in section 2101(c), including how the activities are expected to improve student achievement.
   Click here to enter text.

The Education Quality Standards are built on the premise of continuous improvement for all schools. It follows, then, that we should expect the same for our educators. As required by statute, four percent of the Title IIA monies will be used to fulfill the VT-AOE's responsibility to provide proper and efficient administration and monitoring of the programs carried out under the Title. Vermont is fortunate to have an experienced Title IIA administrator who will continue to guide and support SU/SDs on how to most effectively use local funds, with evidence-based approaches to improving teacher effectiveness. To ensure that SU/SDs are developing, implementing, and evaluating investment plans that meet the academic and non-academic needs of all students, Vermont will utilize a continuous improvement planning cycle to provide differentiated technical assistance, progress monitoring, compliance review, and corrective action in support of evidence-based practice.

Consistent with our dedication to equity for all students, the State will employ SU/SD level funding to provide ongoing support for teachers on identifying and providing high quality instruction to students with specific learning needs. The supports will include, but not be limited to:

- Alignment of efforts to standards including the Vermont Professional Learning Standards, Education Quality Standards, and the Core Teaching and Leadership Standards for Vermont Educators.
- Collaborative (cross-agency) collection of data to inform continuous improvement, starting with a comprehensive needs assessment to determine the specific and contextual needs within an SU/SD. Data will be used to determine the most effective path to narrowing gaps in achievement.
- A determination of which evidence-based activities, strategies, and interventions are most likely to have a measurable impact on student achievement. Funding decisions will be determined by the SU/SD's identified needs, and the presence of evidence-based actionable plans likely to have a positive impact on student learning.
- Collection, analysis, and presentation of evidence to support requests for the continuation of funding of subsequent investments.
- Institution of a systemic process for the collection of evidentiary practices across the state to extend, expand, and refine state-wide use of the evidence-based levels
- Development of a state-wide Community of Practice (in alignment with other state-wide professional learning networks such as the VT-Professional Learning Network) to support the dissemination of information about teaching strategies and interventions that are having a measurable impact on students.

2. Use of Funds to Improve Equitable Access to Teachers in Title I, Part A Schools *(ESEA section 2101(d)(2)(E))*: If an SEA plans to use Title II, Part A funds to improve equitable

access to effective teachers, consistent with ESEA section 1111(g)(1)(B), describe how such funds will be used for this purpose.
Click here to enter text.

We do not intend to use our Title II, Part A funds for equitable access to effective teachers. In Vermont, access to effective teachers is not correlated to student characteristics. For further information, please refer to the Vermont Educator Equity Report or Section A.5 of this plan.

3. System of Certification and Licensing *(ESEA section 2101(d)(2)(B))*: Describe the State's system of certification and licensing of teachers, principals, or other school leaders.
Click here to enter text.

The Vermont Agency of Education (VT-AOE) is proud of the relationship it has developed with the field to coordinate teacher licensing. Initial licensing is largely the result of alignment between the VT-AOE and state-accredited teacher education programs. Licensing renewal involves collaboration between the VT-AOE, the Vermont Standards Board for Professional Educators (VSBPE), and local and regional standards boards across the state. While this cooperation is essential to the quality and success of the licensure program, the responsibility for validation of educators' credentials rests solely with the VT-AOE.

The VT-AOE ensures that all teachers and paraprofessionals working in a program supported with funds under part 1111(g)(2)(J) meet applicable State certification and licensure requirements, including any requirements for certification obtained through alternative routes. Vermont will continue to follow the licensing pathways established and defined by VSBPE under Rule 5300. Educators can earn a license through a traditional educator preparation program, the NASDTEC Interstate Agreement, or alternate routes.

Current Licensing requirements reflect the importance of providing a quality education for all of Vermont's students. The Vermont Standards Board of Professional Educators has the statutory responsibility for the development of rules regarding the licensure of Vermont educators. In 2016, the VSBPE went through the Legislative Committee on Administrative Rules for revisions of current rules. This process includes stakeholder input/comment. The VSBPE will continue with rule revisions based on changing educational landscape and research on educator effectiveness. This dedication to reflecting current high quality practice affirms Vermont's commitment to the quality education of all students in the state and reflects a continuation of current practice.

4. Improving Skills of Educators *(ESEA section 2101(d)(2)(J))*: Describe how the SEA will improve the skills of teachers, principals, or other school leaders in order to enable them to identify students with specific learning needs, particularly children with disabilities, English learners, students who are gifted and talented, and students with low literacy levels, and provide instruction based on the needs of such students.
Click here to enter text.

As provided by the statute, Vermont will reserve an additional three percent of Title IIA funds to provide high quality, professional learning for principals and other school leaders through the creation and implementation of a Vermont Leader's Professional Learning

Academy/Institute. By supporting the use of robust and actionable data to provide professional learning for principals and other school leaders, the Vermont Agency of Education will build state-wide communities of practice to engage in high quality professional learning with clearly articulated and measurable outcomes.

The Academy will be aimed at improving student outcomes in low-performing schools. Consistent with research on the impact of highly effective school leaders on student performance, the Academy will aim to increase the capacity of school leaders to recruit, retain, and support effective educators. Specifically, the Academy will:

- Concentrate on improving the capacity of school leaders, primarily those leading schools identified for Comprehensive or Targeted Supports.
- Employ a curriculum informed by input from stakeholders (state accountability data and evidence collected from the Education Quality Review process) and aligned with Standards including Vermont's Professional Learning Standards, Education Quality Standards, and the Core Teaching and Leadership Standards for Vermont Educators.
- Develop outcome-oriented performance metrics that will be utilized to measure the impact of the professional learning in areas such as standards-based, data-driven, and differentiated instruction, equitable access to high quality instruction, cultural competence, subject and content-specific issues, and the effective leveraging of resources to address equity and excellence.
- Utilize the VT-AOE Leadership Team model as the foundational forum for ongoing conversation and review of the initiative to support evidence gathering.
- Minimize duplication of effort by collaborating with other professional learning providers in the development and implementation stages of the professional learning.

5. Data and Consultation *(ESEA section 2101(d)(2)(K))*: Describe how the State will use data and ongoing consultation as described in ESEA section 2102(d)(3) to continually update and improve the activities supported under Title II, Part A.
   Click here to enter text.

The Vermont VT-AOE will use our continuous improvement model to gather and evaluate data to update and improve activities supported under Title II, Part A. For a thorough examination of our continuous improvement model, please see Section A.4.viii.e above.

In addition to the continuous improvement process, VT-AOE convenes the Committee of Practitioners quarterly to consider the efficacy of the activities supported under Title II, Part A.

6. Teacher Preparation *(ESEA section 2101(d)(2)(M))*: Describe the actions the State may take to improve preparation programs and strengthen support for teachers, principals, or other school leaders based on the needs of the State, as identified by the SEA.
   Click here to enter text.

On behalf of VSBPE, the Vermont Agency of Education operates the Results Oriented Program Approval (ROPA) process to facilitate the recommendation of Level I licensure to Vermont–based educator preparation programs. Preparation programs must demonstrate that their

candidates meet the requisite standards for professional practice and that the institution allocates sufficient resources and support to ensure the long-term success of the program. Among these standards is the educator preparation program requirement of demonstrating that candidates for licensure understand individual differences and diverse cultures, providing a variety of high-quality field experiences with a diverse population of students and educators, and recruiting, admitting, supporting, and retaining candidates, faculty, and cooperating teachers from diverse backgrounds.

These standards provide ROPA review teams with a mechanism to evaluate institutional commitment to preparing candidates to meet the needs of diverse learners and cultures, and to ensure that our most disadvantaged students have educational professionals who are trained to meet their personalized needs. Continued use of the ROPA standards and review process will constitute a continuation of practice. Improving preparation programs with a focus on addressing the needs of all students, including Historically Marginalized Students will ensure that all students are taught by qualified teachers according to accepted standards of practice.

The ROPA process is reviewed annually and revised based on changes in Vermont policy and practice for Teacher Preparation. This will largely be a continuation of current strategy, with the addition of an evaluation process beginning in 2017. Vermont will continue to use Title IIA funds to support part of the work of the pre-service education quality coordinator. This position works with the field to establish professional standards and competencies for all educational endorsement areas offered in the State, and works with the educator preparation programs in the state to align their coursework with these competencies. The position also aides in the five-year review of educator preparation programs. Through this position, we can align educator standards, student learning goals, and policy decisions, ensuring that graduates are familiar with state priorities and well-prepared to teach in Vermont schools.

E. Title III, Part A, Subpart 1: English Language Acquisition and Language Enhancement

1. Entrance and Exit Procedures *(ESEA section 3113(b)(2)):* Describe how the SEA will establish and implement, with timely and meaningful consultation with LEAs representing the geographic diversity of the State, standardized, statewide entrance and exit procedures, including an assurance that all students who may be English learners are assessed for such status within 30 days of enrollment in a school in the State.
   Click here to enter text.

Students who are English Learners are an expanding population in Vermont. They are among the most vulnerable students, a valuable cultural and linguistic asset, and an important source of population growth to meet Vermont's economic challenges. This section of the state plan addresses the identification, entrance, and exit procedures for English Learners in Vermont. How English learners fit into the broader school accountability system is addressed in greater detail in the Accountability section of the state plan. Though there are some updates to the assessments being used for identification and exiting of services, conceptually, this is a continuation of current practice.

Vermont is a member of the WIDA state assessment consortium that has been actively involved in the collaborative work to develop a "common definition of English learner." This work, encapsulated in CCSSO's *Moving Toward a More Common Definition of English Learner*, has guided the standardization and strengthening of Vermont's entrance and exit procedures. The VT-AOE also met with roughly 15 representatives from across the state's EL educator community during a public input session on August 11, 2017. The subject of entrance and exit criteria was raised then, and the outcome of that discussion—that entrance criteria should be relatively simple and standardized, and that exit criteria should be simple, and should possibly include locally-identified data points—informed the decision that the VT-AOE is proposing. The VT-AOE plans to host additional consultations with SU/SDs to share the guidance learned through WIDA collaboration.

Vermont's standardized entrance procedures

Vermont's standardized entrance procedure includes two parts, identification and classification. For identification, the VT-AOE requires all schools in Vermont use the home language survey form to determine potential English Learners. Typically, SU/SDs administer the survey to parents/guardians at the time of a student's initial school enrollment; in any case, all students who may be English Learners will be assessed to determine their EL status within 30 days of enrollment in a Vermont public school. Based on survey responses and, when additional clarification is needed, a follow-up parent interview, an English learner professional evaluates whether further screening/assessment of the student's English language proficiency is required.

After a student has been identified as a potential English learner, Vermont uses a screener to confirm whether a student should be classified as an EL and, if so, to determine the student's current level of English proficiency. Previously there were multiple screeners used by SU/SDs

across the state; however, beginning in the 2017-18 school year, all Vermont schools will begin using the WIDA Screener for initial classification/placement purposes. The screener was developed through an enhanced assessment grant to the WIDA "*ASSETS*" project and is more valid and reliable for classifying initial listening, speaking, reading, and writing skills than the screeners currently allowed. Moving to a single screener will also create consistency in eligibility determinations across Supervisory Union/Supervisory Districts.

Description of Vermont's standardized exit procedures

Once identified, English learners take an English language proficiency assessment annually to gauge their progress toward achieving proficiency. Proficient scores in numerous domains are required to exit services. For a more in-depth discussion of the how targets are set for English learners, please see the Accountability section of the state plan. Starting in school year 2015-2016, Vermont transitioned to the ACCESS 2.0 online assessment of English language proficiency for ELs in Grades 1-12. Kindergarten students still take a paper form of the ACCESS test. Students with severe cognitive disabilities take the ACCESS Alternate Assessment.

Consistent with guidance from WIDA, Vermont requires a composite proficiency level score of 5.0 on the ACCESS 2.0 assessment, plus a minimum score of 4.0 or higher on the reading and writing domains of the test to exit supports. Kindergarten students are required to be assessed again in Grade 1 before they can exit.

Currently, Vermont uses only the state English language proficiency assessment for purposes of exit from EL status. The State does *not* include performance on an academic content assessment as an exit criterion from EL status. The legislation allows for consideration of other measures, and the WIDA Consortium is helping states calibrate EL proficiency scores with scores on state content assessments, including the SBAC. In the future, we will monitor these developments and consult to the field to see if pursuit of a multiple measure determination of proficiency is desired and possible. If the field and data trend in this direction, we would consider a revision of our state plan. For now, however, we will continue to use only ACCESS to make determinations of English language proficiency.

With these resources and supports, the VT-AOE will share proposed changes to state-wide entrance procedures and exit criteria with Title III Directors, EL teachers, and other stakeholders. Additionally, we intend to seek input during face-to-face meetings and explore formation of continued communities of practice.

2. SEA Support for English Learner Progress *(ESEA section 3113(b)(6))*: Describe how the SEA will assist eligible entities in meeting:
    i. The State-designed long-term goals established under ESEA section 1111(c)(4)(A)(ii), including measurements of interim progress towards meeting such goals, based on the State's English language proficiency assessments under ESEA section 1111(b)(2)(G); and

ii. The challenging State academic standards.
Click here to enter text.

The VT-AOE will follow the continuous improvement process outlined in Section A.4.viii.e to help eligible entities meet state long-term and interim targets and challenging academic standards. In this process, a VT-AOE developed needed assessment, and federal accountability data (including ELP data and the performance of ELs against statewide assessments and other measures of academic performance described in this plan) will drive continuous improvement planning. Equity gaps identified with the help of this data will result in the development of action plan components supporting ELs. These plan components will be required to include tangible goals, measures, and improvement strategies related to their identified problems of practice.

The VT-AOE will support these efforts through some combination of monitoring, evaluation, and the provision of technical assistance, with the specific supports varying from school to school and LEA to LEA, in accordance with each educational systems' needs. LEAs receiving Comprehensive or Targeted Supports will garner greater support to meet their goals. However, the VT-AOE will monitor the progress of all LEAs in meeting their goals.

3. Monitoring and Technical Assistance *(ESEA section 3113(b)(8))*: Describe:
   i. How the SEA will monitor the progress of each eligible entity receiving a Title III, Part A subgrant in helping English learners achieve English proficiency; and
   ii. The steps the SEA will take to further assist eligible entities if the strategies funded under Title III, Part A are not effective, such as providing technical assistance and modifying such strategies.
   Click here to enter text.

Since accountability for English Learners' performance on English language proficiency assessments has shifted from Title III to Title I under ESSA, the VT-AOE is developing a more integrated, collaborative approach to monitoring the progress of Title III subgrantees in helping ELs achieve proficiency. Title III and Title I staff are working together to plan and better coordinate protocols used to monitor LEAs' progress, including:

- Design of Consolidated Federal Program application as basis for review and approval of grants
- Use of State-level indicators for progress in achieving ELP and proficiency on academic content assessments
- Local collection and reporting of EL longitudinal student performance data as part of continuous improvement
- Desk audits and on-site program reviews of LEA Title III plans, implementation, and evaluation of evidence-based strategies, LIEPs, and participation of ELs in academic programs

As outlined in the continuous improvement section, the VT-AOE will monitor LEAs progress in meeting their continuous improvement goals. Those LEAs not making progress or showing improvement in targeted areas will receive tiered supports determined by their vicinity to their goals. Those schools with greater needs will be eligible for greater supports. Schools not meeting their goals for multiple years might be eligible for supports that include more coordination with the VT-AOE in the construction of the continuous improvement plans, more technical assistance in determining and enacting interventions, and more monitoring of an LEAs success in meeting their goals. Tiered supports include technical assistance in conducting needs assessments or developing continuous improvement plans and participation in networked improvement communities with other schools in need of similar Targeted Supports.

When VT-AOE individual staff members and/or teams monitor and find evidence that Title III-funded LEAs are not meeting long-term goals for ELs' progress in achieving proficiency, they will provide evidence-based, differentiated technical assistance, resources, and professional learning opportunities based on a continuous improvement framework. The VT-AOE's efforts to better connect and coordinate the work of the teams that monitor, lead continuous improvement planning, and provide technical assistance should ultimately lead to stronger support for LEAs in improving language instruction educational programs and academic outcomes for English Learners.

F. Title IV, Part A: Student Support and Academic Enrichment Grants

1. Use of Funds *(ESEA section 4103(c)(2)(A)):* Describe how the SEA will use funds received under Title IV, Part A, Subpart 1 for State-level activities.
   Click here to enter text.

Title IV provides states with funds for well-rounded educational opportunities. ESSA outlines numerous permitted activities for the funds. The vast majority of the funds must be used for allocations to SU/SDs; however, the state can reserve limited funds for monitoring, training, and technical assistance with the grants. As these are an expansion of funds, this constitutes a proposed change in practice.

Vermont is planning to use its limited state level funds for Title IV to support Supervisory Union/Supervisory District Title IV Coordinators. The VT-AOE will reserve funds at the state level to ensure there is support and appropriate allocation of local funds before engaging in other statewide activities. These funds will be used to hire a full-time employee to monitor and provide technical assistance to Supervisory Union/Supervisory Districts receiving Title IV, Part A money through the formula grant, as well as institute an in-house advisory group of VT-AOE staff whose work intersects with Title IV, Part A. This group of staff members will ensure that school systems know the different agency and state level programs available to them to support the goals of Title IV at the local level. Housing coordination with one individual streamlines communication within the VT-AOE and creates transparency and confidence for Supervisory Union/Supervisory Districts.

The Title IV, Part A coordinator will continue to engage with the consolidated federal programs team and the Education Quality staff. This coordinator will have a greater focus on Comprehensive School Supports allowing 21st Century Learning grants to provide wrap-around services for those receiving schools, while augmenting existing implementation of comprehensive improvement plans.

Title IV, Part A will be used to grant funds to schools eligible for Comprehensive Support in accordance with their continuous improvement plans and in coordination with the Education Quality team. The Title IV, Part A coordinator will continue working closely with the Education Quality staff in order to ensure efficient use of funds at the SU/SD and school level.

Ninety-five percent of the funds must be used for allocations to LEAs; however, the state can reserve one percent for administration and an additional 4% of the funds for state activities including monitoring, training, and technical assistance. As these are an expansion of funds, this constitutes a proposed change in practice for LEAs.

The Title IV, Part A coordinator will be a member of the Consolidated Federal Programs team and work closely with the Education Quality staff. The funds will be part of the Consolidated Federal Program application in order to make it easier to braid Title IV, Part A funds with the other ESSA funds to achieve local and state goals.

2. Awarding Subgrants *(ESEA section 4103(c)(2)(B))*: Describe how the SEA will ensure that awards made to LEAs under Title IV, Part A, Subpart 1 are in amounts that are consistent with ESEA section 4105(a)(2).
   Click here to enter text.

The VT-AOE has determined the Title IV, Part A funds will be distributed as a formula grant to allow access to all LEAs seeking these funds. The VT-AOE's Fiscal Team creates spreadsheets with the allocation formulas built in for all formula grants. A preliminary spreadsheet with the Title IV, Part A formula detailed in ESSA (section 4105) has been created and tested using a sample allocation. The formula used includes the SEA portion for administration and state activities and then follows section 4105 for allocations to each LEA (none receiving less than the $10,000 minimum).

G. Title IV, Part B: 21st Century Community Learning Centers

A. Use of Funds *(ESEA section 4203(a)(2))*: Describe how the SEA will use funds received under the 21st Century Community Learning Centers program, including funds reserved for State-level activities.
Click here to enter text.

Vermont's Title IV part B program (21CCLC) is designed to align and support the state level strategies for all students articulated in this state plan and in Vermont's Education Quality Standards. Funds are intentionally integrated into local level needs assessment planning, continuous improvement activity, and school-wide strategies. Program access and design in funded programs include services that support the state, school, and community goals for youth including those designated as migrant, homeschooled, homeless, those in Title I caseloads, and English Language Learners including meaningful and equitable consultation for private school students in individually funded communities.

At the Vermont Agency of Education, the Title IV part B 21CCLC program is part of team focused on personalized learning and flexible pathways and works with program managers across the Agency including, but not limited to, School Improvement, Title I, Title IIA, Title II, Title III, Title IV Part A, Special Education, and the fiscal monitoring team. Regular communication and collaboration occurs among these state programs which results in strategic and programmatic cohesion around planning, goals, technical assistance, and professional development. Systemic inter-agency collaborative strategies achieved that support state goals include:

- Significant annual use of Title I funds for academic tutoring and academic afterschool and summer programming
- Use of federal child nutrition programs in all funded sites, including snack and meal programs
- Use of the PBIS and other evidence based behavior systems in afterschool programs
- Aligned monitoring and cross team membership on site-visit teams
- Supporting technical assistance around inclusion (there is parity for percentages of afterschool regular attendees on an IEP)
- Funding integration and RFP alignment around personalization, proficiency based learning, and the Vermont Educator Quality Standards
- Fiscal and programmatic monitoring alignment to support compliance and healthy financial structures at the 21c grantee level

The 21CCLC program will continuously improve each year in its efforts to support all students in communities where funds are awarded. Based on a system and evaluation design created around principles of access, equity, and quality, in particular for communities with the most need, current 21CCLC systems' components will improve learning from the last thirteen years of operation. The items below all support state goals and at the same time are targeted to the particular needs of Title IV part B funds:

- The current statewide evaluation plan has four major goal areas, fifteen indicators, and fifty-one measures that are tracked. This plan drives all activity and action and is used for continuous improvement and as a driver for change system-wide. Grantees may adopt the statewide plan and merge it with locally designed evaluation activities. Statewide Evaluation will be improved to continually assess not only baseline program, academic and social indicators tied to need, but over time may embed emerging indicators related to items including personalization, transferable skills, and proficiency based models when these systems come to fuller fruition in Vermont, in particular for youth in secondary schools that receive 21c funding.
- Technical Assistance and Professional Development systems will continue to support the evaluation areas as well, with an on-going analysis if more expansive readiness and support activities are needed for identified stages of program development. The program's current practice of focusing resources on supporting quality and effective leadership at the project and site level will guide action with considerations analyzed for investments in more intensive, embedded and sustained methodologies.
- Vermont's robust monitoring, and reporting system will be continued and enhanced annually. Multiple monitoring activities will occur during the performance period for each grantee, based on a risk assessment of need, and covering a broad spectrum of inquiry. The current process is intentionally aligned to the statewide evaluation plan components and additional legal requirements covering nineteen areas, (e.g. evaluation, safety, facilities, programming, staffing, sustainability and budgeting). State follow-up occurs and is documented until all defined areas of concern are addressed. Annual reporting and tracking follows a similar design and framework.

Administrative and statewide activity funds will be allocated and used for the activities above as allowable by statute.

B. Awarding Subgrants *(ESEA section 4203(a)(4)):* Describe the procedures and criteria the SEA will use for reviewing applications and awarding 21st Century Community Learning Centers funds to eligible entities on a competitive basis, which shall include procedures and criteria that take into consideration the likelihood that a proposed community learning center will help participating students meet the challenging State academic standards and any local academic standards.

The 21st Century Community Learning Center program annually or semi-annually releases applications six months prior to the applicant due date. The grant application is produced and reviewed annually including where statewide goals are articulated as well as addressing all of the areas required within the 21st Century Community Learning Center program statute. Awards are awarded for 5 years for no less than $50,000 provided that funds are available and performance objectives met. The applicant 'bidder' meetings and the technical assistance period starts four months before the due date. The consistency with system level expectations noted above is intentionally embedded in the meetings, technical assistance, and resources for both

applicants and panelists. A letter of intent is due three months before the due date. After the applications are received, a team of independent panelists are trained, who then independently review the applications and provide scores and comments, which at the end of the process are shared with all applicants. This panel may consist of individuals with diverse expertise including educational and non-educational organizations, experts in non-profit management, including principals, retired 21st Century directors, site coordinators, private-sector individuals involved in education, and state agency personnel with relevant experience. Conditions for funding and scores are fully documented.

Panelist responsibilities include:

- Participation in a panelist training to understand roles, expectations, and rules
- Reading, scoring, and commenting on individual applications
- Participation in face to face full panel day(s) to make final applicant decisions
- Making decisions on whether to fund, fund with conditions, or do not fund applications
- Setting conditions for funding
- Providing process feedback to the Agency of Education

Eligibility will guide initial priority as articulated in the Title IV Part B legislation in section 4203(a) (3). Competitive priority will include but not be limited to indicators of need including high poverty and will compliment but not duplicate the indicators used to determine comprehensive and targeted schools. Regular and on-going objective assessments of the application process will take place to ascertain if substantial progress towards state goals is being met and if any adaptations need to be made. The application process as a whole is designed to assure that grantees can meet and be held accountable to both local and statewide goals.

H. Title V, Part B, Subpart 2: Rural and Low-Income School Program

a. Outcomes and Objectives *(ESEA section 5223(b)(1))*: Provide information on program objectives and outcomes for activities under Title V, Part B, Subpart 2, including how the SEA will use funds to help all students meet the challenging State academic standards.
Click here to enter text.

Vermont will use the Rural and Low-Income School Program grants to assist rural districts in meeting the goals of increased student academic achievement and to reduce the achievement gap. The eligible districts will be encouraged to braid the RLIS funds with other ESEA funds to address the needs identified through their comprehensive needs assessment. Each application will be granted and monitored based on the range of allowable activities and the extent that the activity is likely to meet the identified needs and meet the stated goals.

b. Technical Assistance *(ESEA section 5223(b)(3))*: Describe how the SEA will provide technical assistance to eligible LEAs to help such agencies implement the activities described in ESEA section 5222.
Click here to enter text.

Once the list of eligible districts is identified, the VT-AOE will provide a training—in person or by webinar—to those districts. This program is new to Vermont in the 2017-18 school year and, as such, the districts will be unfamiliar with the allowable uses, how to effectively braid the funds with other sources, and reporting requirements. The VT-AOE will work with the eligible districts on their application and then provide ongoing technical assistance throughout the year. The Title V Coordinator is part of the Agency's Consolidated Federal Programs team, allowing full access to the expertise of the team regarding use of funds. The coordinator will use that expertise to train the eligible districts.

I. Education for Homeless Children and Youth program, McKinney-Vento Homeless Assistance Act, Title VII, Subtitle B

a. Student Identification *(722(g)(1)(B) of the McKinney-Vento Act)*: Describe the procedures the SEA will use to identify homeless children and youth in the State and to assess their needs.

Click here to enter text.

Title IX outlines the supports Vermont is responsible to meet to support children and youth experiencing homelessness. Consistent with Vermont's overall commitment to equity for all students, Vermont takes meeting this responsibility seriously. Essential to this process is collaboration with other agencies supporting Vermont's homeless population.

McKinney-Vento exists to ensure school entrance and supports for students experiencing homelessness. SU/SD-level liaisons receive training in identification of students potentially experiencing homelessness.

Under the Vermont process, each SU/SD must name a Homeless Liaison in the SU/SD's Consolidated Federal Program application. Once identified, the liaison participates in trainings that are staggered throughout the year (in person and via the National Association for the Education of Homeless Children and Youth's (NCHE) webinars). These trainings are intended to assist Homeless Liaisons in understanding the McKinney-Vento definition of homelessness and how to assess students' needs. There are numerous ways in which children who are experiencing homelessness can be identified in Vermont. The redundancies are intentional to minimize the chances that students would be missed. Identification strategies include:

- Homeless families and unaccompanied youth self-identify as homeless to school staff.
- Schools identify potential homeless families through their registration process and make a referral to the SU/SD's Homeless Liaison.
- Teachers, counselors, after-school providers, school nutrition, and other school staff identify potential homeless families and unaccompanied youth and make a referral to the SU/SD's Homeless Liaison.
- Community partners (housing providers, social service agencies, pediatricians, faith-based organizations, etc.) refer homeless families and unaccompanied youth to the SU/SD's Homeless Liaison.
- Liaisons post informational posters in places where homeless families and unaccompanied youth will likely see them. The posters include the Homeless Liaison's contact information.

Once a student is identified and is enrolled in school, a needs assessment closely follows. Parents/guardians and unaccompanied youth are informed of supports available to them under McKinney-Vento and school staff assess academic and social/emotional needs and arrange additional supports for students when needed. Homeless liaisons identify individual student needs to determine the services the SU/SD will provide to homeless students. Those identified services are then used to create investments in the CFP application.

b. Dispute Resolution *(722(g)(1)(C) of the McKinney-Vento Act)*: Describe procedures for the prompt resolution of disputes regarding the educational placement of homeless

children and youth.
Click here to enter text.

The VT-AOE has established an SU/SD-level dispute resolution process so all SU/SDs are consistent and timely with their response to disputes. The process begins with the State Director informing and training SU/SD Homeless Liaisons of their responsibility to inform homeless families and unaccompanied youth of their right to appeal decisions related to eligibility and school placement.

Students and their families are given information regarding their rights based on their homeless status. The State Director's contact information is given to parents/guardians and unaccompanied youth; they are encouraged to call if they have questions or concerns about the dispute process. If the family or unaccompanied youth is not satisfied with the outcome of the SU/SD-level dispute process, they can make an appeal to the VT-AOE. In the event of an appeal, the VT-AOE employs an established appeal procedure that clearly defines the process and timelines for each step. See Appendix E for a more detailed discussion of the appeals process. The State Director, the Vermont Secretary of Education or designee, and the VT-AOE legal staff work as a team to resolve McKinney-Vento disputes in a timely manner.

Homeless families and unaccompanied youth are enrolled (or stay enrolled) in the school where placement is desired and provided the services they are entitled to under the McKinney-Vento Act until the dispute process on the SU/SD or VT-AOE (if applicable) level is complete.

c. Support for School Personnel *(722(g)(1)(D) of the McKinney-Vento Act)*: Describe programs for school personnel (including the LEA liaisons for homeless children and youth, principals and other school leaders, attendance officers, teachers, enrollment personnel, and specialized instructional support personnel) to heighten the awareness of such school personnel of the specific needs of homeless children and youth, including runaway and homeless children and youth.
Click here to enter text.

In addition to the regular trainings referenced above, there are several additional supports available to SU/SD homeless liaisons. Liaisons have both the responsibility to work with the homeless population in the SU/SD and to work with other educators to create a supportive environment where students experiencing homelessness have access to a high quality education.

- Homeless liaisons regularly receive technical assistance from the State Director of Homeless Education via email and phone.
- Homeless liaisons can access the National Center for Homeless Education (NCHE) helpline if there is an immediate need for technical assistance and the State Director is not available.
- The VT-AOE maintains a listserv for the SU/SD Homeless Liaisons and the State Director sends out reminders and resources on a regular basis.
    - The State Director provides targeted technical assistance during the McKinney-Vento grantee and Consolidated Federal Programs monitoring processes.

- The State Director notifies the SU/SD Homeless Liaisons of the requirement to train school staff, especially registrars, on the McKinney-Vento Act, and ensures SU/SD Homeless Liaisons have the resources they need to do so.
- The VT-AOE offers in-person training to the SU/SD Homeless Liaisons at least once a year (more if time and resources allow). Topics are chosen by the liaisons based on perceived need.
- All SU/SD Homeless Liaisons are trained in the process to direct certify students experiencing homelessness for programs covered under the Child Nutrition Act.
- The State Director and SU/SD Homeless Liaisons participate in the NCHE webinars and other state and local training opportunities focused on supporting homeless children and youth. Liaisons also use these webinars and other NCHE resources when they train school staff.
- The State Director encourages the Homeless Liaisons to attend the NCHE's annual conference and provides technical assistance on the sources of funds that may be used to attend.

In addition to those supports provided to the homeless liaisons, SU/SD Title I coordinators also have access to trainings offered by the State Director on the homeless education set-aside requirement.

It is an absolute requirement in the CFP application to set aside Title I funds for the needs of homeless students. An application will not be approved without at least a minimum set-aside. The CFP application includes a set of McKinney-Vento assurances for SU/SDs and participating schools that they agree to upon submission of the application.

d. Access to Services *(722(g)(1)(F) of the McKinney-Vento Act)*: Describe procedures that ensure that:
    i. Homeless children have access to public preschool programs, administered by the SEA or LEA, as provided to other children in the State;
    ii. Homeless youth and youth separated from public schools are identified and accorded equal access to appropriate secondary education and support services, including by identifying and removing barriers that prevent youth described in this clause from receiving appropriate credit for full or partial coursework satisfactorily completed while attending a prior school, in accordance with State, local, and school policies; and
    iii. Homeless children and youth who meet the relevant eligibility criteria do not face barriers to accessing academic and extracurricular activities, including magnet school, summer school, career and technical education, advanced placement, online learning, and charter school programs, if such programs are available at the State and local levels.

Click here to enter text.

By State law, Vermont's public education system includes universal preschool for all 3 and 4 year olds and 5 year olds not yet enrolled in kindergarten. If a family loses their housing, the homeless liaison follows the same process for preschool students as they would for K-12 students. Preschool students are immediately enrolled in the school determined to be in their

best interest to attend and SU/SD Homeless Liaisons ensure that preschool students have access to the supports they are entitled to under McKinney-Vento. The VT-AOE will provide technical assistance on how best to serve homeless preschoolers.

The SU/SD Homeless Liaison and appropriate school staff have the responsibility to ensure homeless students have equal access to academic programs and extracurricular activities by assessing and then addressing the individual student's needs. They work closely with other federally funded programs like Title I, 21st Century, and locally supported academic and extracurricular program staff to enroll homeless students. If extracurricular activities include fee, uniform, or other requirements, the Homeless Liaison or designated staff person ensures the student has access to financial and other supports needed to meet the enrollment/registration requirements. Often community programs provide students the supports they require for full participation and to remove barriers.

The SU/SD Homeless Liaisons also work closely with the school nutrition staff to ensure that homeless students have access to free meals upon enrollment. Homeless students are automatically eligible (directly certified) for free meals and are not required to complete paperwork or produce income documentation. Some schools are food pantry satellite locations and will ensure homeless students and their families have access to food to take home with them. The State Director works closely with the VT-AOE child nutrition staff to ensure the programs they coordinate are aware of this entitlement.
Secondary youth experiencing homelessness are identified in the same manner as described above; however, for youth separated from the public school system there are additional considerations in the identification process, including:

- The VT-AOE actively partners with statewide community organizations serving youth experiencing or at risk of experiencing homelessness. These include the Runaway and Homeless Youth Act and the U.S. Department of Housing and Urban Development funded programs. Other statewide partners include the Vermont Department of Children and Families, Vermont Coalition to End Homelessness, the Vermont Migrant Education Program, and the Vermont Network against Domestic and Sexual Violence.
- The State Director ensures that SU/SD Homeless Liaisons are familiar with locally affiliated programs.
- The SU/SD Homeless Liaisons partner with the locally affiliated programs mentioned above and other local programs: pediatricians, law enforcement, faith-based organizations and food shelves, and other programs serving children and youth who may be disenfranchised from school. These local social service programs encourage youth to re-enroll in school and the Homeless Liaisons make sure they have the support they need to attend and participate in school.

The SU/SD Homeless Liaison works closely with the appropriate school system staff to make sure secondary students experiencing homelessness have equal access to education and support services. They support each student individually to meet their unique needs and make sure there are no barriers to full participation in school, credit accrual, or graduation. If needed, Title

I set-aside funds are used to remove barriers. For homeless students who have been enrolled in multiple high schools, tracking credit accumulation can be a major impediment to graduation. As outlined in Vermont's Education Quality Standards and supported by Act 77, Vermont high schools have moved toward a proficiency model for high school graduation. Students in schools need to demonstrate proficiency in order to complete individual classes and, ultimately, earn a diploma. As such, schools do not issue Carnegie credits and the accumulation of such credits do not lead to graduation; instead, schools acknowledge the proficiencies a student has demonstrated at previous schools in the accumulation of proficiencies leading to graduation. Ultimately, the school granting the diploma determines that a student has met sufficient proficiencies for graduation.

e. Strategies to Address Other Problems *(722(g)(1)(H) of the McKinney-Vento Act)*: Provide strategies to address other problems with respect to the education of homeless children and youth, including problems resulting from enrollment delays that are caused by—
   i. requirements of immunization and other required health records;
   ii. residency requirements;
   iii. lack of birth certificates, school records, or other documentation;
   iv. guardianship issues; or
   v. uniform or dress code requirements.

   Click here to enter text.

The policy in Vermont is that students will be enrolled immediately. After enrollment, the LEA Homeless Liaison and/or the school social worker or registrar will work with the family on obtaining enrollment requirements/documents. They are empowered to take the steps necessary to ensure a student experiencing homelessness receives the support necessary to fully participate in school. When needed, technical assistance is available from the VT-AOE.

f. Policies to Remove Barriers (*722(g)(1)(I) of the McKinney-Vento Act)*: Demonstrate that the SEA and LEAs in the State have developed, and shall review and revise, policies to remove barriers to the identification of homeless children and youth, and the enrollment and retention of homeless children and youth in schools in the State, including barriers to enrollment and retention due to outstanding fees or fines, or absences.

   Click here to enter text.

It is the State's priority to ensure that homeless children and youth are enrolled in school immediately and that enrollment delays are minimized. To achieve this goal, the VT-AOE assists SU/SD Homeless Liaisons. Homeless Liaisons are proactive and try to reduce the number of problems by ensuring staff are regularly trained on McKinney-Vento requirements. Most schools provide registration materials that include housing questions that cue the registrars and school secretaries that the family or unaccompanied youth is experiencing homelessness. If the family or unaccompanied youth indicates on the paperwork or verbally that they may be homeless, the registrar immediately enrolls the family and makes a referral to the Homeless Liaison. The VT-AOE works closely with the State Department for Children and Families (DCF). If DCF suspects that a family is homeless and not attending school, they will notify the SU/SD Homeless Liaison or the State Director and the family will be contacted.

When problems arise, the Homeless Liaison works quickly to resolve them. If there is an issue of enrollment, the liaison works with the school administrator and registrar to enroll the student as quickly as possible. If transportation is an issue, the Homeless Liaison works with the previous SU/SD attended to ensure that transportation or the cost of transportation is not as barrier to school attendance. If homeless families or unaccompanied youth lack typical enrollment documentation requirements such as health records, guardianship paperwork, birth certificates, and other required documents, the Homeless Liaison or other designated staff determine what is absolutely necessary and works with the family or unaccompanied youth to help obtain them. These activities occur after the student is enrolled and attending school. If the family or unaccompanied youth need financial support to obtain the required documents, school staff work with the Title I Coordinator or use other funding to help pay those fees.

If a homeless child or youth needs academic support, they are enrolled in Title I or other academic supports including afterschool and summer programming. If social-emotional support is needed, the school counselor and/or nurse is connected to work with the student. Homeless Liaisons and other key staff check in regularly on homeless students and touch base with teachers and families about supports needed to attend and participate in school. Supports may include transportation, school supplies, tutoring, afterschool programming, credit accrual support, and social services referrals. If a student disengages with the school, the Homeless Liaison and school staff contact the family or unaccompanied youth to offer supports to get the student back in school. School staff also partner with community organizations who provide the supports the family or unaccompanied youth might need reengage in school.

g. Assistance from Counselors *(722(g)(1)(K))*: A description of how youths described in section 725(2) will receive assistance from counselors to advise such youths, and prepare and improve the readiness of such youths for college.
Click here to enter text.

Secondary youth that are McKinney-Vento eligible work with school guidance counselors on post-secondary options – including college. Whenever possible, students will be enrolled in college readiness programs like Gear-Up and Talent Search.

Appendix A: Measurements of interim progress

Instructions: Each SEA must include the measurements of interim progress toward meeting the long-term goals for academic achievement, graduation rates, and English language proficiency, set forth in the State's response to Title I, Part A question 4.iii, for all students and separately for each subgroup of students, including those listed in response to question 4.i.a. of this document. For academic achievement and graduation rates, the State's measurements of interim progress must take into account the improvement necessary on such measures to make significant progress in closing statewide proficiency and graduation rate gaps.

Interim Targets Overview

ESSA requires that states establish interim targets for each measure. Interim targets are set locally and at the state level in a staged approach. First, the state establishes a statewide interim target in relation to the accountability cycles we have established for the Comprehensive Support cycles. This state-wide target is designed to track our performance towards the long-term goal and to hold ourselves responsible for making strategic efforts today. The process for setting the interim target for each measure and student group is the same:

1. Calculate the difference between current school performance and the long-term target
2. Divide the difference by the number of accountability cycles remaining until the goal needs to be met.
3. Establish the school's next interim target by adding the value of #2 to the value of the school's current performance.

A. Academic Achievement

Table 38: ELA Performance Charts for Student Groups

*Please note that all numbers with an asterisk are approximations only. For a full explanation of how they were derived, please see section A.4.iii.a.1 above.

Accountability Question	Grade	Current Performance (2016)	Long term Goal *Mid Point of Proficient Scale*	Interim Targets		
				2019 1	2022 2	2025 3
How well are students performing in ELA/ reading in 3rd-9th grade? SCALE	All Students					
	3rd	2438	2460	2445	2453	2460
	4th	2477	2502	2485	2494	2502
	5th	2515	2541	2524	2532	2541
	6th	2539	2574	2551	2562	2574
	7th	2562	2600	2575	2587	2600
	8th	2580	2617	2592	2605	2617
	9th	*2608*	*2648*	*2621*	*2634*	*2648*
	American Indian or Alaskan Native					
	3rd	2415	2460	2430	2445	2460
	4th	2432	2502	2455	2479	2502
	5th	2496	2541	2511	2526	2541
	6th	2526	2574	2542	2558	2574
	7th	2530	2600	2553	2577	2600
	8th	2535	2617	2562	2590	2617
	9th	*2559*	*2648*	*2588*	*2618*	*2648*
	Asian					
	3rd	2453	2460	2455	2458	2460
	4th	2496	2502	2498	2500	2502
	5th	2528	2541	2532	2537	2541
	6th	2553	2574	2560	2567	2574
	7th	2577	2600	2585	2592	2600
	8th	2597	2617	2604	2610	2617
	9th	*2626*	*2648*	*2633*	*2640*	*2648*
	African-American					
	3rd	2407	2460	2425	2442	2460
	4th	2445	2502	2464	2483	2502
	5th	2475	2541	2497	2519	2541
	6th	2495	2574	2521	2548	2574
	7th	2512	2600	2541	2571	2600
	8th	2545	2617	2569	2593	2617
	9th	*2573*	*2648*	*2598*	*2623*	*2648*
	Hispanic					
	3rd	2425	2460	2437	2448	2460
	4th	2456	2502	2471	2487	2502
	5th	2510	2541	2520	2531	2541
	6th	2548	2574	2557	2565	2574
	7th	2548	2600	2565	2583	2600
	8th	2596	2617	2603	2610	2617

Accountability Question	Grade	Current Performance (2016)	Long term Goal *Mid Point of Proficient Scale*	Interim Targets		
				2019 1	2022 2	2025 3
	9th	*2630*	*2648*	*2636*	*2642*	*2648*
	Native Hawaiian or Pacific Islander					
	3rd	2453	2460	2455	2458	2460
	4th	2504	2502	2503	2503	2502
	5th	2528	2541	2532	2537	2541
	6th	2571	2574	2572	2573	2574
	7th	2561	2600	2574	2587	2600
	8th	2549	2617	2572	2594	2617
	9th	*2568*	*2648*	*2595*	*2622*	*2648*
	White					
	3rd	2438	2460	2445	2453	2460
	4th	2478	2502	2486	2494	2502
	5th	2517	2541	2525	2533	2541
	6th	2540	2574	2551	2563	2574
	7th	2563	2600	2575	2588	2600
	8th	2581	2617	2593	2605	2617
	9th	*2610*	*2648*	*2622*	*2635*	*2648*
	English Learner					
	3rd	2410	2460	2427	2443	2460
	4th	2383	2502	2423	2462	2502
	5th	2406	2541	2451	2496	2541
	6th	2408	2574	2463	2519	2574
	7th	2437	2600	2491	2546	2600
	8th	2464	2617	2515	2566	2617
	9th	*2475*	*2648*	*2532*	*2590*	*2648*
	Students with Free and Reduced Lunch					
	3rd	2406	2460	2424	2442	2460
	4th	2441	2502	2461	2482	2502
	5th	2480	2541	2500	2521	2541
	6th	2502	2574	2526	2550	2574
	7th	2520	2600	2547	2573	2600
	8th	2541	2617	2566	2592	2617
	9th	*2568*	*2648*	*2595*	*2622*	*2648*
	Students With Disabilities					
	3rd	2353	2460	2389	2424	2460
	4th	2385	2502	2424	2463	2502
	5th	2416	2541	2458	2499	2541
	6th	2431	2574	2479	2526	2574
	7th	2448	2600	2499	2549	2600
	8th	2465	2617	2516	2566	2617
	9th	*2485*	*2648*	*2539*	*2593*	*2648*
	Male					

Accountability Question	Grade	Current Performance (2016)	Long term Goal *Mid Point of Proficient Scale*	Interim Targets		
				2019 1	2022 2	2025 3
	3rd	2427	2460	2438	2449	2460
	4th	2465	2502	2477	2490	2502
	5th	2499	2541	2513	2527	2541
	6th	2523	2574	2540	2557	2574
	7th	2543	2600	2562	2581	2600
	8th	2561	2617	2580	2598	2617
	9th	*2588*	*2648*	*2608*	*2628*	*2648*
	Female					
	3rd	2449	2460	2453	2456	2460
	4th	2490	2502	2494	2498	2502
	5th	2533	2541	2536	2538	2541
	6th	2556	2574	2562	2568	2574
	7th	2582	2600	2588	2594	2600
	8th	2600	2617	2606	2611	2617
	9th	*2630*	*2648*	*2636*	*2642*	*2648*
	Migrant					
	3rd	2363	2460	2395	2428	2460
	4th	N<11	2502			2502
	5th	N<11	2541			2541
	6th	N<11	2574			2574
	7th	N<11	2600			2600
	8th	N<11	2617			2617
	9th	N<11	*2648*			
	Historically Marginalized Students					
	3rd	*2415*	2460	*2430*	*2445*	2460
	4th	*2443*	2502	*2462*	*2482*	2502
	5th	*2480*	2541	*2500*	*2520*	2541
	6th	*2504*	2574	*2527*	*2550*	2574
	7th	*2516*	2600	*2544*	*2572*	2600
	8th	*2537	2617	*2563*	*2590*	2617
	9th	*2561*	*2648*	*2590*	*2619*	*2648*

Table 39: Math Performance Charts for Student Groups

*Please note that all numbers with an asterisk are approximations only. For a full explanation of how they were derived, please see section A.4.iii.a.1 above.

Accountability Question	Grade	Current Performance (2016)	Long term Goal *Mid Point of Proficient Scale*	Interim Targets		
				2019 1	2022 2	2025 3
How well are students performing in mathematics in 3rd-9th grade? SCALE	All Students					
	3rd	2443	2468	2468	2493	2468
	4th	2482	2516	2493	2504	2516
	5th	2509	2553	2523	2538	2553
	6th	2522	2580	2541	2560	2580
	7th	2548	2600	2565	2582	2600
	8th	2564	2619	2582	2600	2619
	9th	*2589*	*2649*	*2609*	*2629*	*2649*
	American Indian or Alaskan Native					
	3rd	2428	2468	2441	2454	2468
	4th	2440	2516	2465	2490	2516
	5th	2487	2553	2509	2541	2553
	6th	2498	2580	2525	2552	2580
	7th	2512	2600	2541	2570	2600
	8th	2511	2619	2547	2583	2619
	9th	*2527*	*2649*	*2567*	*2607*	*2649*
	Asian					
	3rd	2459	2468	2462	2465	2468
	4th	2498	2516	2504	2510	2516
	5th	2523	2553	2533	2543	2553
	6th	2545	2580	2556	2568	2580
	7th	2569	2600	2579	2589	2600
	8th	2598	2619	2605	2612	2619
	9th	*2626*	*2649*	*2633*	*2641*	*2649*
	African-American					
	3rd	2402	2468	2424	2444	2468
	4th	2446	2516	2469	2492	2516
	5th	2465	2553	2494	2513	2553
	6th	2466	2580	2504	2542	2580
	7th	2487	2600	2524	2562	2600
	8th	2506	2619	2543	2581	2619
	9th	*2523*	*2649*	*2565*	*2607*	*2649*
	Hispanic					
	3rd	2427	2468	2440	2454	2468
	4th	2464	2516	2481	2498	2516
	5th	2496	2553	2515	2534	2553
	6th	2520	2580	2540	2560	2580
	7th	2537	2600	2558	2579	2600
	8th	2569	2619	2585	2602	2619

Accountability Question	Grade	Current Performance (2016)	Long term Goal *Mid Point of Proficient Scale*	Interim Targets		
				2019 1	2022 2	2025 3
	9th	*2616*	*2649*	*2627*	*2638*	*2649*
	Native Hawaiian or Pacific Islander					
	3rd	2450	2468	2456	2462	2468
	4th	2513	2516	2514	2515	2516
	5th	2500	2553	2517	2535	2553
	6th	2558	2580	2565	2572	2580
	7th	2551	2600	2567	2583	2600
	8th	2513	2619	2548	2583	2619
	9th	*2524*	*2649*	*2565*	*2607*	*2649*
	White					
	3rd	2442	2468	2450	2459	2468
	4th	2483	2516	2494	2505	2516
	5th	2510	2553	2524	2538	2553
	6th	2523	2580	2542	2561	2580
	7th	2549	2600	2566	2583	2600
	8th	2565	2619	2583	2601	2619
	9th	*2590*	*2649*	*2609*	*2629*	*2649*
	English Learner					
	3rd	2426	2468	2440	2454	2468
	4th	2411	2516	2446	2471	2516
	5th	2423	2553	2466	2509	2553
	6th	2382	2580	2448	2514	2580
	7th	2431	2600	2487	2543	2600
	8th	2421	2619	2487	2553	2619
	9th	*2420*	*2649*	*2496*	*2572*	*2649*
	Students with Free and Reduced Lunch					
	3rd	2414	2468	2432	2440	2468
	4th	2452	2516	2473	2494	2516
	5th	2477	2553	2402	2527	2553
	6th	2485	2580	2516	2548	2580
	7th	2506	2600	2537	2568	2600
	8th	2518	2619	2551	2585	2619
	9th	*2539*	*2649*	*2575*	*2612*	*2649*
	Students With Disabilities					
	3rd	2354	2468	2392	2430	2468
	4th	2406	2516	2442	2479	2516
	5th	2421	2553	2465	2509	2553
	6th	2408	2580	2465	2522	2580
	7th	2424	2600	2482	2541	2600
	8th	2435	2619	2496	2557	2619
	9th	*2451*	*2649*	*2517*	*2583*	*2649*
	Male					

Accountability Question	Grade	Current Performance (2016)	Long term Goal *Mid Point of Proficient Scale*	Interim Targets		
				2019 1	2022 2	2025 3
	3rd	2442	2468	2450	2459	2468
	4th	2485	2516	2495	2505	2516
	5th	2507	2553	2522	2537	2553
	6th	2519	2580	2539	2559	2580
	7th	2541	2600	2560	2580	2600
	8th	2557	2619	2577	2598	2619
	9th	*2579*	*2649*	*2602*	*2625*	*2649*
	Female					
	3rd	2442	2468	2450	2459	2468
	4th	2480	2516	2492	2504	2516
	5th	2510	2553	2524	2538	2553
	6th	2525	2580	2543	2561	2580
	7th	2555	2600	2570	2585	2600
	8th	2570	2619	2586	2602	2619
	9th	*2596*	*2649*	*2613*	*2631*	*2649*
	Migrant					
	3rd	2377	2468	2407	2437	2468
	4th	N<11	2516			2516
	5th	N<11	2553			2553
	6th	N<11	2580			2580
	7th	N<11	2600			2600
	8th	N<11	2619			2619
	9th	N<11	*2649*			*2649*
	Historically Marginalized Students					
	3rd	*2420*	2468	*2436*	*2452*	2468
	4th	*2454*	2516	*2474*	*2495*	2516
	5th	*2474*	2553	*2500*	*2526*	2553
	6th	*2483*	2580	*2514*	*2546*	2580
	7th	*2502*	2600	*2534*	*2567*	2600
	8th	*2508*	2619	*2545*	*2582*	2619
	9th	*2528*	*2649*	*2568*	*2608*	*2649*

Table 40: Proposed Graduation Rate Long-term Goals and Interim Targets

Graduation Rate (4 year)	Number of Students in Cohort	Current Performance	Long Term Goal	Interim Goals		
				2019 1	2022 2	2025 3
All Students	6,172	87.6%	90%	88.4%	89.2%	90%
Accountability Categories						
Ethnic and Racial Categories:						
American Indian or Alaskan Native	97	80.4%	90%	83.6%	86.8%	90%
Asian	168	80.0%	90%	83.3%	86.7%	90%
Black	193	79.8%	90%	83.2%	86.6%	90%
Hispanic	115	80.9%	90%	83.9%	87.0%	90%
Native Hawaiian or other Pacific Islander	20	100.0%	90%	90.0%	90.0%	90%
White	5,892	88.8%	90%	89.2%	89.6%	90%
English Learners	141	68.1%	90%	75.4%	82.7%	90%
Students with Free and Reduced Lunch	2,733	78.0%	90%	82.0%	86.0%	90%
Students with Disabilities	1,009	71.9%	90%	77.9%	84.0%	90%
Historically Marginalized Students						90%
Historically Privileged Students						
Additional Reporting Categories						
Female	3,021	89.6%	90%	89.7%	89.9%	90%
Male	3,151	85.8%	90%	87.2%	88.6%	90%
Migrant Students	6	16.7%	90%	41.1%	65.6%	90%
Military-Affiliated Students	*	*				90%
Homeless Students	*	*				90%
Students in Foster Care	*	*				90%

* Data is not currently available.

Table 41: Current 6-year Graduation Rate Levels of Performance

Graduation Rate (6 year)	Number of Students in Cohort	State Average Grad Rate	Long Term Goals	Interim Goals		
				2019 1	2019 2	2019 3
All Students	6,538	90.7%	100%	93.8%	96.9%	100%
Accountability Categories						
Ethnic and Racial Categories:						
American Indian or Alaskan Native	99	80.8%	100%	87.2%	93.6%	100%
Asian	161	93.2%	100%	95.5%	97.7%	100%
Black	194	84.0%	100%	89.3%	94.7%	100%
Hispanic	101	86.1%	100%	90.7%	95.4%	100%
Native Hawaiian or other Pacific Islander	19	100.0%	100%	100.0%	100.0%	100%
White	6,307	90.7%	100%	93.8%	96.9%	100%
English Learners	130	82.3%	100%	88.2%	94.1%	100%
Students with Free and Reduced Lunch	2,685	82.3%	100%	88.2%	94.1%	100%
Students with Disabilities	1,063	79.3%	100%	86.2%	93.1%	100%
Historically Marginalized Students						100%
Historically Privileged Students						100%
Additional Reporting Categories						
Female	3,219	91.1%	100%	94.1%	97.0%	100%
Male	3,319	90.2%	100%	93.5%	96.7%	100%
Migrant Students	*	*				100%
Military-Affiliated Students	*	*				100%
Homeless Students	*	*				100%
Students in Foster Care	*	*				100%

* Data is not currently available.

Table 42: Proposed English Language Proficiency Baseline Data and Interim Targets

Accountability Question	Grade	Baseline Data (2016)	Long term Goal	Interim Targets		
				2019	2022	2025
How well are students gaining English Proficiency? Percent Proficient in "time"	All	55%	100%	70%	85%	100%

Appendix B

A school and/or SU/SD summary composite score for each Criteria is calculated by first converting the actual school-level performance (F) into the 4-Level Performance score. These Indicator 4-Level Performance Scores are then averaged to create an Indicator Summary (H). Indicator Summary Scores are then averaged again to create an Accountability Question Summary Score (I). The Accountability Question Summary Scores are then combined with a weighted average to produce the Criteria Current Score (K). Finally, the prior year's Current Score is subtracted from the current year current score to calculate the change from year-to-year.

Table 43: Worked Example of Calculating Score

Criteria	Category	Accountability Question	Indicators					Accountability		Criteria	
			Indicators	Grades	(F) Actual Score	(G) 4-Level Performance	(H) Indicator Summary	(I) Summary	(J) Weight	(K) Current Score	(L) Change Y-Y
Academic Proficiency	Content Standards	How well are students performing in ELA/reading? (3-9)	*Scale*	**6 7 8**	**2557 2548 2610**	***3.6 2.8 3.8***	***3.40***	***3.10***	***35%***	***2.9875***	***N/A until 2018, for illustrative purposes, assume last year was 2.850 +.1375***
			Growth	**All**	**45.2 %**	***2.8***	***2.80***				
		How well are students performing in mathematics? (3-9)	*Scale*	**6 7 8**	**2533 2532 2569**	***2.5 2.1 2.6***	***2.40***	***2.85***	***35%***		
			Growth	**All**	**57.8 %**	***3.3***	***3.30***				
		How well are students performing in science? (5,8,11)	*Scale*	**8**	**833**	***2.9***	***2.90***	***2.90***	***10%***		
		How well are students performing in PE	*Scale*	**6-8**	**TBD**	***3.1***	***3.10***	***3.10***	***10%***		
	English Language Proficiency	How well are English Learners gaining English proficiency?	*% Progress*	**6-8**	***64%***	***3.3***	***3.05***	***3.05***	***10%***		
			% Proficient	**6-8**	***58%***	***2.8***					
	Graduation Rate	Are students staying in school until they *graduate*?	*4-year Grad. Rate 6-year Grad. Rate*	**N/A N/A**	***N/A***	***N/A***	***N/A***	***N/A***	***0%***		
	College and Career Readiness	How well did seniors perform on career and college ready assessments?	*% CCR on tests*	**N/A**	***N/A***	***N/A***	***N/A***	***N/A***	***0%***		
		Are alumni pursuing a career and college ready outcome within 16 months of graduation?	% CCR as Alums	N/A	***N/A***	***N/A***	***N/A***	***N/A***	***0%***		

Appendix C

After the Current (K) and Change in Year-to-Year performance scores are calculated the gaps are calculated. To determine the Equity Index Gap (M) the performance of the historically marginalized group is subtracted from the historically advantaged group. The higher the number the more problematic as the gap between student groups is large. These Gaps are then averaged to calculate the overall Equity Index (N).

To determine the Equity Gap Reduction, the difference in current performance this year from the performance last year. The change for each student group is compared and the historically marginalized group is subtracted from the historically advantaged group. In this case, a large positive number means that the historically marginalized group is improving at a rate that is faster than that of the historically advantaged group.

Table 44: Worked Example of "Equity Index"

Criteria	Student Group	(K) Current	(M) Gap (HM-HA Perform Gap)	(N) Equity Index	(L) Change Year-to- Year	(()) Gap Reduction (HA-HM Perform Group)	(P) Equity Gap Reduction Year-to-Year
Academic Proficiency	**All Students**	2.988			+0.225		
	*FRL**	2.513	0.987	1.114	+0.325	+.175	+0.155
	Non-FRL	3.500			+0.150		
	*SPED**	***	***		***	***	
	Non-SPED	***			***		
	*EL**	2.343	1.368		+0.295	+.160	
	Non-EL	3.711			+0.135		
	White	3.108	N/A		+0.195	N/A	
	Asian	***	***		***	***	
	*Black**	***	***		***	***	
	*Hispanic**	***	***		***	***	
	*Native American**	***	***		***	***	
	*Pacific Islander**	***	***		***	***	
	Historically Marginalized (HM) Students*	2.513	0.987		+0.320	+.130	
	Historically Advantaged (HA) Students	3.500			+0.190		

Appendix D: MPO Planning Chart

MPO Planning Chart

GOAL AREA 1: English Language Arts/Literacy Achievement

CONCERNS: **1.1)** We are concerned that less than 30% of migrant students in school are proficient in ELA and we have no comparable measurable data on OSY.

1.2) We are concerned that MEP staff do not have access to ELA/Literacy data in a timely way to identify needs and deliver appropriate ELA/literacy instruction to students who are migrant. **1.3)** We are concerned that parents who are migrant do not have sufficient strategies to support their children with ELA/literacy homework.

Solution strategy identified in the CNA	**Performance Target/AMO**	**Strategy**	**MEP Measurable Program Outcome (Objective)**	**Evaluation Tools**
1.1a) Provide full access to the variety of high quality intervention programs in schools 1.1b) Work with schools to share data on students' ELA progress quarterly and problem solve around student needs (sharing results, info, etc.) 1.1c) Identify appropriate ways to assess the literacy level of OSY in English and/or home language 1.2a) Collaborate with the Vermont Principal's Association to emphasize the importance of data and obtain their assistance with	**100% proficient on the state assessment in English Language Arts**	1.1 Provide individualized year-round coordination and mentoring services for students in grades K-12 in collaboration with schools to increase grade-appropriate ELA skills.	1a) Each year, 80% of children enrolled in grades K-12 and participating in MEP services will be promoted to the next grade or graduate as reported by the children' school.	· In-school Coordinator Report (new)
			1b) Each year, MEP students receiving services for at least five months will increase ELA skills as reported on the	· Classroom Teacher Rubric (new)

Solution strategy identified in the CNA	**Performance Target/AMO**	**Strategy**	**MEP Measurable Program Outcome (Objective)**	**Evaluation** **Tools**
the timely sharing of progress reports 1.2b) Establish communication structures and identify individuals responsible for specific actions to address barriers identified 1.2c) Conduct independent math assessments and/or internal ELA/literacy assessments to establish baseline with post assessment after migrant students receive services 1.2d) Provide training for schools on sensitivity to migrancy and mobility, the importance of making communications accessible, and resources for migrant families to assist with interpretation and translation 1.2e) Inform schools of their legal responsibilities to provide appropriate language services and share lists of translators/interpreters 1.3a) Continue family field days to increase family learning/development of ELA/literacy skills			Classroom Teacher Rubric.	

Solution strategy identified in the CNA	**Performance Target/AMO**	**Strategy**	**MEP Measurable Program Outcome (Objective)**	**Evaluation** **Tools**
1.3b) Provide two or more age/grade appropriate ELA/literacy resources, games, activities, and other ELA/literacy materials to parents 1.3c) Offer parent workshops covering strategies for helping with ELA/literacy homework, school-readiness pre-literacy, and how to set up homework space in the home				

GOAL AREA 2: Mathematics Achievement

NEED/CONCERN: **2.1)** We are concerned that MEP staff do not have access to data in a timely way to identify needs and deliver appropriate math instruction to students who are migrant. **2.2)** We are concerned that students who are migrant do not have the fundamental math skills to be successful in later grades and their adult lives.

2.3) We are concerned that parents who are migrant do not have sufficient strategies to support their children with math homework.

Solution identified in the CNA	**Performance Target (Goal)**	**Strategy**	**MEP Measurable Program Outcome (Objective)**	**Evaluation Tools**
2.1a) Collaborate with the VT Principal's Association to emphasize the importance of data and obtain their assistance with the timely sharing of progress reports 2.1b) Establish communication structures and identify individuals responsible for specific actions to address barriers identified 2.1c) Conduct independent math assessments and/or internal math assessments to establish baseline with post assessment after migrant students receive services 2.2a) Contract tutors for migrant students who are behind their non-migrant peers in math 2.2b) Enroll migrant students with needs in math in existing after-school academic/homework support programs 2.2c) Provide activities/technology applications/resources in the home to increase evidence-based math skills through apps, games, etc.	**100% proficient on the state assessment in mathematics**	2.1 Provide individualized year-round coordination and mentoring services for students in grades K-12 in collaboration with schools to increase grade-appropriate math skills.	2a) Each year, MEP students receiving services for at least five months will increase math skills as reported on the Classroom Teacher Rubric.	· Classroom Teacher Rubric (new)

Solution identified in the CNA	**Performance Target (Goal)**	**Strategy**	**MEP Measurable Program Outcome (Objective)**	**Evaluation Tools**
2.3a) Provide two or more age/grade appropriate math resources to parents to support their child's math achievement 2.3b) Offer parent workshops covering strategies for helping with math homework, school-readiness pre-math, homework space, doing routine math games 2.3c) Provide math activities, games, manipulatives, and resources to help parents assist their children in the home with math homework and studies				

GOAL AREA 3: School Readiness

NEED/CONCERN: **3.1)** We are concerned that children who are ages 0-5 and migrant do not have consistent and sufficient early education due to lack of transportation, parents' work schedules, lack of English proficiency, and lack of available and appropriate PK programs. **3.2)** We are concerned that parents of children who are ages 0-5 do not know how or do not have enough resources/time to support their children's social, emotional, and academic development to prepare them for kindergarten.

3.3) We are concerned that preschool students who are migrant do not have access to high quality preschool (minimum of 10 hours/ week).

3.4) We are concerned that preschool students who are migrant do not have a home supported literacy-rich environment.

Solution identified in the CNA	**Performance Target (Goal)**	**Strategy**	**MEP Measurable Program Outcome (Objective)**	**Evaluation Tools**
3.1a) Support parents/schools in identifying local transportation options when needed. 3.1b) Promote networking to help provide transportation to early education and preschool programs for children ages 0-5. 3.1c) Provide professional development for staff and providers on how to overcome barriers that impede full participation in early education by children ages 0-5 who are migrant. 3.2a) Provide instructional home visits to model school readiness strategies 3.2b) Establish networks within the school and community to which parents can be referred to meet medical, dental, social services, ELL, and other needs.	N/A	3.1 Provide year-round coordination and mentoring for preschool students and their families to increase school readiness and enrollment in high quality preschool programs.	3a) Each year, 80% of 3-5 year old children enrolled in a high quality preschool for at least 10 hours/week or receiving at least six in-home early literacy interventions per trimester, will receive an age-appropriate score on the Vermont Ready for Kindergarten! Survey.	In-school Coordinator Report (new)
		3.2 Develop and support family literacy through early literacy intervention services and increase parents' ability to support their children's education.	3b) Each year after participating in family literacy services, 80% of participating parents will report an increased ability to support their children's education through a rating of four or five on a five-point scale.	· Parent Survey

Solution identified in the CNA	**Performance Target (Goal)**	**Strategy**	**MEP Measurable Program Outcome (Objective)**	**Evaluation** **Tools**
3.2c) Provide parent leadership activities. 3.2d) Provide training for parents and prepare materials for parent use in the home to assist with preparing their children to be ready for school. 3.2e) Provide literacy resource materials for parents to use with their children in the home. 3.3a) Work with state ECE leadership to coordinate assessments and facilitate communication about pre-K services. 3.3b) Work with parents to identify and access high quality preschool, and help problem-solve barriers to attendance. 3.3c) Coordinate with community resources providers to remove barriers to migrant children's attendance in pre-K programs. 3.4a) Support parents with literacy materials				

Solution identified in the CNA	**Performance Target (Goal)**	**Strategy**	**MEP Measurable Program Outcome (Objective)**	**Evaluation Tools**
including books to read to their children 3.4b) Provide family literacy home visits to model activities that parents can do with their children 3.4c) Sponsor parent events that promote pre-literacy strategies and activities to do in the home.				

GOAL AREA 4: High School Graduation and Out-of-School Youth

NEED/CONCERN: **4.1)** We are concerned that over 50% of OSY have not attended school beyond 8th grade and have limited literacy. **4.2)** We are concerned that H.S. students who are migrant and OSY are not able to attain their educational goals. **4.3)** We are concerned that secondary-aged students exhibit many characteristics associated with at-risk for H.S. dropout. **4.4)** We are concerned that OSY are limited in English proficiency which may limit their access to education and other services, resources, and opportunities. **4.5)** We are concerned that schools are not assessing OSY readiness for a high school programs. **4.6)** We are concerned that OSY do not have access to, or skills to use, computers and the Internet.

Solution identified in the CNA	**Performance Target (Goal)**	**Strategy**	**MEP Measurable Program Outcome (Objective)**	**Evaluation Tools**
4.1a) Develop research/evidence-based literacy instruction for OSY	**Number of 12th grade migrant students is less than 30. Number of**	4.1 Provide secondary-aged migrant students with individualized year-round guidance,	4a) Each year, 80% of MEP students in grades 9-12 will be on track toward graduation as measured by a PLP	· Coordinator report (new)

Solution identified in the CNA	**Performance Target (Goal)**	**Strategy**	**MEP Measurable Program Outcome (Objective)**	**Evaluation Tools**
4.1b) Provide targeted instruction based on assessment data on OSY 4.2a) Promote the economic benefits of education to students who have not attained their established educational goals 4.2b) Work with schools on flexible graduation plans using a template (i.e., HSCP) 4.2c) Establish goal setting incorporating student work and economic goals 4.3a) Provide guidance, mentoring, and counseling assistance to migrant families on the benefits of staying in school & post-secondary options 4.3b) Offer professional development for staff on migrancy/mobility and H.S. completion strategies	**graduate is reported**	mentoring, and counseling that leads to high school graduation and informed by their Personalized Learning Plan (PLP).	that meets Vermont's Education Quality Standards' requirements.	
		4.2 Provide year-round coordination and mentoring for OSY to increase academic skills to include English language lessons, life skills, and technology skills.	4b) Each year, 75% of OSY receiving direct instruction for at least 10 hours will score proficient on at least one appropriate OSY lesson.	· Modified Student Assessment Score Sheet
		4.3 Assist OSY to articulate goals and create a personalized learning plan in coordination with the OSY consortium materials.	4c) Each year, all OSY who enter Tier 2 services will have a personalized learning plan that meets VT MEP standards.	· Coordinator report (new)
		4.4 Provide year-round coordination and mentoring for OSY to make progress on their personalized learning plan toward career and/or high school graduation.	4d) Each year, OSY participating in Tier 2 services for at least 30 hours will complete at least 50% of their personalized learning plan objectives.	· Coordinator report (new)
		4.5 Provide professional	4e) Each year, 75% of .75 to full-time	· Staff survey

Solution identified in the CNA	**Performance Target (Goal)**	**Strategy**	**MEP Measurable Program Outcome (Objective)**	**Evaluation Tools**
4.4a) Partner with ABE providers for local ELL classes 4.4b) Bring formal, practical English classes onsite with employer buy-in 4.4c) Continue to promote distance learning and "bite-sized" app-based practice 4.5a) Identify instruments to assess OSY readiness for high school programs (e.g., TABE-M) 4.5b) Help students and staff request transcripts 4.5c) Utilize the OSY Consortium to identify promising practices in assessment in other states 4.6a) Provide technology mentors 4.6b) Increase access to basic computer classes through local ABE providers 4.6c) Establish a system for a device		development on identification, recruitment, and instructional services for MEP-funded administrative and instructional staff to include an average of 4 hours per month for .75 to full-time staff and an average of 2 hours per month for staff funded at least half-time.	staff participating in a monthly average of four hours of professional development will report an increased capacity for delivering instruction or providing services by 20% as measured by the staff survey.	
		4.6 Ensure that all .75 and full time staff have a professional development plan in place that responds to their annual performance appraisal for continuous program improvement.	4f) Each year, all .75 to full-time staff will have a professional development plan that supports their needs and goals as outlined in their annual performance appraisal.	· Coordinator report (new)

Solution identified in the CNA	**Performance Target (Goal)**	**Strategy**	**MEP Measurable Program Outcome (Objective)**	**Evaluation Tools**
setup and distribution program 4.6d) Use the OSY Profile and Farm Sheet to monitor OSY with Internet and cell service				

Appendix E: Homeless Appeal Procedure

McKinney-Vento Homeless Assistance Act Appeal Processing Procedure

Purpose

This procedure sets forth the steps for processing a written appeal submitted by a parent/ guardian or unaccompanied youth (referred to as appellant) regarding a decision made by a Local Education Agency (LEA) related to the McKinney-Vento Homeless Assistance Act (http://www2.ed.gov/policy/elsec/leg/esea02/pg116.html). *Please note that an appeal submitted via email is acceptable.*

Investigation and Resolution of an Appeal

1. *Written Receipt.* When a written appeal is received, the State Education Agency (SEA) will provide a written receipt to the appellant via email and return receipt mail within 10 business days, which will include the following information:
    a. The date that the appeal was received;
    b. A tentative resolution date;
    c. The name and phone number of a contact person for status updates;
    d. A copy of the SEA's appeal procedure.
2. *Investigation and Resolution*. On behalf of the Vermont Secretary of Education, the SEA Homeless Coordinator will:
    a. Notify the superintendent of the LEA involved within 10 business days of receipt of the appeal via email and return receipt mail. The notification will include instructions for requesting a copy of the appeal.
    b. Request documentation needed from the appellant and the LEA to clarify the facts.
    c. Review documentation and, if needed, request additional documentation and/or interview the parties involved.
3. *Recommendation and Final Decision.* Within 30 business days of receipt of the appeal, the Homeless Coordinator will make a recommendation to the Secretary of Education, who will make the final decision to support or deny the appeal. The timeframe for this step may be extended if additional investigation time is needed. The appellant and the LEA involved will be notified if additional time is required.
4. *Notification and File*. The SEA will notify the appellant and the LEA involved of the final decision and, if the appeal is granted, the LEA will be expected to follow through on the Secretary's ruling. The SEA will retain a record of all appeals, findings and final decisions. These documents are considered public record and may be made available to the appellant, the LEA, and other members of the general public in a format that meets privacy law requirements.

OMB Control No. 1894-0005 (Exp. 03/31/2017)

NOTICE TO ALL APPLICANT

The purpose of this enclosure is to inform you about a new provision in the Department of Education's General Education Provisions Act (GEPA) that applies to applicants for new grant awards under Department programs. This provision is Section 427 of GEPA, enacted as part of the Improving America's Schools Act of 1994 (Public Law (P.L.) 103-382).

To Whom Does This Provision Apply?

Section 427 of GEPA affects applicants for new grant awards under this program. **ALL APPLICANTS FOR NEW AWARDS MUST INCLUDE INFORMATION IN THEIR APPLICATIONS TO ADDRESS THIS NEW PROVISION IN ORDER TO RECEIVE FUNDING UNDER THIS PROGRAM.**

(If this program is a State-formula grant program, a State needs to provide this description only for projects or activities that it carries out with funds reserved for State-level uses. In addition, local school districts or other eligible applicants that apply to the State for funding need to provide this description in their applications to the State for funding. The State would be responsible for ensuring that the school district or other local entity has submitted a sufficient section 427 statement as described below.)

What Does This Provision Require?

Section 427 requires each applicant for funds (other than an individual person) to include in its application a description of the steps the applicant proposes to take to ensure equitable access to, and participation in, its Federally-assisted program for students, teachers, and other program beneficiaries with special needs. This provision allows applicants discretion in developing the required description. The statute highlights six types of barriers that can impede equitable access or participation: gender, race, national origin, color, disability, or age. Based on local circumstances, you should determine whether these or other barriers may prevent your students, teachers, etc. from such access or participation in, the Federally-funded project or activity. The description in your application of steps to be taken to overcome these barriers need not be lengthy; you may provide a clear and succinct description of how you plan to address those barriers that are applicable to your circumstances. In addition, the information may be provided in a single narrative, or, if appropriate, may be discussed in connection with related topics in the application.

Section 427 is not intended to duplicate the requirements of civil rights statutes, but rather to ensure that, in designing their projects, applicants for Federal funds address equity concerns that may affect the ability of certain potential beneficiaries to fully participate in the project and to achieve to high standards. Consistent with program requirements and its approved application, an applicant may use the Federal funds awarded to it to eliminate barriers it identifies.

What are Examples of How an Applicant Might Satisfy the Requirement of This Provision?

The following examples may help illustrate how an applicant may comply with Section 427.

(1) An applicant that proposes to carry out an adult literacy project serving, among others, adults with limited English proficiency, might describe in its application how it intends to distribute a brochure about the proposed project to such potential participants in their native language.

(2) An applicant that proposes to develop instructional materials for classroom use might describe how it will make the materials available on audio tape or in braille for students who are blind.

(3) An applicant that proposes to carry out a model science program for secondary students and is concerned that girls may be less likely than boys to enroll in the course, might indicate how it intends to conduct "outreach" efforts to girls, to encourage their enrollment.

(4) An applicant that proposes a project to increase school safety might describe the special efforts it will take to address concern of lesbian, gay, bisexual, and transgender students, and efforts to reach out to and involve the families of LGBT students

We recognize that many applicants may already be implementing effective steps to ensure equity of

access and participation in their grant programs, and we appreciate your cooperation in responding to the requirements of this provision.

Estimated Burden Statement for GEPA Requirements

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless such collection displays a valid OMB control number. Public reporting burden for this collection of information is estimated to average 1.5 hours per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. The obligation to respond to this collection is required to obtain or retain benefit (Public Law 103-382. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the U.S. Department of Education, 400 Maryland Ave., SW, Washington, DC 20210-4537 or email ICDocketMgr@ed.gov and reference the OMB Control Number 1894-0005.

Battelle for Kids
Bringing clarity to school improvement

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BATTELLE FOR KIDS' INFORMATION SECURITY POLICIES

Version 1.2

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Executive Summary

Battelle for Kids is committed to ensuring the highest-quality service and integrity in its operations in support of our educational-improvement efforts and clients we serve.

In recognition of the critical role that information systems play in Battelle for Kids' business activities, the following information security policy document provides an overview of protocols and other requirements necessary for the secure and reliable operation of the Battelle for Kids' information systems infrastructure.

Battelle for Kids critically depends on continued customer confidence. This confidence has been gradually increased and is the result of many years of dedicated effort on the part of Battelle for Kids' employees. This confidence can be rapidly lost due to problems, such as hacker intrusions causing system outages. The trust that customers have in Battelle for Kids is a competitive advantage that must be nurtured and grown with efforts, such as implementation of these information security policies.

These policies define the measures that all Battelle for Kids employees are expected to know and follow. These security measures are the minimum required to prevent problems such as: fraud and embezzlement, industrial espionage, sabotage, errors and omissions and system unavailability. These policies also define the minimum controls necessary to prevent legal problems, such as allegations of negligence, breach of fiduciary duty, or privacy violation. This policy document outlines reasonable and practical ways for Battelle for Kids to prevent unnecessary losses.

If you are unclear about any of the policies outlined in this document, please see Battelle for Kids' chief operations officer for more information.

Introduction

Critical Business Function: Information and information systems are necessary for the performance of just about every activity at Battelle for Kids. If there were to be a serious security problem with this information or these information systems, Battelle for Kids could suffer serious consequences including lost customers, reduced revenues and degraded reputation. As a result, information security is a critical part of the Battelle for Kids' business environment.

Consistent Compliance Essential: A single unauthorized exception to security measures can jeopardize other users, the entire organization, and even outside organizations such as business partners. The interconnected nature of information systems requires that all workers observe a minimum level of security. This document defines that minimum level of due care. In some cases, these requirements will conflict with other objectives such as improved efficiency and minimized costs. Top management has examined this trade-offs and has decided that the minimum requirements defined in this document are appropriate for all workers at Battelle for Kids. As a condition of continued employment, all workers, employees, contractors, consultants and temporary employees must consistently observe the requirements set forth in this document.

Team Effort Required: The tools available in the information security field are relatively unsophisticated. Many needed tasks cannot be achieved with products now on the market. This means that Battelle for Kids' employees must play an important role in the information security area. Information security is a team effort requiring the participation of every worker who comes into contact with Battelle for Kids' information or information systems.

Information Ownership

New Centrality of Information: Information is a critical and integral part of the products and services that Battelle for Kids provides. The new centrality of information necessitates the establishment of new roles and responsibilities to properly manage and protect it. To this end, this policy defines the information security roles and responsibilities of owners, custodians and users. Information security can no longer be a concern of technical specialists alone.

Policy Scope and Applicability: This policy applies to handling all Battelle for Kids' production information, regardless of the origin of this information. Production information is information routinely used to perform important business activities or routinely used to support management decision making. This policy applies despite what information handling technology is used, where the information resides, how the information is employed to meet business needs, and which users have access to the information. This policy applies to all Battelle for Kids' business units and all third parties performing business on behalf of Battelle for Kids.

Roles and Responsibilities of Owners: Information owners are senior business unit managers with the authority for acquiring, creating and maintaining information and information systems within their assigned area of control. Owners are responsible for categorizing the information for which they have been designated an owner using the classifications defined in the Data Classification Policy. To assist with contingency planning efforts, owners are responsible for categorizing information, or specific application systems, according to a criticality scale defined by the Technology department. Owners are responsible for authorizing user access to information based on the need to know. Designated information owners are responsible for establishing and updating specific written policies regarding the categories of people who will be granted permission to access information. As needed, these policies must specify limitations on the use of this information by those to whom access has been granted. The Technology department will provide owners with training, reference material and consulting assistance so that they may appropriately make these and related decisions and distinctions. Owners must make decisions about the permissible uses of information, including relevant business rules.

Owners are responsible for choosing appropriate information systems, and relevant controls for information handled by these systems, consistent with policies and standards issued by the Technology department. Owners must define the validation rules used to verify the correctness and acceptability of input data. These validation rules and other controls for protecting information must be formally approved in writing by the relevant owner before major modifications can be made to production application systems. Owners must understand the uses and risks associated with the information for which they are accountable. They are responsible for the consequences associated with improper disclosure, insufficient maintenance, inaccurate classification labeling and other security-related control deficiencies pertaining to the information for which they are the designated owner.

Roles and Responsibilities of Custodians: Information custodians are individuals, often staff within the Technology department or local department system administrators, in physical or logical possession of information from owners. Custodians are charged with the provision of information systems services consistent with the instructions of owners, including information security measures such as encryption. Using physical and logical access control systems, custodians must protect the information in their possession from unauthorized distribution, access, alteration, destruction or usage. Custodians also are responsible for providing and administering general controls, such as backup and recovery systems consistent with the policies and standards issued by the Technology department. Custodians are responsible for establishing, monitoring and operating information systems in a manner consistent with policies and standards issued by the Technology department. Custodians must not change the production information in their possession unless they have received explicit and temporary permission from either the owner or an authorized user.

Roles and Responsibilities of Users: Information users are individuals, who have been granted explicit authorization to access, modify, delete or utilize information by the relevant owner. Users must use the information only for the purposes specifically approved by the owner. Users are not permitted to make additional copies of, or otherwise reproduce or disseminate sensitive information unless the owner has expressly agreed. Users also must comply with all security measures defined by the owner, implemented by the custodian or defined by the Technology department. Users must additionally refrain from disclosing information in their possession, unless it has been designated as public, without obtaining permission from the Owner. Users must report to the Technology department all situations where they believe an information security vulnerability or violation may exist. Users of personal computers have special responsibilities, for example relating to backups and virus screening that is defined in the Personal Computer Security Policy.

Multiple Roles and Responsibilities: It is likely that certain individuals will act in multiple capacities with respect to certain types of information. For example, an employee may be the creator of new production information that is stored in a desktop personal computer. In this case, the employee must, at least temporarily, act in the capacity of owner, custodian and user. To achieve a more secure operating environment, separate individuals must perform the roles of owner, custodian and user wherever production information has more than one user. Creators of new types of production information must promptly inform the Information Systems Architecture group within the Information Technology department so that appropriate roles and responsibilities may be established and maintained.

Designating Owners: Where Battelle for Kids has several information owners, the chief operations officer must assign ownership responsibility to the senior manager of the business unit who makes the greatest use of the information. When the chief operations officer is acting in his or her capacity of owner, this individual must take into consideration the needs and interests of other stakeholders who rely upon or have an interest in the information. With the exception of operational computer and network information, managers in the Technology department must not be owners for any information. An owner's roles and responsibilities may be delegated to any full-time manager in the owner's business unit. An owner's roles and responsibilities may not be assigned or delegated to contractors, consultants, or individuals at outsourcing organizations or external service bureaus.

Designating Custodians: Management must specifically assign responsibility for the control measures protecting every major production type of information. Owners are responsible for identifying all those individuals who are in possession of the information for which they are the designated owner. These individuals by default become custodians. Although special care must be taken to clearly specify security-related roles and responsibilities when outsiders are involved, it is permissible for custodians to be contractors, consultants, or individuals at outsourcing organizations or external service bureaus.

Designating Users: Users may be employees, temporaries, contractors, consultants or third parties with whom special arrangements, such as non-disclosure agreements, have been made. All users must be known to and authorized by owners. The security-relevant activities of all users must be tracked and logged by custodians. Users must always be specific individuals. Users must not be defined as departments, project teams or other groups.

Changes in Status: The individuals who play the roles of information owners, custodians, and users will change on a regular basis. These changes in worker status must be communicated to the Technology department. Custodians must maintain access control systems so that previously-provided user privileges are no longer provided whenever there has been a user status change. When a custodian has a change in status, it is the responsibility of the owner to promptly assign a new custodian, and to assist the new custodian with the assumption of tasks previously performed by the former custodian, including necessary training. When an owner has a change in status, it is the chief operations officer's responsibility to promptly designate a new owner.

Handling of Information Following Status Changes: Users who change their status must leave all production information with their immediate manager. Soon after a user has a change of status, both computer-resident files and paper files must be reviewed by the user's immediate manager to determine who should be given possession of the files, or the appropriate methods to be used for file disposal or destruction. The manager must promptly reassign the user's duties and specifically delegate responsibility for information formerly in the user's possession. It is this manager's responsibility to train the new user so that the new user is able to fully perform the tasks previously performed by the former user. It is this manager's responsibility that the new user become acquainted with the relationships that the previous user had with both insiders and outsiders, and become acquainted with all pending transactions and incomplete projects handled by the previous user.

Externally-Supplied Information: In the course of normal business activities, Battelle for Kids often takes possession of third-party sensitive information. Whenever a non-disclosure agreement (NDA) has been signed, an internal Battelle for Kids owner must be assigned for information so received. The manager of the business unit utilizing the information is ordinarily designated as the owner. The owner must promptly report the existence of this third-party information to the Information Architecture group within the Information Technology department. This third-party information must be labeled with the appropriate data classification category and treated as though it was Battelle for Kids' internal information with the same classification. The roles and responsibilities for custodians and users are also relevant to externally-supplied information.

System of Record: Each owner must designate a system of record that will serve as the most authoritative copy of the information under his or her care. Updates to this information must be made to the system of record before or at the same time that updates are made to other systems containing this information. It is the owner's responsibility to ensure that all production copies of the information for which he or she is the designated owner are maintained with appropriate controls to ensure a reasonable degree of information accuracy, timeliness, and integrity.

Risk Acceptance Process: In rare circumstances, exceptions to information security policies and standards will be permitted if the information owner, the Technology department director, and the chief operations officer have all signed a properly completed risk acceptance form. In the absence of such management approval reflected on a risk acceptance form, all owners, custodians, and users must consistently observe relevant Battelle for Kids' information security policies and standards.

Notifications of Loss or Disclosure: If sensitive information is lost, disclosed to unauthorized parties, or suspected of being lost or disclosed to unauthorized parties, its owner and the director of the Technology department must be notified immediately.

Data Classification

Overview

Employee Responsibility: Every employee who has access to Battelle for Kids' information or information systems is personally responsible for the protection of information that has been entrusted to their care. All employees who come into contact with sensitive Battelle for Kids' internal information are expected to familiarize themselves with this data classification policy and to consistently use these same ideas in their daily Battelle for Kids' business activities. Sensitive information is either confidential or secret information, and both are defined later in this document. Although this policy provides overall guidance, to achieve consistent information protection, workers are expected to apply and extend these concepts to fit the needs of day-to-day operations. This document provides a conceptual model for classifying information based on its sensitivity, and an overview of the required approaches to protect information based on these same sensitivity classifications.

Addresses Major Risks: The Battelle for Kids' data classification system, as defined in this document, is based on the concept of "need to know." This term means that information is not disclosed to any person who does not have a legitimate and demonstrable business need to receive the information. This concept, when combined with the policies defined in this document, will protect Battelle for Kids' information from unauthorized disclosure, use, modification and deletion.

Applicable Information: This data classification policy is applicable to all information in the possession or under Battelle for Kids' control. For example, confidential information entrusted to Battelle for Kids by customers, business partners, suppliers and other third parties must be protected with this data classification policy. Workers are expected to protect third-party information with the same care that they protect Battelle for Kids' information. No distinctions between the words "data," "information," "knowledge" and "wisdom" are made for purposes of this policy.

Trade Secrets: Trade secrets are a type of proprietary information that gives Battelle for Kids' competitive advantage in some manner. Trade secrets must be identified as such prior to being disclosed to any worker. By default, all trade secrets are classified as Secret information. The Battelle for Kids' chief operating officer is the only person authorized to designate any Battelle for Kids' information as a trade secret.

Access Control

Need to Know: Every policy requirements set forth in this document is based on the concept of need to know. If a worker is unclear how the requirements set forth in this policy should be applied to any particular circumstance, he or she must conservatively apply the need to know concept. That is to say that information must be disclosed only to those people who have a legitimate business need for the information. This principle applies to private employee information such as medical histories, just as it applies to proprietary corporate information such as plans for a new product.

System Access Controls: Access to all Battelle for Kids' sensitive computer-resident information must be protected by access controls to ensure that it is not improperly disclosed, modified, deleted or rendered unavailable. Whatever technology is employed, access must be controlled for each individual based on that individual's need to know. The notion of "need to know" includes not only viewing information, but also other privileges such as modifying information or using information to complete a transaction.

Access Granting Decisions: Access to Battelle for Kids' sensitive information must be provided only after the written authorization of the information owner has been obtained. Custodians of the involved information must refer all requests for access to the relevant owners or their delegates. Standard templates of system privileges are defined for all job titles, and owners approve these privileges in advance. Special needs for other access privileges will be dealt with on a request-by-request basis.

Classification Labels

Owners and Production Information: All production information types possessed by or used by a particular organizational unit within Battelle for Kids must have a designated owner. Production information is information routinely used to accomplish business objectives. Owners are responsible for assigning appropriate sensitivity classifications as defined below. Owners do not legally own the information entrusted to their care. They are designated members of the Battelle for Kids' management team who act as stewards, and who supervise the ways in which certain types of information are used and protected.

Secret: This classification label applies to the most sensitive business information that is intended for use strictly within Battelle for Kids. Its unauthorized disclosure could seriously and adversely impact Battelle for Kids its customers, its business partners and its suppliers. Examples include corporate-level strategic plans, strategy memos, reports on breakthrough new product research and trade secrets such as certain computer programs.

Confidential: This classification label applies to less-sensitive business information that is intended for use within Battelle for Kids. Its unauthorized disclosure could adversely impact Battelle for Kids or its customers, suppliers, business partners or employees.
Information that some people would consider to be private is included in this classification. Examples include employee performance evaluations, customer transaction data, strategic alliance agreements, unpublished internally-generated market research, computer passwords, identity token personal identification numbers and internal audit reports.

For Internal Use Only: This classification label applies to all other information that does not clearly fit into the previous two classifications. While its unauthorized disclosure is against policy, it is not expected to seriously or adversely impact Battelle for Kids or its employees, suppliers, business partners, or its customers. Examples include the Battelle for Kids' telephone directory, new employee training materials and internal policy manuals.

Public: This classification applies to information that has been approved by Battelle for Kids' management for release to the public. By definition, there is no such thing as unauthorized disclosure of this information and it may be disseminated without potential harm. Examples include product and service brochures, advertisements, job opening announcements and press releases.

Other Labels: Battelle for Kids' department or division-specific data classification labels are permissible, but must be consistent with and supplemental to the Battelle for Kids' data classification system. These supplementary labels might for example include the use of words like "private" or "financial."

Owners and Access Decisions: Owners must make decisions about who will be permitted to gain access to information, and the uses to which this information will be put. Owners must take steps to ensure that appropriate controls are utilized in the storage, handling, distribution and regular usage of information.

Labeling

Consistent Classification Labeling: If information is sensitive, from the time it is created until the time it is destroyed or declassified, then it must be labeled with an appropriate data classification designation. Such markings must appear on all manifestations of the information, such as electronic & hard copies, email, and CD-ROMs. Workers must not remove or change data classification system labels for sensitive information unless the permission of the owner has been obtained.

What Gets Labeled: The vast majority of Battelle for Kids' information falls into the "Internal Use Only" category. For this reason, it is not necessary to apply a label to Internal Use Only information. Information without a label is by default classified as "Internal Use Only."

Labels Believed to be Incorrect: If the recipient of Battelle for Kids' internal information believes that the data classification label accompanying this information is incorrect, the recipient must protect the information in a manner consistent with the more stringent of the two possible classification labels. Before using this information or distributing it to any other party, such a recipient must check with the information Owner to ensure that the label currently applied to the information is correct.

Information Collections: Workers who create or update a collection of information are responsible for choosing an appropriate data classification label for the new collection. This label must be consistent with the decisions made by the relevant owners and generally should be the most restricted classification level found in the collection. For example, if a new database is being created, and if it contains "Internal Use Only and Confidential" information, then the entire database must be classified as confidential. Other examples of such collections include an internally-generated competitive intelligence report, management decision background reports, and access-controlled intranet pages. At the time that it is being compiled, every worker creating a new collection of this nature must notify the involved information owner about the creation of their new collection.

Storage Media: If information recorded on computer storage media with a higher sensitivity classification is moved to media with a lower sensitivity classification, then the media with the lower sensitivity classification must be upgraded so that its classification reflects the highest sensitivity classification. If information with several different data classification levels is resident on a single computer, then the system controls must reflect the requirements associated with most restrictive data classification level.
In general, because it increases handling costs and operational complexity, commingling information with different sensitivity classifications is discouraged.

Labels for Externally-Supplied Information: With the exception of general business correspondence and copyrighted software, all externally-provided information that is not clearly in the public domain must receive a Battelle for Kids' data classification system label. The Battelle for Kids worker who receives this information is responsible for assigning an appropriate classification on behalf of the external party. When assigning a Battelle for Kids' classification label, this staff member must preserve copyright notices, author credits, guidelines for interpretation, and information about restricted dissemination.

Labeling Hardcopy: All printed, handwritten or other paper manifestations of sensitive information must have a clearly-evident sensitivity label on the upper right hand corner of each page. If bound, all paper manifestations of sensitive information must have an appropriate sensitivity label on the front cover, the title page, and the rear cover. The cover sheet for faxes containing sensitive information must contain the appropriate classification label.

Labeling Computer Storage Media: All computer storage media containing sensitive information must be externally labeled with the appropriate sensitivity classification. Unless it would adversely affect the operation of an application program, computer files containing sensitive information must also clearly indicate the relevant classification label in the first two data lines.

Other Displays: If information is sensitive, all instances in which it is displayed on a screen or otherwise presented to a computer user must involve an indication of the information's sensitivity classification. Teleconferences and telephone conference calls where sensitive information will be discussed must be preceded by a statement about the sensitivity of the information involved. Teleconferences and telephone calls where sensitive information is discussed must be preceded by a determination that all parties to the discussion are authorized to receive the sensitive information. Persons other than those specifically invited must not attend meetings where sensitive information will be discussed.

Third-Party Interactions

Third Parties and "The Need to Know:" Unless it has been specifically designated as public, all Battelle for Kids' internal information must be protected from disclosure to third parties. Third parties may be given access to Battelle for Kids' internal information only when a demonstrable need to know exists, and when such a disclosure has been expressly authorized by the relevant Battelle for Kids information owner. Contractors, consultants, temporaries, volunteers and every other type of individual or entity that is not a Battelle for Kids employee, is by definition a third party for purposes of this policy.

Disclosures to Third Parties and Non-Disclosure Agreements: The disclosure of sensitive information to consultants, contractors, temporaries or any other third parties must be preceded by the receipt of a signed Battelle for Kids' non-disclosure agreement.

Disclosures from Third Parties and Non-Disclosure Agreements: Workers must not sign non-disclosure agreements provided by third parties without the authorization of Battelle for Kids' legal counsel designated to handle intellectual property matters. These forms may contain terms and conditions that unduly restrict Battelle for Kids' future business directions.

Third-Party Requests for Battelle for Kids' Information: Unless a worker has been authorized by the information owner to make public disclosures, all requests for information about Battelle for Kids and its business must be referred to the information owner. Such requests include questionnaires, surveys and newspaper interviews. This policy does

not apply to sales and marketing information about Battelle for Kids' products and services, nor does it pertain to customer support calls.

Prior Review: Every Battelle for Kids speech, presentation, technical paper, book or other communication to be delivered to the public must have been approved for release by the involved marketing and communication lead. This policy applies if the employee will represent Battelle for Kids or discuss Battelle for Kids' affairs, or if the communication is based on information obtained in the course of performing Battelle for Kids' job duties.

Owner Notification: If sensitive information is lost, is disclosed to unauthorized parties, or is suspected of being lost or disclosed to unauthorized parties, the information owner and the manager of the Technology department must be notified immediately.

Declassification and Downgrading

Dates for Reclassification: If known, the date that secret or confidential information will no longer be sensitive or declassified must be indicated on all Battelle for Kids' sensitive information. This will assist those in possession of the information with its proper handling, even if these people have not been in recent communication with the information's owner. Those workers in possession of sensitive information that was slated to be declassified on a date that has come and gone, but is not known definitively to have been declassified, must check with the information owner before they disclose the information to any third parties.

Classification Extensions: The designated information owner may, at any time prior to scheduled declassification or downgrading, extend the period that information is to remain at its current classification level. To achieve this, the owner must change the declassification or downgrading date appearing on the original document, notify all known recipients and custodians, initiate a cost-effective search for additional recipients, and notify the Battelle for Kids archives custodian. Owners must not to specify a date for declassification or downgrading unless they are relatively sure that the date will not be changed.

Notifications: The designated information owner may, at any time, declassify or downgrade the classification of information entrusted to his or her care. To achieve this, the owner must change the classification label appearing on the original document, notify all known recipients and custodians, and notify the Battelle for Kids archives custodian.

Schedule for Review: To determine whether sensitive information may be declassified or downgraded, at least once annually, information owners must review the sensitivity classifications assigned to information for which they are responsible. From the standpoint of sensitivity, information must be declassified or downgraded as soon as practical.

No Unauthorized Downgrading: Workers must not move information classified at a certain sensitivity level to a less-sensitive level unless this action is a formal part of declassification or downgrading process approved by the owner.

Destruction and Disposal

Destruction and Disposal: All Battelle for Kids' information must be destroyed or disposed of when no longer needed for business purposes. To support this policy, information owners must review the continued value and usefulness of information on a periodic basis. Owners must review the data retention schedule to determine the minimum legal periods that information must be retained.

Destruction and Locked Boxes: All sensitive information no longer being used or no longer needed must be placed in designated locked boxes until such time as authorized Battelle for Kids personnel or a bonded destruction service picks it up. If no locked disposal boxes are in the immediate vicinity, sensitive information in hardcopy form must be either shredded or incinerated, while sensitive information in all other forms must be delivered to the Technology department for secure destruction. The shredders used for this purpose must create confetti or other similar small particles. Strip-cut shredders must not be used for this purpose. Erasing or reformatting magnetic media such as CD-ROM is not an acceptable data destruction method. The use of overwriting programs approved by the Technology department is permissible as a way to destroy sensitive information on magnetic storage media, such as CD-ROM.

Only after these programs have been used can storage media containing sensitive information be reused, trashed, recycled or donated to charity.

Destruction Approval: Workers must not destroy or dispose of potentially important Battelle for Kids' records or information without specific advance management approval. Unauthorized destruction or disposal of Battelle for Kids' records or information will subject the worker to disciplinary action including termination and prosecution. Records and information must be retained if they are likely to be needed in the future, regulation or statute requires their retention, or they are likely to be needed for the investigation or prosecution of unauthorized, illegal, or abusive acts. Any questions about data destruction must be referred to the information owner or the owner's delegate.

Photocopies: All waste copies of secret information that are generated in the course of copying, printing or other sensitive information handling must be destroyed according to the instructions found in this policy. If a copy machine jams or malfunctions when workers are making copies of secret information, the involved workers must not leave the machine until all copies of the information are removed from the machine or destroyed beyond recognition.

Equipment Disposal or Servicing: Before computer or communications equipment is sent to a vendor for trade, servicing or disposal, all Battelle for Kids' sensitive information must be destroyed or concealed according to methods approved by the Technology department. Internal hard drives and other computer storage media may not be donated to charity, disposed of in the trash, or otherwise recycled unless they have been subjected to overwriting processes approved by the Technology department.

External Party Disclosure

Determining If Disclosure Is Appropriate

Duty to Take Special Care: To the extent required to perform their job duties, workers are given access to Battelle for Kids' sensitive internal information. Proper protection of this information is essential if the interests of not only Battelle for Kids, but also customers and business partners, are to be preserved. These interests include maintenance of competitive advantage, trade secret protection, and preservation of personal privacy. As indicated in the non-disclosure agreement signed by all employees, special care must be taken to prevent disclosure of sensitive internal information to unauthorized third parties.

Sources of Additional Information: While this policy describes the considerations that workers should bear in mind before, during, and after disclosure to third parties, it cannot specifically address every possible situation. Questions about the disclosure of specific information must be directed to the relevant information owner. Additionally, workers are expected to extend these policies to fit the specific circumstances they face, to use their professional judgment, and ask the Technology department for guidance in those instances where the appropriate handling of sensitive information is unclear.

Two Types of Information: For the purpose of this policy, there are basically two types of information. The first type of information has been approved for release to a specific group such as clients, an organization such as a regulatory agency, or an individual such as a contractor. Information that has been specifically designated as public also falls into this first category.
If the party requesting information falls within the limits of the approved group of recipients, or if the public label has been applied, then no owner approval is required. The second type of information has not yet been approved for release to a specific group, organization, or individual. This policy discusses the specific requirements for dealing with the second category. Additional guidance may be found in the Information Classification Policy.

Third Parties and The Need To Know: Unless it has specifically been designated as public, all Battelle for Kids' internal information must be protected from unauthorized disclosure to third parties. Third parties may be given access to Battelle for Kids' internal information only when a demonstrable need to know exists, and when such a disclosure has been expressly authorized by the relevant Battelle for Kids information owner.

Non-Disclosure Agreements: The disclosure of sensitive information to consultants, contractors, temporaries, volunteers, outsourcing organization staff and other third parties must be preceded by the receipt of a signed non-disclosure agreement (NDA). When an NDA pertains to an organization, to be valid, an officer of the recipient organization must sign the NDA. Workers must not sign NDAs provided by third parties without the advance authorization of Battelle for Kids' legal counsel designated to handle intellectual property matters.

Disclosing Information Belonging to Third Parties: Battelle for Kids workers must not disclose third-party information to other third parties unless the third party providing the information or the legal owner of the information has provided advance approval of the disclosure. Even when this disclosure has been approved in advance, the receiving party must sign a non-disclosure agreement.

Third-Party Requests for Battelle for Kids' Information: Unless a worker has been authorized by the information owner to make disclosures, all requests for information about Battelle for Kids and its business must be referred to the Marketing & Communications Team. Such requests include questionnaires, surveys and newspaper interviews. This policy does not apply to sales and marketing information about Battelle for Kids' products and services, nor does it pertain to customer requests for information that has been approved for release to customers.

Prior Review: Every Battelle for Kids speech, presentation, technical paper, book or other communication to be delivered to the public must be approved for release by the assigned marketing and communication lead. This policy applies if the employee will represent Battelle for Kids or discuss Battelle for Kids' affairs, or if the communication is based on information obtained in the course of performing Battelle for Kids' duties. If new products, research results, corporate strategies, customer information or marketing approaches are to be divulged, approval of the chief operations officer and Battelle for Kids' legal counsel must be obtained.

Releasing Information About Internal Events: Specific information about Battelle for Kids' internal events, including new products and services, staff promotions, reorganizations and information system problems, must not be released to third parties, including members of the news media, without specific authorization from the senior management.

Discussions in Public Forums: Care must be taken to properly structure comments and questions posted to electronic bulletin boards, mailing lists, online news groups and related forums on public networks like the Internet. Care must be taken when wording requests for proposals and help wanted advertisements so that strategic directions, new products and other sensitive information are not indirectly divulged. If a worker is part of a project team developing an unannounced new product or service, a research and development effort, or related confidential Battelle for Kids' matters, then all related postings must be cleared with one's manager prior to being posted to any public network. Workers must be careful not to reveal specifics about Battelle for Kids' internal systems through public postings.

Preparing Information for Disclosure

Using the Best Information: Authorized disclosures of Battelle for Kids' internal information must be performed with the most current, accurate, timely and relevant information available. The employee disclosing the information must be aware of and extract the information from the system of record, or the definitive master copy of such information within Battelle for Kids.

Updates to Previously Disclosed Information: Owners must have correct information that has been made public, or that has been disclosed to certain third parties, if subsequent events have made this information misleading or materially incorrect. Timely and prompt correction of the previously disclosed information is especially important in those instances where the public or a third party is likely to rely on the information in its decision-making processes. This requirement does not apply if the disclosure took place a year or more in the past, and the information is unlikely to be in use.

Designated Source for Public Disclosures: Information generated by Battelle for Kids and released to the public must be accompanied by the name of a designated staff member acting as the single recognized official source and point of contact. All updates and corrections to this information that are released to the public must flow through this official source.

Resolving Problems with Disclosure Processes

Unassigned Owner: If the Battelle for Kids' internal information being considered for disclosure to a third party does not have a designated owner, then the disclosure decision must be made by the Battelle for Kids Chief Operations Officer. Workers also can ask the designated information custodian to identify the owner.

Unmarked Information: If the information being considered for disclosure to third parties is not marked with an appropriate information classification, then employees must assume that the information is Battelle for Kids' Internal Use Only information, and not approved for public release. Information marked public does not require owner approval prior to release to third parties.

Marking Preservation: The worker disclosing Battelle for Kids' internal information to third parties must preserve markings indicating author, date, version number, usage restrictions and other details that might be useful in determining the approved usage, currency, accuracy and relevance of the information. An exception may be made, with owner approval, in those cases where such markings would reveal Battelle for Kids' information that should not be disclosed to the third party.

Disclaimers: It is the information owner's responsibility to ensure that when controversial, frequently changing, highly uncertain or potentially-damaging information is released to third parties that it contains the appropriate legal disclaimers. Such disclaimers, generally provided by the Battelle for Kids' legal counsel, include words that limit Battelle for Kids' liability, define the information's intended uses and inform recipients of potential problems associated with the information.

Recovery or Destruction: All copies of secret information provided to third parties must be returned to the worker within Battelle for Kids who provided it. All such copies must be destroyed. Such recovery or destruction must occur within a month of the time when the information ceases to be useful for the intended purposes. The Battelle for Kids employee who provided the information is responsible for recovering the information. This Battelle for Kids employee must note the recovery or destruction of the information in his or her records reflecting disclosures.

Reporting Improper Disclosures: If sensitive information has been inappropriately disclosed, or is believed to have been inappropriately disclosed, then the circumstances must be reported immediately to the relevant information owner. If an owner has not been assigned for the information, then the Technology department must be informed immediately.

It is the owner's responsibility to determine whether the disclosure or suspected disclosure must be reported to third parties such as government banking regulators, criminal justice system personnel, customers, and others. If no owner has been assigned, then this decision is the Chief Operations Officer's responsibility.

Network Security

Introduction

Purpose: The purpose of this policy is to establish management direction, procedural requirements, and technical guidance to ensure the appropriate protection of Battelle for Kids' information handled by computer networks.

Scope: This policy applies to all employees, contractors, consultants, temporaries, volunteers and other workers at Battelle for Kids, including those workers affiliated with third parties who access Battelle for Kids' computer networks.

Throughout this policy, the word “worker” will be used to collectively refer to all such individuals. The policy also applies to all computer and data communication systems owned by or administered by Battelle for Kids.

General Policy: All information traveling over Battelle for Kids’ computer networks that has not been specifically identified as the property of other parties will be treated as though it is a Battelle for Kids’ corporate asset. It is the policy of Battelle for Kids to prohibit unauthorized access, disclosure, duplication, modification, diversion, destruction, loss, misuse or theft of this information. In addition, it is the policy of Battelle for Kids to protect information belonging to third parties that have been entrusted to Battelle for Kids in a manner consistent with its sensitivity and in accordance with all applicable agreements.

Responsibilities

An information security management committee will be composed of senior directors or their delegates from each Battelle for Kids division, the Senior Director of technology and the chief operation officer. At quarterly and ad hoc meetings, this committee will periodically review the status of Battelle for Kids’ computer and network security, review and monitor remedial work related to computer and network security incidents, authorize and later judge the results of major projects dealing with computer and network security, approve new or modified information security policies, standards, guidelines and procedures and perform other high-level information security management activities.

The Senior Director of technology is responsible for establishing, maintaining, implementing, administering and interpreting organization-wide information systems security policies, standards, guidelines and procedures. This manager also is responsible for activities related to this policy. While responsibility for information systems security on a day-to-day basis is every worker's duty, specific guidance, direction and authority for information systems security is centralized for all of Battelle for Kids and its subsidiaries in the Technology department. This department will perform information systems risk assessments, prepare information systems security action plans, evaluate information security products and perform other activities necessary to assure a secure information systems environment.

The Senior Director of technology or a delegate is responsible for conducting investigations into any alleged computer or network security compromises, incidents or problems. All compromises or potential compromises must be immediately reported to the Senior Director of technology. System administrators are responsible for acting as local information systems security coordinators. These individuals are responsible for establishing appropriate user privileges, monitoring access control logs, and performing similar security actions for the systems they administer. They also are responsible for reporting all suspicious computer and network-security-related activities to the Senior Director of technology. System administrators also implement the requirements of this and other information systems security policies, standards, guidelines and procedures

Departmental managers are responsible for ensuring that appropriate computer and communication system security measures are observed in their areas. Besides allocating sufficient resources and staff time to meet the requirements of these policies, departmental managers are responsible for ensuring that all users are aware of Battelle for Kids’ policies related to computer and communication system security.

Users are responsible for complying with this and all other Battelle for Kids’ policies defining computer and network security measures. Users also are responsible for bringing all known information security vulnerabilities and violations that they notice to the attention of the physical security manager.

Physical Security

All doors leading to outside of Battelle for Kids’ offices must remain locked at all times or under attendance of a Battelle for Kids employee. Access to systems development staff offices, telephone wiring closets, computer machine rooms, network switching rooms and other work areas containing confidential or secret information must be physically restricted. Management responsible for the staff working in these areas must consult the Technology department to determine the appropriate access control method.

Workers must not attempt to enter restricted areas in Battelle for Kids' buildings for which they have not received access authorization. When a worker terminates a working relationship with Battelle for Kids, all physical security access codes known by or available to the worker must be deactivated or changed. Confidential or secret information must not be downloaded to remote locations, such as sales offices, unless proper physical security and encryption facilities are installed and faithfully observed.

Every third-party repair person or maintenance person who shows up at Battelle for Kids' facilities without being called by an employee must be denied access to the facilities. All such incidents must be promptly reported to the Administration department. Those that have been called by an employee must have their requested presence confirmed by a staff member or receptionist before they are given access to the facilities.

System Access Control

End-User Passwords: Users must choose fixed passwords that are difficult to guess. This means that passwords must not be related to a user's job or personal life. For example, a car license plate number, a spouse's name or fragments of an address must not be used. This also means passwords must not be a word found in the dictionary or some other part of speech. For example, proper names, places, technical terms and slang must not be used. Where this type of systems software is available, users must be prevented from selecting easily-guessed passwords.

Users can choose easily-remembered passwords that are difficult for unauthorized parties to guess if they:

- String together several words into a pass phrase.
- Shift a word up, down, left, or right one row on the keyboard.
- Bump characters in a word a certain number of letters up or down the alphabet.
- Transform a regular word according to a specific method, such as making every other letter a number reflecting its position in the word.
- Combine punctuation or numbers with a regular word.
- Create acronyms from words in a song, a poem, or another known sequence of words.
- Deliberately misspell a word.
- Combine a number of personal facts like birth dates and favorite colors.

Users must not construct passwords that are identical or similar to passwords they have previously employed. Where systems software facilities are available, users must be prevented from reusing previous passwords.

Users must not construct passwords using a basic sequence of characters that is then partially changed based on the date or some other predictable factor. For example, users must not employ passwords like "X34JAN" in January and "X34FEB" in February.

Passwords must not be stored in readable form in batch files, automatic logon scripts, software macros, in data communications software, in Web browsers, on hard drives or in other locations where unauthorized persons might discover them. Passwords must not be written down and left in a place where unauthorized persons might discover them. Aside from initial password assignment and password-reset situations, if there is reason to believe that a password has been disclosed to someone other than the authorized user, the password must be changed immediately.

Passwords must never be shared or revealed to anyone else besides the authorized user. If users need to share computer resident data, they should use electronic mail, public directories on local area network servers, and other mechanisms.

This policy does not prevent the use of default passwords, typically used for new user ID assignment or password reset situations, which are then immediately changed when the user next logs onto the involved system. All passwords must be immediately changed if they are suspected of being disclosed or known to have been disclosed to anyone other than the authorized user.

Password System Setup: All computers permanently or intermittently connected to Battelle for Kids' networks must have password access controls. Multi-user systems must employ user IDs and passwords unique to each user, and user privilege restriction mechanisms with privileges based on an individual's need to know.

Unless an extended user authentication system is involved, computer and communication system access control must be achieved through fixed passwords that are unique to each individual user. Access control to files, applications, databases, computers, networks and other system resources through shared passwords or group passwords is prohibited. Wherever systems software permits, the display and printing of fixed passwords must be masked, suppressed or otherwise obscured such that unauthorized parties will not be able to observe or subsequently recover them.

Wherever systems software permits, the initial fixed passwords issued to a new user by a security administrator must be valid only for the user's first online session. At that time, the user must be required to choose another password. This same process applies to the resetting of passwords in the event that a user forgets a password.

All vendor-supplied default fixed passwords must be changed before any computer or communications system is used for production Battelle for Kids' business. This policy applies to passwords associated with end-user user IDs and passwords associated with privileged user IDs. Where systems software permits, the number of consecutive attempts to enter an incorrect password must be strictly limited. After six unsuccessful attempts to enter a password, the involved user ID must be suspended until reset by a system administrator or temporarily disabled for no less than three minutes. If VPN or other constant connections are employed, a time-out period must be initiated.

Whenever system security has been compromised or if there is a reason to believe that it has been compromised, the involved system administrator must immediately change all involved privileged user passwords and require every end-user password on the involved system to be changed at the time of the next log on. If systems software does not provide the latter capability, a broadcast message must be sent to all users telling them to change their passwords immediately.

Logon and Logoff Process: All users must be positively identified prior to being able to use any Battelle for Kids' multi-user computer or communications system resources. Positive identification for internal Battelle for Kids' networks involves a user ID and fixed password, both of which are unique to an individual user, or an extended user authentication system.

The logon process for network-connected Battelle for Kids' computer systems must simply ask the user to log on, providing prompts as needed. Specific information about the organization managing the computer, the computer operating system, the network configuration, or other internal matters must not be provided until a user has successfully provided both a valid user ID and a valid password.

With the exception of electronic bulletin boards or other systems where all regular users are anonymous, users are prohibited from logging into any Battelle for Kids' system or network anonymously, for example, by using guest user IDs. If users employ systems facilities that permit them to change the active user ID to gain certain privileges, they must have initially logged on employing a user ID that clearly indicates their identity.

System Privileges

Limiting System Access: The computer and communications system privileges of all users, systems and independently-operating programs such as agents, must be restricted based on the need to know. This means that privileges must not be extended unless a legitimate business-oriented need for such privileges exists.
Default user file permissions must not automatically permit anyone on the system to read, write, execute or delete a file. Although users may reset permissions on a file-by-file basis, such permissive default file permissions are prohibited. Default file permissions granted to limited groups of people who have a genuine need to know are permitted.

Users with personal computers are responsible for administering a screen saver program securing access to their machine's hard disk drive, and setting passwords for all applications and systems software that provide the capability. Battelle for Kids' computer and communications systems must restrict access to the computers that users can reach over Battelle for Kids' networks. These restrictions can be implemented through routers, gateways, firewalls and other network components. These restrictions must be used to, for example, control the ability of a user to log on to a certain computer then move from that computer to another.

Process for Granting System Privileges: Requests for new user IDs and changed privileges must be in writing and approved by the user's manager before the Technology department fulfills these requests. Individuals who are not Battelle for Kids employees must not be granted a user ID or be given privileges to use Battelle for Kids' computers or networks unless the written approval of a department head has been obtained.

Privileges granted to users who are not Battelle for Kids employees must be granted for periods of 90 days or less. As needed, users who are not Battelle for Kids employees must have their privileges reauthorized by the sponsoring department head every 90 days.

Special privileges, such as the default ability to write to the files of other users, must be restricted to those responsible for systems administration or systems security. An exception to this policy can be made if a department head has approved the exception in writing. Configuration changes, operating system changes, and related activities that require system privileges must be performed by system administrators, not end users.

Third-party vendors must not be given Internet or VPN connection privileges to Battelle for Kids' computers or networks unless the system administrator determines that they have a legitimate business need. These privileges must be enabled only for the time period required to accomplish the approved tasks, such as remote maintenance. If a perpetual or long-term connection is required, then the connection must be established by approved extended user authentication methods.

All users wishing to use Battelle for Kids' internal networks, or multi-user systems that are connected to Battelle for Kids' internal networks, must sign a compliance statement prior to being issued a user ID. If a certain user already has a user ID, a signature must be obtained prior to receiving a renewed user ID. The latter process must be performed periodically.

Process for Revoking System Access: All user IDs must have the associated privileges revoked after a certain period of inactivity not exceeding 90 days. If a computer or communication system access control subsystem is not functioning properly, it must default to denial of privileges to users. If access control subsystems are malfunctioning, the systems must remain unavailable until such time as the problem has been rectified.

Users must not test or attempt to compromise computer or communication system security measures unless specifically approved in advance and in writing by the Senior Director of technology. Incidents involving unapproved system hacking, password guessing, file decryption, bootleg software copying or similar unauthorized attempts to compromise security measures may be unlawful, and will be considered serious violations of Battelle for Kids' policy. Customer requests that Battelle for Kids' security mechanisms be compromised must not be satisfied unless the Senior Director of technology approves in advance or Battelle for Kids is compelled to comply by law. Short-cuts bypassing systems security measures, pranks, and practical jokes involving the compromise of systems security measures are absolutely prohibited. The privileges granted to users must be reevaluated by management every six months. In response to feedback from this review, system administrators must promptly revoke all privileges no longer needed by users.

Management must report all significant changes in worker duties or employment status promptly to the system administrators responsible for user IDs associated with the involved persons. For all terminations, the chief operations officer also must issue a notice of status change to the system administrator who might be responsible for a system on which the involved worker might have a user ID.

Establishment of Access Paths: Changes to Battelle for Kids' internal networks include loading new software, changing network addresses, reconfiguring routers and changing VPN access. With the exception of emergency situations, all changes to Battelle for Kids' computer networks must be approved in advance by the Technology department except as delegated by the Technology department. Emergency changes to networks must be made by persons who are authorized by the Technology department. This process prevents unexpected changes from leading to denial of service, unauthorized disclosure of information, and other problems. This process applies not only to workers, but also to vendor personnel.

Workers must not establish electronic bulletin boards, local area networks, FTP servers, Web servers, modem connections to existing local area networks or other multi-user systems for communicating information without the specific approval of the Senior Director of technology. New types of real-time connections between two or more in-house computer systems must not be established unless such approval is obtained.

Participation in external networks as a provider of services that external parties rely on is prohibited unless Battelle for Kids legal counsel has identified the legal risks involved and the Senior Director of Technology has expressly accepted these and other risks associated with the proposal.

All Battelle for Kids' computers that connect to an internal or external network must employ password-based access controls or an extended user authentication system. Multi-user computers must employ software that restricts access to the files of each user, logs the activities of each user, and has special privileges granted to a system administrator. Single-user systems must employ access control software approved by the Technology department that includes boot control and an automatic screen blanker that is invoked after a certain period of no input activity. Portable computers and home computers that contain Battelle for Kids' information are also covered by this policy, as are network devices such as firewalls, gateways, routers and bridges.

All inter-processor commands from non-Battelle for Kids' locations are prohibited unless a user or process has properly logged on. Examples of such commands include remotely-initiated requests for a list of users currently logged on and a remote procedure call. Users initiating sessions through VPN connections to Battelle for Kids' internal networks or multi-user computer systems must pass through an additional access control point or firewall before users employing these lines can reach a logon banner. Unless approved in advance by the Senior Director of technology, VPN connections that do not go through approved firewalls to reach Battelle for Kids' internal-network connected systems are prohibited. This policy applies to Internet inbound calls and electronic data interchange.

Remote maintenance ports for Battelle for Kids' computer and communication systems must be disabled until the time they are needed by the vendor. These ports must be disabled immediately after use. VPN connections can be established with vendors through outbound calls initiated by Battelle for Kids workers. No firewall access control is needed for either type of connection.

Portable phones using radio technology and cellular phones must not be used for data transmissions containing Battelle for Kids confidential or secret information unless the connection is encrypted. Other broadcast networking technologies, such radio-based local area networks, must not be used for these types of Battelle for Kids' information unless the link is encrypted. Such links may be used for electronic mail as long as users understand that confidential or secret information must not be transmitted using this technology.

Computer Viruses, Worms and Trojan Horses

Users must keep approved and current virus-screening software enabled on their computers. This software must be used to scan all software coming from third parties or other Battelle for Kids departments and must take place before the new software is executed. Users must not bypass scanning processes that could stop the transmission of computer viruses.

Users are responsible for eradicating viruses from all personal computer systems under their control whenever viruses have been detected using software installed by Battelle for Kids staff. As soon as a virus is detected, the involved user must immediately contact the Technology department to assure that no further infection takes place and that any experts needed to eradicate the virus are promptly engaged.

All personal computer software must be copied prior to its initial usage, and such copies must be stored in a safe place. These master copies must not be used for ordinary business activities, but must be reserved for recovery from computer virus infections, hard disk crashes, and other computer problems. These master copies also must be stored in a secure location.

Battelle for Kids' computers and networks must not run software that comes from sources other than business partners, knowledgeable and trusted user groups, well-known systems security authorities, computer or network vendors, or commercial software vendors. Software downloaded from electronic bulletin boards, shareware, public domain software, and other software from un-trusted sources must not be used unless it has been subjected to a rigorous testing regimen approved by the Senior Director of Technology.

Data and Program Backup

Personal computer users are responsible for backing up the information on their machines. It is required that all Battelle for Kids documents are saved to a location designated by Technology department (i.e. File Server, SharePoint, etc.) For multi-user computer and communication systems, the Technology department is responsible for making periodic backups. If requested, the Information Technology department will install or provide technical assistance for the installation of backup hardware or software. All sensitive information such as confidential or secret, valuable or critical, resident on Battelle for Kids' computer systems and networks must be periodically backed up. User department managers must define which information and which machines are to be backed up, the frequency of backup, and the method of backup based.
Nothing in the timeframes for periodic backup mentioned immediately above restricts the generation of more frequent backups, as will occasionally be required for operational and business reasons. Battelle for Kids requires the use of at least three sets of backup storage media to be used in rotation. For multi-user machines, whenever systems software permits, backups must be performed without end-user involvement, over an internal network and during the off hours.

Storage of backup media is the responsibility of the multi-user machine system administrator involved in the backup process. Media must be stored in fireproof safes, at a separate location at least several city blocks away from the system being backed up. All Battelle for Kids' confidential or secret information stored on backup computer media must be encrypted using approved encrypting methods.

Encryption

When Battelle for Kids' confidential or secret information is transmitted over any communication network, it must be sent in encrypted form. Specific definitions of the words "confidential" and "secret" can be found in the Data Classification Policy. Whenever confidential or secret information is not being actively used, it must be stored in encrypted form. This means that when this information is stored or transported in computer-readable storage media, it must be in encrypted form.

Encryption of information in storage or in transit must be achieved through commercially-available products approved by the Technology department. Whenever encryption is used, workers must not delete the sole readable version of

the information unless they have demonstrated that the decryption process is able to reestablish a readable version of the information.

Encryption keys used for Battelle for Kids' information are always classified as confidential or secret information. Access to such keys must be limited only to those who have a need to know. Unless the approval of the Senior Director of Technology is obtained, encryption keys must not be revealed to consultants, contractors, temporaries or other third parties. Encryption keys always must be encrypted when sent over a network. Whenever such facilities are commercially available, Battelle for Kids must employ automated rather than manual encryption key management processes for the protection of information on Battelle for Kids' networks

Logs and Other Systems Security Tools

Every multi-user computer or communications system must include sufficient automated tools to assist the system administrator in verifying a system's security status. These tools must include mechanisms for the recording, detection and correction of commonly-encountered security problems.

To the extent that systems software permits, computer and communications systems handling sensitive, valuable, or critical Battelle for Kids' information must securely log all significant security relevant events. Examples of security relevant events include users switching user IDs during an online session, attempts to guess passwords, attempts to use privileges that have not been authorized, modifications to production application software, modifications to system software, changes to user privileges and changes to logging system configurations.

Records reflecting security relevant events must be periodically reviewed in a timely manner by computer operations staff, information security staff, or systems administration staff. Users must be informed of the specific acts that constitute computer and network security violations. Users must also be informed that such violations will be logged.

Although system administrators are not required to promptly load the most recent version of operating systems, they are required to promptly apply all security patches to the operating system that have been released by knowledgeable and trusted user groups, well-known systems security authorities, or the operating system vendor. Only those systems security tools supplied by these sources or by commercial software organizations may be used on Battelle for Kids' computers and networks.

Remote Printing

Printers must not be left unattended if confidential or secret information is being printed or soon will be printed. The persons attending the printer must be authorized to examine the information being printed. Unattended printing is permitted if the area surrounding the printer is physically protected such that persons who are not authorized to see the material being printed may not enter.

Production Data Center

Special Considerations: The purpose of this policy is to identify special considerations for security necessary at Battelle for Kids' production facilities and data center. Unless otherwise noted in this policy all Network Security policies remain applicable.

Limiting System Access: Only information owners and custodians determined to have a "need to know" will be granted privileges to access Battelle for Kids' production computer equipment. This may include support personnel and other members of the technology team that require access to perform their duties. Determination for such workers will be made exclusively by the Senior Director of technology.

Process for Granting System Privileges: Requests for new user IDs and changed privileges must be in writing and approved by the user's manager before the Technology department fulfills these requests. The manager must demonstrate a genuine "need to know" before requests will be granted.

Data Backups: The Information Technology department is solely responsible for making periodic backups of production network files and databases.

- Battelle for Kids requires the use of at least four full backup sets of storage media to be used in a weekly rotation. Differential backups of all production network storage will be made on a daily basis and stored on separate media.
- Off-Site storage at least three of the four full backup sets must be maintained. Off-site storage of this media is handled by Expedient Data Center (see Appendix for details).
- All production network backups will be encrypted.

SQL Databases: All SQL Databases in the production data center will grant access based on the network integrated security. Use of SQL stand alone security should be limited to special circumstances and approved by the Senior Director of technology.

Direct access to SQL Databases must be limited to information custodians and approved by the Senior Director of technology. Access should be limited to "read only" except when designated by the Senior Director of technology. All data stored in SQL databases in the production datacenter should be considered "secret" for purposes of data classification.

All SQL Database servers must employ full point in time backups with transaction logs.

Physical Security: See Appendix A**:** Expedient Data Center

Privacy

Unless contractual agreements dictate otherwise, messages sent over Battelle for Kids' computer and communications systems are the property of Battelle for Kids, Management reserves the right to examine all data stored in or transmitted by these systems. Because Battelle for Kids' computer and communication systems must be used for business purposes only, workers must have no expectation of privacy associated with the information they store in or send through these systems.

When providing computer-networking services, Battelle for Kids does not provide default message protection services such as encryption. No responsibility is assumed for the disclosure of information sent over Battelle for Kids' networks, and no assurances are made about the privacy of information handled by Battelle for Kids' internal networks. In those instances where session encryption or other special controls are required, it is the user's responsibility to ensure that adequate security precautions have been taken. Nothing in this paragraph must be construed to imply that Battelle for Kids' policy does not support the controls dictated by agreements with third parties, such as organizations that have entrusted Battelle for Kids with confidential information.

Exceptions

The Senior Director of technology acknowledges that under rare circumstances, certain workers will need to employ systems that are not compliant with these policies. All such instances must be approved in writing and in advance by the Senior Director of technology.

Violations

Battelle for Kids workers who willingly and deliberately violate this policy will be subject to disciplinary action up to and including termination.

Firewall Security

Policy Objective and Scope: Firewalls are an essential component of the Battelle for Kids' information systems security infrastructure. Firewalls are defined as security systems that control and restrict network connectivity and network services. Firewalls establish a control point where access controls may be enforced. Connectivity defines which computer systems are permitted to exchange information. A service is sometimes called an application, and it refers to the way for information to flow through a firewall. Examples of services include file transfer protocol (FTP) and Web browsing (HTTP).

Policy Applicability: All firewalls on Battelle for Kids' networks, whether managed by employees or by third parties, must follow this policy. Departures from this policy will be permitted only if approved in advance and in writing by the Senior Director of technology.

Required Documentation: Prior to the deployment of every Battelle for Kids' firewall, a diagram of permissible paths with a justification for each, and a description of permissible services accompanied by a justification for each, must be submitted to the Senior Director of technology. Permission to enable such paths and services will be granted by the Senior Director of technology only when these paths or services are necessary for important business reasons, and sufficient security measures will be consistently employed.

Default to Denial: Every connectivity path and service that is not specifically permitted by this policy and supporting documents issued by the Technology department must be blocked by Battelle for Kids' firewalls. The list of currently approved paths and services must be documented and distributed to all system administrators with a need to know by the Technology department. An inventory of all access paths into and out of Battelle for Kids' internal networks must be maintained by the Technology department.

Connections between Machines: Real-time connections between two or more Battelle for Kids' computer systems must not be established or enabled unless the Technology department has determined that such connections will not unduly jeopardize information security. In many cases, firewalls or similar intermediate systems must be employed. This requirement applies no matter what the technology employed, including wireless connections, microwave links, cable modems, integrated services digital network lines and digital subscriber line connections. Any connection between an in-house Battelle for Kids' production system and any external computer system, or any external computer network or service provider, must be approved in advance by the Technology department.
Logs: All suspicious activity that might be an indication of either unauthorized usage or an attempt to compromise security measures must be logged. The integrity of these logs must be protected with checksums, digital signatures, encryption, or similar measures. These logs must be reviewed periodically to ensure that the firewalls are operating in a secure manner.

Intrusion Detection: All Battelle for Kids' firewalls must include intrusion detection systems approved by the Technology department. Each of these intrusion detection systems must be configured according to the specifications defined by the Technology department. Among other potential problems, these intrusion detection systems must detect unauthorized modifications to firewall system files, and detect denial of service attacks in progress. All technical staff working on firewalls must be provided with remote access systems and privileges so that they can immediately respond to these incidents even when they are physically removed from the firewall.

External Connections: All in-bound real-time Internet connections to Battelle for Kids' internal networks or multi-user computer systems must pass through a firewall before users can reach a logon banner. No Battelle for Kids' computer system may be attached to the Internet unless it is protected by a firewall. The computer systems requiring firewall protection include Web servers, electronic commerce servers, and mail servers.

Virtual Private Networks: To prevent unauthorized disclosure of sensitive and valuable information, all inbound traffic, with the exception of Internet mail and Web site traffic, that accesses Battelle for Kids' networks must be encrypted with the products approved by the Technology department.

These connections are often called virtual private networks (VPNs). The VPNs permissible on Battelle for Kids' networks combine extended user authentication functionality with communications encryption functionality.

Firewall Access Mechanisms: All Battelle for Kids' firewalls must have unique passwords or other access control mechanisms. The same password or access control code must not be used on more than one firewall. Whenever supported by the involved firewall vendor, those who administer Battelle for Kids' firewalls must have their identity validated through extended user authentication mechanisms.

Firewall Access Privileges: Privileges to modify the functionality, connectivity, and services supported by firewalls must be restricted to a few technically-trained individuals with a business need for these same privileges. Unless permission from the Senior Director of technology has been obtained, these privileges must be granted only to individuals who are full-time permanent employees of Battelle for Kids, and not to temporaries, contractors, consultants or outsourcing personnel.

Disclosure Of Internal Network Information: The internal system addresses, configurations, products deployed and related system design information for Battelle for Kids' networked computer systems must be restricted such that both systems and users outside the Battelle for Kids' internal network cannot access this information.

Firewall Dedicated Functionality: Firewalls must run on dedicated devices that perform no other services, such as acting as a mail server. Sensitive or critical Battelle for Kids' information must never be stored on a firewall. Such information may be held in buffers as it passes through a firewall.

Firewall Physical Security: All Battelle for Kids' firewalls must be located in locked rooms accessible only to those who perform authorized firewall management and maintenance tasks approved by the Information Technology department management. The placement of firewalls in an open area within a general purpose data processing center is prohibited, although placement within separately locked rooms or areas, which themselves are within a general data processing center is acceptable. These rooms must be equipped with alarms and an automated log of all persons who gain entry to the room.

Personal Computers

Overview

Objectives and Scope: A large portion of Battelle for Kids' business is conducted with personal computers, including portable computers, handheld computers, personal digital assistants, mobile devices and similar computers dedicated to a single user's activity. Protection of personal computers and the information handled by these systems is an essential part of doing business at Battelle for Kids. To this end, this policy provides information security instructions applicable to all workers who use Battelle for Kids personal computers. All personal computer users are expected to comply with this policy as a condition of continued employment. This policy applies whether personal computers are standalone or connected to a network such as a local area network or the intranet.

Business Use Only

Business Use Only: In general, Battelle for Kids' computer and communication systems are intended to be used for business purposes only. Incidental personal use is nonetheless permissible if the use does not consume more than a trivial amount of resources that could otherwise be used for business purposes, does not interfere with worker productivity, does not preempt any business activity, and does not cause distress, legal problems, or morale problems for other workers. Permissible incidental use of a personal computer would, for example, involve responding to an electronic mail message about a luncheon, purchasing a gift online, and paying bills through the Internet. Offensive material that might cast Battelle for Kids in a bad light, including sexist, racist, violent or other content, is strictly forbidden from all Battelle for Kids' personal computers.

Management

Rights To Programs Developed: Without a specific written exception, all computer programs and documentation generated by, or provided by workers for the benefit of Battelle for Kids are the property of Battelle for Kids. All other material developed by Battelle for Kids workers using personal computers is considered the property of Battelle for Kids. This material includes patents, copyrights and trademarks.

Browsing: Workers must not browse through Battelle for Kids' computer systems or networks. Steps taken by workers to legitimately locate information needed to perform their job are not considered browsing. Use of the Battelle for Kids' intranet is not considered browsing.

Tools to Compromise Systems Security: Unless specifically authorized by the Technology department, Battelle for Kids workers must not acquire, possess, trade or use hardware or software tools that could be employed to evaluate or compromise information systems security. Examples of such tools include those that defeat software copy protection, discover secret passwords, identify security vulnerabilities or decrypt encrypted files.

Reporting Problems: Users must promptly report all information security alerts, warnings, and suspected vulnerabilities to the Technology department. Users must not use Battelle for Kids' systems to forward such information to other users, whether the other users are internal or external to Battelle for Kids.

Configuration Control

Changes to Application Software: Battelle for Kids has a standard list of permissible software packages that users can run on their personal computers. Workers must not install other software packages on personal computers without obtaining advance permission from Technology department. Workers must not permit automatic software installation routines to be run on Battelle for Kids' personal computers unless these routines have been approved by the Technology department. Unless separate arrangements are made with the Technology department, upgrades to authorized software will be downloaded to personal computers automatically. Unapproved software may be removed without advance notice to the involved worker.
Changes to Operating System Configurations: On Battelle for Kids-supplied computer hardware, workers must not change operating system configurations, upgrade existing operating systems, or install new operating systems. If such changes are required, they must be performed by technical personnel, in person or with remote system maintenance software.

Changes to Hardware: Computer equipment supplied by Battelle for Kids must not be altered or added to in any way without the prior knowledge of and authorization from the Technology department.

Physical Security

Donation or Sale of Equipment: Before personal computer equipment or storage media that has been used for Battelle for Kids' business is provided to any third party, the equipment or media must be physically inspected by the Technology department to determine that all sensitive information has been removed. This policy does not apply when a non-disclosure agreement has been signed by the third party.

Lending Personal Computers To Others: Workers must never lend a Battelle for Kids' personal computer containing sensitive information to another person unless that other person has received prior authorization from the owner if the sensitive information to access such information.

Custodians for Equipment: The primary user of a personal computer is considered a custodian for the equipment. If the equipment has been damaged, lost, stolen, borrowed, or is otherwise unavailable for normal business activities, a custodian must promptly inform the involved department manager. With the exception of portable machines, personal computer equipment must not be moved or relocated without the knowledge and approval of the involved department manager.

Use of Personal Equipment: Workers must not bring their own computers, computer peripherals, or computer software and connect to the Battelle for Kids internal network without prior authorization from their department head. Workers must not use their own personal computers for production Battelle for Kids' business unless these systems have been evaluated and approved by the Technology department. Writing memos or reports is not considered production Battelle for Kids' business for purposes of this policy.

Locking Sensitive Information: When not being used by authorized workers, or when not clearly visible in an area where authorized persons are working, all hardcopy sensitive information must be locked in file cabinets, desks, safes or other furniture. When not being used, or when not in a clearly visible and attended area, all computer storage media containing sensitive information must be locked in similar enclosures.

Environmental Considerations: All personal computers in Battelle for Kids' offices must use surge suppressors. Those personal computers running production applications must also have uninterruptible power systems approved by the Technology department.

Networking

Internet: As a matter of policy, inbound Internet connections to Battelle for Kids' personal computers is forbidden unless these connections employ an approved virtual private network (VPN) software package approved by the Technology department. These VPN systems must employ both user authentication features with at least fixed passwords and data interception prevention features, such as encryption.

Downloading Sensitive Information: Sensitive Battelle for Kids' information may be downloaded from a multi-user system to a personal computer only if a clear business need exists, adequate controls to protect the information are currently installed on the involved personal computer, and advance permission from the information owner has been obtained. This policy is not intended to cover electronic mail or memos, but does apply to databases, master files and other information stored on servers, and other multi-user machines.
This applies regardless of the media on which information is stored, the locations where the information is stored, the systems technology used to process the information, the people who handle it, or the processes by which information is handled.

Installation of Communications Lines: Workers and vendors must not make arrangements for, or actually complete the installation of voice or data lines with any carrier, if they have not obtained approval from the director of the Technology department.

Viruses

Virus Program Installed: All personal computers must continuously run the current version of virus detection package approved by the Technology department. The current version of this virus package must be automatically downloaded to each personal computer when the machine is connected to the Battelle for Kids' internal network. Workers must not abort this download process. At a minimum, this package must execute whenever external storage media is supplied.

Decompression before Checking: Externally-supplied floppy disks, CD-ROMs and other removable storage media must not be used unless they have been checked for viruses. Attachments to electronic mail must not be executed or opened unless they have been checked for viruses. Externally-supplied, computer-readable files, software programs, databases, word processing documents and spreadsheets must be decompressed prior to being subjected to an approved virus-checking process. If the files have been encrypted, they must be decrypted before running a virus-checking program.

Eradicating Viruses: Workers must not attempt to eradicate a virus without expert assistance. If workers suspect infection by a virus, then they must immediately stop using the involved computer, physically disconnect from all networks, and contact the Technology department. If the suspected virus appears to be damaging information or software, workers must immediately turn off the personal computer.

Playing With Viruses: Users must not intentionally write, compile, copy, propagate, execute or attempt to introduce any computer code designed to self-replicate, damage or otherwise hinder the performance of any Battelle for Kids' computer system.

Establishing Networks: Workers must not establish electronic bulletin boards, local area networks, modem connections to existing internal networks, Internet commerce systems or other multi-user systems for communicating information without the specific approval of the Technology department.

Backup

Archival Copies: All personal computer software that is not standard Battelle for Kids' software must be copied prior to its initial usage, and such copies must be stored in a safe and secure location. These master copies, perhaps the media issued by the vendor, must not be used for ordinary business activities, but must be reserved for recovery from virus infections, hard disk crashes and other computer problems. Documentation about the licenses for such software must be retained to get technical support, qualify for upgrade discounts, and verify the legal validity of the licenses.

Periodic Backup: All sensitive, valuable or critical information residing on Battelle for Kids' computer systems must be periodically backed up. Such backup processes must be performed at least weekly. Unless automatic backup systems are known to be operational, all end users are responsible for making at least one current backup copy of sensitive, critical, or valuable files and storing that copy in a location on the local area network. These separate backup copies should be made each time that a significant number of changes are saved. Selected files from backups must be periodically restored to demonstrate the effectiveness of every backup process. Department managers must verify that proper backups are being made on all personal computers used for production business activities.

Reporting Software Purchases: All user department purchases of personal computer software that have not been handled through the Purchasing department must promptly be reported to the Technology department.

Copyright Protection: Making unauthorized copies of licensed and copyrighted software, even if for "evaluation" purposes, is forbidden. Battelle for Kids permits reproduction of copyrighted materials only to the extent legally considered fair use or with the permission of the author or owner. If workers have any questions about the relevance of copyright laws, they must contact corporate legal counsel. Unless they receive information to the contrary, workers must assume that software and other materials are copyrighted.

Telecommuting & Mobile Computing

Management Issues

Consistent Security: Battelle for Kids' information must at all times be protected in a manner commensurate with its sensitivity and criticality. The precautions described in this policy apply regardless of the storage media on which information is recorded, the locations where the information is stored, the systems used to process the information, the individuals who have access to the information, or the processes by which the information is handled. This means that workers must protect information in a similar manner no matter whether they are in a Battelle for Kids' office, a hotel room or at a home office.

Intellectual Property Rights: Intellectual property developed or conceived of while a worker is attending to Battelle for Kids' business at an alternative work site is the exclusive property of Battelle for Kids. Such intellectual property includes patent, copyright, trademark, and all other intellectual property rights as manifested in memos, plans, strategies, products, computer programs, documentation and other Battelle for Kids' materials.

Reporting Loss or Damage: Workers at remote working locations must promptly report to their manager any damage to or loss of Battelle for Kids' computer hardware, software or sensitive information entrusted to their care.

Access Control

Encryption: All computers used for telecommuting, and portables, laptops, notebooks and other transportable computers containing sensitive (confidential or secret) Battelle for Kids' information must consistently employ hard disk encryption for all data files. This control must be provided through software or hardware systems approved by the Technology department. Personal digital assistants, handheld computers and smart phones must not be used to handle Battelle for Kids' sensitive information unless they have been configured with the necessary controls, such as encryption, and approved for such use by the Technology department. Exceptions will be made for calendars, address books, and stored connection information such as telephone numbers.

Sharing Access Devices and Systems: Telecommuters must not share dynamic password token cards, smart cards, fixed passwords or any other access devices or parameters with anyone without prior approval from the Technology department. This means that a remote computer used for Battelle for Kids' business must be used exclusively by the telecommuter. Family members, friends and others must not be permitted to use this machine. Telecommuters must never lend to others a handheld computer, a personal digital assistant, a smart phone or any other computer that stores information about Battelle for Kids' business activities.

Physical Security

Similarity in Approaches: At alternative work sites, reasonable precautions must be taken to protect Battelle for Kids' hardware, software, and information from theft, damage and misuse.

Provision of Secure Containers: Workers who must keep secret or confidential Battelle for Kids' information at their homes to do their work must have safes or lockable heavy furniture for the proper storage of this information.

Shredders: Telecommuters must have or be provided with a shredder to appropriately dispose of printed versions of sensitive information. Shredders that make strips of paper are not acceptable for the disposal of Battelle for Kids' sensitive material. Acceptable shredders make confetti or other small particles. All sensitive Battelle for Kids' paper-resident information plus any information containing financial account numbers, like credit card numbers, must be shredded. Intermediate work products containing sensitive information, such as carbon copies, photocopies, photographic negatives or paper memo drafts, must also be shredded. Telecommuting workers on the road must not throw away Battelle for Kids' sensitive information in hotel wastebaskets or other publicly-accessible trash containers. Sensitive information must be retained until it can be shredded, or destroyed with other approved methods.

Logging-Out: After a worker has completed a remote session with Battelle for Kids' computers, the worker must disconnect from the VPN connection and log off from the computer. Workers using remote communications facilities must wait until they receive a confirmation of their log off command from the remotely connected Battelle for Kids' machine before they leave the computer they are using.

Communications Links

Inbound VPN Connections to Battelle for Kids' Networks: All in-bound VPN connections to Battelle for Kids' internal networks and networked computer systems must pass through an additional access control point, such as a firewall, telecommunications front end or similar system, before users are permitted to reach an operating system-based computer logon screen asking for a user ID and fixed password. This additional access point must employ dynamic passwords or another extended user authentication technology approved by the Technology department.

Establishing Internet Connections: Workers must not establish firewalls, routers, communications servers or any other facilities on their remote computer systems that handle Battelle for Kids' business if these facilities permit telnet or any other type of real-time inbound remote access through the Internet.
Outbound connections from a remote system through the Internet, terminating at a Battelle for Kids' networked computer system, are permissible as long as these connections are secured by a virtual private network software package.

Other Connections: Other than VPN connections, workers must not establish any other interface between a remote computer used for Battelle for Kids' business activities and another network, such as value-added networks, unless prior approval of the Technology department has been obtained in writing. This means that workers are prohibited from establishing their own personal accounts with Internet service providers and using these accounts for Battelle for Kids' business. Instead, all Battelle for Kids' business Internet electronic mail and Internet surfing must be accomplished through a Battelle for Kids-managed firewall with Battelle for Kids' approved electronic mail software.

DSL Lines and Cable Modem Lines: Digital subscriber lines, cable modem lines and other high-speed lines must not be used for any Battelle for Kids' business communications unless a firewall and an approved virtual private network is employed. Telecommuters must contact the Technology department for assistance in the establishment of these facilities before making any arrangements with third-party vendors.

Telephone Discussions: Workers must take steps to avoid discussing sensitive information when on the telephone. If discussion of such information is absolutely required, workers must use guarded terms and refrain from mentioning sensitive details beyond those needed to get the job done. Secret information must not be discussed on speakerphones unless all participating parties acknowledge that no unauthorized persons are in close proximity, such that they might overhear the conversation. Unless an encryption system approved by the Technology department is used, secret Battelle for Kids' information must never be discussed on cordless or cellular telephones.

Backup and Media Storage

Backup: Telecommuters are responsible for ensuring that their remote systems are backed up on a periodic basis, either automatically through the network or remotely with external drives or similar equipment. If backups are made locally, telecommuting workers must store copies of these same backups at a secure location away from the remote working site at least every two weeks. If these backups contain sensitive information, the backups must be encrypted using software approved by the Technology department.

Sensitive Media Marking and Storage: When sensitive information is written to an external drive, CD-ROM or other storage media, the media must be externally marked with the highest relevant sensitivity classification. Unless encrypted, when not in use, this media must be stored in heavy locked furniture. Smart cards and tamper-resistant security modules are an exception to this rule.

System Management

Battelle for Kids-Provided Machines: Employees working on Battelle for Kids' business at alternative work sites must use Battelle for Kids-provided computer and network equipment. An exception will be made only if other equipment has been approved by the Technology department as compatible with Battelle for Kids' information systems and controls.

Changes to Configurations and Software: On Battelle for Kids-supplied computer hardware, workers must not change the operating system configuration or install new software. If such changes are required, they must be performed by Information System personnel with remote system maintenance software. Changing the font defaults for a word processing program, or otherwise altering the templates provided with an application, is permissible without Help Desk assistance or advance approval.

Changes to Hardware: Computer equipment supplied by Battelle for Kids must not be altered or added to in any way without prior knowledge and authorization from the Technology department.

Downloading Software: Without prior authorization, workers must not download software from the Internet or other systems outside Battelle for Kids onto computers used to handle Battelle for Kids' data.

Ownership Versus Possession: If Battelle for Kids supplied a telecommuter with software, hardware, furniture, information or other materials to perform Battelle for Kids' business remotely, then the title to, and all rights and interests to these items will remain with Battelle for Kids. In such instances, telecommuter possession does not convey

ownership or any implication of ownership. All such items must be promptly returned to Battelle for Kids when a telecommuter separates from Battelle for Kids, or when so requested by the telecommuter's manager.

Liability For Battelle for Kids Property: If Battelle for Kids supplied a telecommuter with software, hardware, furniture, information or other materials to perform Battelle for Kids business remotely, then Battelle for Kids assumes all risks of loss or damage to these items unless such loss or damage occurs due to the telecommuter's negligence. Battelle for Kids expressly disclaims any responsibility for loss or damage to persons or property caused by, or arising out of the usage of such items.

Travel Considerations

Removal of Information: Sensitive (confidential or secret) information may not be removed from Battelle for Kids premises unless the information's owner has approved in advance. This policy includes sensitive information stored on portable computer hard disks, CD-ROMs, and paper memos. An exception is made for authorized off-site backups that are in encrypted form.

Traveling with Secret Information: Unless specific approval from a local department manager has been granted, workers must avoid traveling on public transportation when in the possession of secret Battelle for Kids' information.

Foreign Transport: Whenever secret information is carried by a Battelle for Kids worker into a foreign country, the information must either be stored in some inaccessible form, such as an encrypted CD-ROM, or must remain in the worker's possession at all times. Battelle for Kids workers must not take secret Battelle for Kids' information into another country unless the permission has been obtained from the Technology department.

Public Exposure: Sensitive Battelle for Kids' information must not be read, discussed, or otherwise exposed in restaurants, on airplanes on trains or in other public places where unauthorized people might discover it.

Checked Luggage: Workers in the possession of portable, laptop, notebook, , handheld, smart phones, tablets and other transportable computers containing sensitive Battelle for Kids' information must not check these computers in airline luggage systems. These computers must remain in the possession of the traveler as hand luggage.

Securing Hardcopy Sensitive Information: Whenever a hardcopy version of secret information is removed from Battelle for Kids' premises, it must either be stored in safe, locking furniture or some other heavy container with a lock, or carried in a locked briefcase when not in use. Such information must not be left in an unattended motor vehicle, hotel room, or external office, even if this vehicle or room is locked.

Faxing Sensitive Information: If secret information is sent by fax, then the recipient must have been notified of the time when it will be transmitted, and also have agreed that an authorized person will be present at the destination machine when the material is sent. An exception will be made if the area surrounding the fax machine is physically restricted such that persons who are not authorized to see the material being faxed may not enter. Sensitive Battelle for Kids' information must not be faxed through a hotel desk or other un-trusted third parties. Another exception will be made in those instances in which the destination fax machine is password protected and authorized parties are the only ones who have access to the involved password.

Electronic Mail

Company Property: As a productivity enhancement tool, Battelle for Kids encourages the business use of electronic communications systems, notably the Internet, telephone, fax, voice mail, electronic mail, and instant messaging. Unless third parties have clearly noted copyrights or some other rights on the messages handled by these electronic communications systems, all messages generated on or handled by Battelle for Kids' electronic communications systems are considered to be the property of Battelle for Kids.

Authorized Usage: Battelle for Kids' electronic communications systems generally must be used for business activities only. Incidental personal use is permissible as long as it does not consume more than a trivial amount of system resources, does not interfere with worker productivity, and does not preempt any business activity. Battelle for Kids' electronic communication systems must not be used for political advocacy efforts, religious efforts, private business activities, or personal amusement and entertainment. News feeds, electronic mail mailing lists, push data updates and other mechanisms for receiving information over the Internet must be restricted to material that is clearly related to both Battelle for Kids' business and the duties of the receiving workers. Workers are reminded that the use of corporate information system resources must never create the appearance or the reality of inappropriate use.

Default Privileges: Electronic communication systems must be established and maintained such that only the privileges necessary to perform a job are granted to a worker. For example, when a worker's relationship with Battelle for Kids comes to an end, all of the worker's privileges on Battelle for Kids' electronic communications systems also must cease. With the exception of emergencies and regular system maintenance notices, broadcast facilities must be used only after the permission of a department manager has been obtained.

User Separation: Where electronic communications systems provide the ability to separate the activities of different users, these facilities must be implemented. Electronic mail systems and instant messaging must employ personal user IDs and secret passwords to isolate the communications of different users. Workers must not employ the user ID or the identifier of any other user.

User Accountability: Regardless of the circumstances, individual passwords must never be shared or revealed to anyone else besides the authorized user. Technology department staff must never ask users to reveal their passwords. If users need to share computer resident data, then they should utilize message forwarding facilities, public directories on local area network servers, groupware databases, and other authorized information-sharing mechanisms. To prevent unauthorized parties from obtaining access to electronic communications, users must choose passwords that are difficult to guess. For example, users must not choose a dictionary word, details of their personal history, a common name or a word that reflects work activities.

User Identity: Misrepresenting, obscuring, suppressing or replacing another user's identity on an electronic communications system is forbidden. The user name, electronic mail address, organizational affiliation, and related information included with electronic messages or postings must reflect the actual originator of the messages or postings. Workers must not send anonymous electronic communications. At a minimum, all workers must provide their name and phone number in all electronic communications. Electronic mail signatures indicating job title, company affiliation, address and other particulars are strongly recommended for all electronic mail messages.

Use of Encryption Programs: Workers are reminded that Battelle for Kids' electronic communications systems are not encrypted by default. If sensitive information (classified as confidential or secret) must be sent by electronic communication systems, an encryption process approved by the Technology department must be employed. These encryption systems must protect the sensitive information from end to end (from sender to recipient). In other words, they must not involve decryption of the message content before the message reaches its intended final destination.

Mobile computers, notebook computers, portable computers, smartphones, tablets and similar computers that store Battelle for Kids' sensitive information must consistently employ file encryption to protect this sensitive information when it is stored inside these same computers, and when it is stored on accompanying data storage media. Users of these types of computers who are recipients of sensitive information sent by electronic mail must delete this

information from their systems if they do not have encryption software that can properly protect it. Separately, workers must not use encryption for any production electronic communications system unless a backup key or a key escrow system has been established with the cooperation of the Technology department.

Respecting Intellectual Property Rights: Although the Internet is an informal communications environment, the laws for copyrights, patents, trademarks and the like still apply. Workers using Battelle for Kids' electronic systems must repost or reproduce material only after obtaining permission from the source, quote material from other sources only if these other sources are properly identified, and reveal internal Battelle for Kids' information on the Internet only if the information has been officially approved for public release. All information acquired from the Internet must be considered suspect until confirmed by another source. There is no quality control process on the Internet, and a considerable amount of information posted on the Internet is outdated, inaccurate and/or deliberately misleading.

Respecting Privacy Rights: Except as otherwise specifically approved by the Senior Director of technology, workers must not intercept or disclose, or assist in intercepting or disclosing, electronic communications. Battelle for Kids is committed to respecting the rights of its workers, including their reasonable expectations of privacy. Battelle for Kids is also responsible for operating, maintaining and protecting its electronic communications networks. To accomplish these objectives, it is occasionally necessary to intercept or disclose, or assist in intercepting or disclosing, electronic communications. To meet these objectives, Battelle for Kids may employ content monitoring systems, message logging systems, and other electronic system management tools. By making use of Battelle for Kids' systems, users consent to permit all information they store on Battelle for Kids' systems to be divulged to law enforcement at the discretion of Battelle for Kids' management.

No Guaranteed Message Privacy: Battelle for Kids cannot guarantee that electronic communications will be private. Workers must be aware that electronic communications can, depending on the technology, be forwarded, intercepted, printed and stored by others. Electronic communications can be accessed by people other than the intended recipients in accordance with this policy. Because messages can be stored in backups, electronic communications actually may be retrievable when a traditional paper letter would have been discarded or destroyed. Workers must accordingly be careful about the topics covered in Battelle for Kids' electronic communications, and should not send a message discussing anything that they would not be comfortable reading about on the front page of their local newspaper.

Incidental Disclosure: It may be necessary for technical support personnel to review the content of an individual worker's communications during the course of problem resolution. These staff members must not review the content of an individual worker's communications out of personal curiosity or at the request of individuals who have not gone through proper approval channels. Advance approval by the Senior Director of Technology is required for all such monitoring.

Message Forwarding: Electronic communications users must exercise caution when forwarding messages. Battelle for Kids' confidential or secret information must not be forwarded to any party outside Battelle for Kids without the prior approval of a local department manager. Blanket forwarding of messages to parties outside Battelle for Kids is prohibited unless the prior permission of the Senior Director of Technology has been obtained. Messages sent by outside parties must not be forwarded to other third parties unless the sender clearly intended this and such forwarding is necessary to accomplish a customary business objective. In all other cases, forwarding of messages sent by outsiders to other third parties can be done only if the sender expressly agrees to this forwarding.

Handling Alerts about Security: Users must promptly report all information security alerts, warnings, and reported vulnerabilities to the Technology department. Information Security is the only organizational unit authorized to determine appropriate action in response to such notices.
Users must not utilize Battelle for Kids' systems to forward these notices to other users, whether the other users are internal or external to Battelle for Kids. Users must promptly report all suspected security vulnerabilities or problems that they notice to Information Security.

Public Representations: No media advertisement, Internet home page, electronic bulletin board posting, electronic mail message, voice mail message, or any other public representation about Battelle for Kids may be issued unless it

has been approved by the Marketing & Communications department. Battelle for Kids, as a matter of policy, does not send unsolicited electronic mail, nor does it issue unsolicited fax advertising.
No one outside Battelle for Kids may be placed on an electronic mail distribution list without indicating their intention to be included on the list through an opt-in process. If Battelle for Kids' workers are bothered by an excessive amount of unwanted messages from a particular organization or electronic mail address, they must not respond directly to the sender. Recipients must forward samples of the messages to the system administrator in charge of the electronic mail system for resolution. Workers must not send large number of messages to overload a server or user's electronic mailbox in retaliation for any perceived issue.

User Backup: If an electronic mail message contains information relevant to the completion of a business transaction, contains potentially important reference information, or has value as evidence of a Battelle for Kids' management decision, it must be retained for future reference. Users must regularly move important information from electronic mail message files to word processing documents, databases, and other files. Electronic mail inboxes must not be used for the archival storage of important information.

Use at Your Own Risk: Workers access the Internet with Battelle for Kids' facilities at their own risk. Battelle for Kids is not responsible for material viewed, downloaded or received by users through the Internet. Electronic mail systems may deliver unsolicited messages that contain offensive content.

Information Integrity

Information Reliability: All information acquired from the Internet must be considered suspect until confirmed by separate information from another source. Before using free Internet-supplied information for business decision-making purposes, workers must corroborate the information by consulting other sources.

Virus Checking: All non-text files downloaded from non-Battelle for Kids' sources through the Internet must be screened with current virus detection software prior to being used. Whenever an external provider of the software is not trusted, downloaded software must be tested on a stand-alone, non-production machine that has been recently backed up. Downloaded files must be decrypted and decompressed before being screened for viruses. The use of digital signatures to verify that a file has not been altered by unauthorized parties is recommended, but this does not assure freedom from viruses, Trojan horses and other problems.

Push Technology: Automatic updating of software or information on Battelle for Kids' computers through background push Internet technology is prohibited unless the involved vendor's system has been tested and approved by the Internet group within the Technology department.

Spoofing Users: Before workers release any internal Battelle for Kids' information, enter into any contracts, or order any products through public networks, the identity of the individuals and organizations contacted must be confirmed. Identity confirmation is ideally performed through digital signatures or digital certificates, but in cases where these are not available, other means such as letters of credit, third-party references, and telephone conversations may be used.

User Anonymity: Misrepresenting, obscuring, suppressing or replacing a user's identity on the Internet or any Battelle for Kids' electronic communications system is forbidden. The user name, electronic mail address, organizational affiliation and related information included with messages or postings must reflect the actual originator of the messages or postings. Use of anonymous FTP logons, anonymous UUCP logons, HTTP or Web browsing and other access methods established with the expectation that users would be anonymous are permissible.

Web Site Changes: Workers must not establish new Internet pages dealing with Battelle for Kids' business, or make modifications to existing Web pages dealing with Battelle for Kids' business, unless they have obtained the approval from the Marketing & Communications department. Modifications include the addition of links to other sites, updating the information displayed, and altering the graphic layout of a page. Management must ensure that all posted material has a consistent and polished appearance, is aligned with business goals, and is protected with adequate security measures.

Information Confidentiality

Information Exchange: Battelle for Kids' software, documentation and all other types of internal information must not be sold or otherwise transferred to any non-Battelle for Kids party for any purposes other than business purposes expressly authorized by management. Exchanges of software or data between Battelle for Kids and any third party must not proceed unless a written agreement has been signed. Such an agreement must specify the terms of the exchange, and the ways that the software or data is to be handled and protected. Regular business practices, such as shipment of a product in response to a customer purchase order, need not involve such a specific agreement since the terms and conditions are implied.

Posting Materials: Workers must not post unencrypted Battelle for Kids' material on any publicly-accessible Internet computer that supports anonymous FTP or similar publicly-accessible services, unless the posting of these materials has been approved by management. Battelle for Kids' internal information must not be placed in any computer unless the persons who have access to that computer have a legitimate business need to know the involved information.

Message Interception: Battelle for Kids' secret, proprietary or private information must not be sent over the Internet unless it has been encrypted by approved methods. Unless specifically known to be in the public domain, source code must always be encrypted before being sent over the Internet. For the same reasons, Internet telephone services must not be used for Battelle for Kids' business unless the connection is known to be encrypted.

Security Parameters: Unless a connection is known to be encrypted, credit card numbers, telephone calling card numbers, fixed logon passwords and other security parameters that can be used to gain access to goods or services, must not be sent over the Internet in readable form. Encryption processes are permissible if they are approved by the Senior Director of technology.

Public Representations

External Representations: Workers may indicate their affiliation with Battelle for Kids in mailing lists, chat sessions and other offerings on the Internet. This may be done by explicitly adding certain words, or it may be implied, for example through an electronic mail address. In either case, whenever workers provide an affiliation, unless they have been expressly designated as a spokesperson of Battelle for Kids, they also must clearly indicate the opinions expressed are their own, and not necessarily those of Battelle for Kids. If an affiliation with Battelle for Kids is provided, political advocacy statements and product or service endorsements also are prohibited. With the exception of ordinary marketing and customer service activities, all representations on behalf of Battelle for Kids must be cleared by management.

Appropriate Behavior: Whenever any affiliation with Battelle for Kids is included with an Internet message or posting, written attacks are strictly prohibited. Workers must not make threats against another user or organization over the Internet. All Internet messages intended to harass, annoy or alarm another person are similarly prohibited.

Removal of Postings: Those messages sent to Internet discussion groups, electronic bulletin boards or other public forums that include an implied or explicit affiliation with Battelle for Kids, may be removed if management deems them to be inconsistent with Battelle for Kids' business interests or existing company policy. Messages in this category include political statements, religious statements, cursing or other foul language, and statements viewed as harassing others based on race, creed, color, age, sex, physical handicap or sexual orientation.

The decision to remove electronic mail must be made by the Senior Director of technology. When practical and feasible, individuals responsible for the message will be informed of the decision and given the opportunity to remove the message themselves.

Disclosing Internal Information: Workers must not publicly disclose internal Battelle for Kids' information through the Internet that may adversely affect the Battelle for Kids' customer relations or public image unless the approval of a member of the top management team has been obtained. Such information includes business prospects, products now in research and development, product performance analyses, product release dates, and internal information systems problems. Responses to specific customer electronic mail messages are exempted from this policy.

Inadvertent Disclosure: Care must be taken to properly structure comments and questions posted to mailing lists, public news groups, Usenet, and related public postings on the Internet. Before posting any material, workers must consider whether the posting could put Battelle for Kids at a significant competitive disadvantage or whether the material could cause public relations problems. Workers should keep in mind that several separate pieces of information can be pieced together by a competitor to form a picture revealing confidential information that then could be used against Battelle for Kids workers must never post on the Internet the specific computer or network products employed by Battelle for Kids.

Intellectual Property Rights

Copyrights: When at work, or when Battelle for Kids' computing or networking resources are employed, copying of software in a manner that is not consistent with the vendor's license is strictly forbidden. The reproduction, forwarding, or in any other way republishing or redistribution of words, graphics, or other copyrighted materials must be done only with the permission of the author or owner. Workers must assume that all materials on the Internet are copyrighted unless specific notice states otherwise. When information from the Internet is integrated into internal reports or used for other purposes, all material must include labels in accordance to the graphics standards manual.

Glossary

Access control: A system to restrict the activities of users and processes based on the need to know.

Agents: A new type of software that performs special tasks on behalf of a user, such as searching multiple databases for designated information.

Algorithm: A mathematical process for performing a certain calculation. In the information security field, it is generally used to refer to the process for performing encryption.

Booting: The process of initializing a computer system from a turned-off or powered-down state.

Bridge: A device that interconnects networks or that otherwise permits networking circuits to be connected.

Compliance statement: A document used to obtain a promise from a computer user that such user will abide by system policies and procedures.

Confidential information: A sensitivity designation for information, the disclosure of which is expected to damage Battelle for Kids or its business affiliates.

Critical information: Any information essential to Battelle for Kids' business activities, the destruction, modification, or unavailability of which would cause serious disruption to Battelle for Kids' business.

Cryptographic challenge and response: A process for identifying computer users involving the issuance of a random challenge to a remote workstation, which is transformed using an encryption process and a response is returned to the connected computer system.

Default file permission: Access control file privileges, read, write, execute and delete, granted to computer users without further involvement of either a security administrator or users.

Default password: An initial password issued when a new user ID is created, or an initial password provided by a computer vendor when hardware or software is delivered.

Dynamic password: A password that changes each time a user logs on to a computer system.

Encryption key: A secret password or bit string used to control the algorithm governing an encryption process.

Encryption: A process involving data coding to achieve confidentiality, anonymity, time stamping and other security objectives.

End User: A user who employs computers to support Battelle for Kids' business activities, who is acting as the source or destination of information flowing through a computer system.

Extended user authentication technique: Any of various processes used to bolster the user identification process typically achieved by user IDs and fixed passwords, such as hand-held tokens and dynamic passwords.

Firewall: A logical barrier stopping computer users or processes from going beyond a certain point in a network unless these users or processes have passed some security check, such as providing a password.

Gateway: A computer system used to link networks that can restrict the flow of information and that employ some access control method.

Information retention schedule: A formal listing of the types of information that must be retained for archival purposes and the time frames that these types of information must be kept.

Isolated computer: A computer that is not connected to a network or any other computer. For example, a stand-alone personal computer.

Logon banner: The initial message presented to a user when he or she makes connection with a computer.

Logon script: A set of stored commands that can log a user onto a computer automatically.

Master copies of software: Copies of software that are retained in an archive and that are not used for normal business activities.

Multi-user computer system: Any computer that can support more than one user simultaneously.

Password guessing attack: A computerized or manual process whereby various possible passwords are provided to a computer in an effort to gain unauthorized access.

Password reset: The assignment of a temporary password when a user forgets or loses his or her password.

Password-based access control: Software that relies on passwords as the primary mechanism to control system privileges.

Password: Any secret string of characters used to positively identify a computer user or process.

Positive identification: The process of definitively establishing the identity of a computer user.

Privilege: An authorized ability to perform a certain action on a computer, such as read a specific computer file.

Privileged user ID: A user ID that has been granted the ability to perform special activities, such as shut down a multi-user system.

Router: A device that interconnects networks using different layers of the Open Systems Interconnection (OSI) Reference Model.

Screen blanker or **screen saver:** A computer program that automatically blanks the screen of a computer monitor or screen after a certain period of inactivity.

Secret information: Particularly sensitive information, the disclosure of which is expected to severely damage Battelle for Kids or its business affiliates.

Security patch: A software program used to remedy a security or other problem, commonly applied to operating systems, database management systems, and other systems software.

Sensitive information: Any information, the disclosure of which could damage Battelle for Kids or its business associates.

Shared password: A password known by or used by more than one individual.

Software macro: A computer program containing a set of procedural commands to achieve a certain result.

Special system privilege: Access system privileges permitting the involved user or process to perform activities that are not normally granted to other users.

Suspending a user ID: The process of revoking the privileges associated with a user ID.

System administrator: A designated individual who has special privileges on a multi-user computer system, and who looks after security and other administrative matters.

Terminal function keys: Special keys on a keyboard that can be defined to perform certain activities such as save a file.

User IDs: Also known as accounts, these are character strings that uniquely identify computer users or computer processes.

Valuable information: Information of significant financial value to Battelle for Kids or another party.

Verify security status: The process by which controls are shown to be both properly installed and properly operating.

Virus screening software: Commercially-available software that searches for certain bit patterns or other evidence of computer virus infection.

Appendix A – Expedient Data Center

Overview: Battelle for Kids' contracts with Expedient Data Center for its entire production network data center facilities. This enterprise data center provides the following features:

- Dedicated power feeds to the local electric substation
- Dual 750kVA Uninterrupted Power Supply Units
- Two 1.75MW diesel generators with 10,000 gallons of backup fuel
- 420 Tons of cooling designed in an N+2 configuration
- Direct access to multiple Tier 1 internet providers
- High availability network, including firewall and load balancers
- On-site engineers providing 24x7x365 monitoring and support
- FE-25 DuPont fire suppression backed up by a dry pipe fire suppression system
- Multi-tiered security including video camera surveillance, biometric and key card access control systems
- Security fence and reinforced walls surrounding the building
- SSAE-16 Audited.

Appendix B: Agreement to Comply with Information Security Policies

A signed paper copy of this form must be submitted with all requests for authorization of a new user ID, authorization of a change in privileges associated with an existing user ID, or periodic reauthorization of an existing user ID. Battelle for Kids' management will not accept modifications to the terms and conditions of this agreement.

_____
User's Printed Name

_____
User's Department

I, the user, agree to take all reasonable precautions to assure that Battelle for Kids' internal information, or information that has been entrusted to Battelle for Kids by third parties such as customers, will not be disclosed to unauthorized persons. At the end of my employment or contract with Battelle for Kids, I agree to return to Battelle for Kids all information to which I have had access as a result of my position with Battelle for Kids, I understand that I am not authorized to use this information for my own purposes, nor am I at liberty to provide this information to third parties without the express written consent of the internal Battelle for Kids manager who is the designated information owner.

I have access to a copy of the Battelle for Kids' Information Security Policies Manual, I have read and understand the information contained in the manual, and I understand how it impacts my job. As a condition of continued employment at Battelle for Kids, I agree to abide by the policies and other requirements found in that manual. I understand that non-compliance will be cause for disciplinary action up to and including system privilege revocation, dismissal from Battelle for Kids, and perhaps criminal and/or civil penalties.

I agree to choose a difficult-to-guess password as described in the Battelle for Kids' Information Security Policies Manual, I agree not to share this password with any other person, and I agree not to write this password down unless it has been transformed in an unrecognizable way.

I also agree to promptly report all violations or suspected violations of information security policies to the director of the Technology department.

_____
User's Signature

_____
Date

AGENCY OF EDUCATION: State Data Report Card Reporting Project
RISK REGISTER DESCRIPTION:

1. Risk Description: Provide a description of what the risk entails
2. Source of Risk: Project, Proposed Solution, Vendor or Other
3. Risk Rating: Risk ratings to indicate: Likelihood and probability of risk occurrence; Impact should risk occur; and Overall risk rating (high, medium or low priority)
4. Risk Strategy: State's Planned Risk Strategy: **Avoid, Mitigate, Transfer or Accept**
    a. Avoid: Avoid the activity; activities with a high likelihood of loss and large impact.
    b. Mitigate: Develop a plan to reduce risk to reduce the risk of potential loss; activities with a high likelihood of occurring, but impact is small.
    c. Transfer: Outsource risk (or a portion of the risk - Share risk) to third party or parties that can manage the outcome; activities with low probability of occurring, but with a large impact. Often times this is transferred back to vendor.
    d. Accept: Take the chance of negative impact, eventually budget the cost (i.e. a contingency budget line); activities where cost-benefit analysis determines the cost to mitigate risk is higher than cost to bear the risk, then the best response is to accept and continually monitor the risk.
5. Timing of Risk Response: Describes the suggested timing for carrying out the risk response (e.g. prior to the start of the project, during the Planning Phase, prior to implementation, etc.)
6. State's Planned Risk Response: Describe what the State plans to do (if anything) to address the risk (See Risk Response table)
7. Reviewer's Assessment of State's Planned Response: Indicate if the planned response is adequate/appropriate in your judgment and if not what would you recommend.

Department Action Step: Respond to the sections highlighted in yellow (Risk Strategy, State's Planned Risk Response) and send copy back to David Gadway for review

NOTE: Hyperlinks are used on the Risk ID. From the Risk Register, CTL-CLICK on a link to see the Risk Response, or from the Risk Response, CTL-CLICK on a link to go back to the Risk Register.

RISK REGISTER:

Risk #:	Risk Description	Source of Risk	Risk Rating: Impact	Risk Rating: Probability	Risk Rating: Overall Risk	State Risk Strategy Summary (Avoid, Mitigate, Transfer, Accept)	Timing of Response	Reviewer Assessment of Response
1a	Budget/Funding: No risks. Project funding is secure. Scope of work is fixed price.							
2a	Contract: There are a few contract-related items that warrant noting. 1. Define Deliverables Acceptance criteria and tie payments to those deliverables. See **Appendix A** for suggested starting point for Payment for Deliverables. Defining the acceptance criteria of each deliverable is needed. 2. Define Testing responsibilities as Vendor did not propose those. When asked during the IR, what the scope of work related to Testing is, Vendor provided detail outlined in **Appendix B**. Consider including that **Appendix B** content in the Scope of Work/Deliverables section of the Contract. 3. Define Training responsibilities as Vendor did not propose those. When asking during the IR, what the scope of work related to Training is, Vendor provided detail outlined in **Appendix C**. Consider including that **Appendix C** content in the Scope of Work/Deliverables section of the Contract. 4. Define Service Level Agreements in the Contract. See **Appendix D** for suggested content. 5. Ensure Vendor can support security of FERPA data. 6. Include Non-Functional Requirements.	Project	Medium	Low	Low	2.1 Mitigate 2.2 Mitigate 2.3 Mitigate 2.4 Mitigate	Prior to contract execution	Risk strategy accepted.
3a	Vendor Risk: As this is a custom software development project, the vendor cannot demonstration or point to an existing product, and can only promise that given their experience with similar projects, they can also deliver on this project.	Project	Medium	Medium	Medium	Accept	Prior to contract execution and during project	Risk strategy accepted.

4a	SOV Service Level/Staffing: Vendor suggests the following related to current technical knowledge: "*Technical knowledge transfer sessions will be scheduled to train the Vermont AOE staff who will be responsible for maintaining the application in the future. This technical training will be inclusive of all components developed as part of the Online Report Card System including, architecture, database design, programming practices, application components, installation, and troubleshooting. It is expected that the Vermont AOE technical staff is knowledgeable and has prior experience developing in the application technology stack as described in this document (e.g., Microsoft SQL Server, Visual Studio, C#, ASP.NET MVC, Bootstrap, etc.).*" AOE technical staff indicated they are just starting their training in this technology stack. As such, they are not yet able to meet this Vendor assumption. This impacts scope and potentially budget should AOE staff not be able to maintain solution and AOE needs additional Vendor support.	Project	Medium	Medium	Medium	Mitigate and/or Accept	Prior to contract execution and during project	Risk strategy accepted.
5a	Project Management Staffing: No risk noted. Adequate Project Management staffing identified for project from both AOE and BFK.							
6a	Project Schedule: No risk noted. Adequate time and resource to complete project.							
7a	Infrastructure: Backup/Restore Platform: No risk noted.							
7b	Infrastructure: Hardware Platform: Hosting: As the plan is to move off of Vendor hosting in 2 years to another hosting provider, either internal or other external (AWS, Azure, etc.), consider moving to that hosting environment now and holding BFK responsible for ensuring their solution works in that hosting environment, as part of this scope of work.	Project	Low	Low	Low	Mitigate	Prior to contract execution	Risk strategy accepted.

7c	Infrastructure: Business Continuity/Disaster Recovery: No risk noted.							
8a	Scope/Functional Requirements: The draft Vermont State Plan drives the scope of work but is not yet approved by Dept. of Education. There is a slight chance that the draft is not approved or the scope of work changes.	Project	Medium	Medium	Medium	Mitigate	Prior to contract execution and during project	Risk strategy accepted.
8b	Scope/Non-Functional Requirements: No risk noted.							
9a	Interoperability: No Vendor requirements in the Scope of Work related to Interoperability. There is the expectation that data sources are identified by AOE that will populate the reporting database. There is also the expectation that the SLDS (State Longitudinal Data System) System is in place, which is the primary data source. The SLDSs system is in progress/not yet completed. As such, there is a risk that that the SLDS is not fully available when needed. There is also a risk that there is some gap is data required vs. data available from SLDS or other data sources.	Project	Medium	Medium	Medium	Accept and Mitigate	During project	Risk strategy accepted.
10a	Compliance/Regulatory: No risk noted.							
11a	Security: No risk noted. There is no personally identifiable data in play. The hosted data center is FISMA compliant.							
12a	Other: No Risk Noted.							

RISK RESPONSE:

Risk #:	State's Planned Risk Response and Reviewer's Assessment of State's Risk Response
1a	**STATE'S RISK RESPONSE:** N/A. No risk noted.
2a	**STATE'S RISK RESPONSE:** 1. Mitigate - We will define in the Contract both the Deliverables as well as a Payment Schedule based on those Deliverables aligned with those identified in Appendix A. The State will also define the Acceptance Criteria of each Deliverable during Phase I. 2. Mitigate - We will define in the Contract both Testing Deliverables and a Testing Plan with Schedule and Responsibilities aligned with those identified in Appendix B. 3. Mitigate - We will define in the Contract the Training Plan with Schedule and Responsibilities aligned with those identified in Appendix C. 4. Mitigate - We will define in the Contract the Service Level Agreements aligned with those identified in Appendix D. **REVIEWER'S ASSESSMENT:** Risk strategy accepted.
3a	**STATE'S RISK RESPONSE:** Disagree with Risk—While this is a unique project that will be designed to our specifications, the vendor was able to point to other similar projects it has developed in other locations. The AOE does not feel this is a risk. **STATE'S RISK RESPONSE #2:** Accept Risk—While this is a unique project that will be designed to our specifications, the vendor was able to point to other similar projects it has developed in other locations. **REVIEWER'S ASSESSMENT:** Any custom development effort is a risk, in that, a finished product is not demonstrable. Suggest accepting this risk vs. suggesting it is not a risk. **REVIEWER'S ASSESSMENT #2:** Risk strategy accepted.

4a	**STATE'S RISK RESPONSE:** Mitigate and/or accept-- AOE is in the process of hiring a developer; skills with this architecture will be an employment qualification. If AOE is unable to hire a developer with these skills the cost to continue in the hosted model is not exorbitant. **STATE'S RISK RESPONSE #2:** Mitigate and/or accept-- AOE is in the process of hiring a developer; skills with this architecture will be an employment qualification. If AOE is unable to hire a developer with these skills the cost to continue in either the vendor-supported/hosted model or to supplement in-house staff for what is expected to be minimal programming needs is not exorbitant. AOE specifically required the solution to be developed in non-proprietary platforms with the hopes that skills to maintain will be available in-house; however, this approach also allows the State to potentially tap into other available State resources, via the shared Agency of Digital Services model, or contract for temporary contractual services should in-house resources not be completely up-to-speed. The reality is that changes to this system will be infrequent and likely very minor in nature and the non-proprietary platforms and technologies on which it is to be built will give the State options regarding the best way to resource these changes. **REVIEWER'S ASSESSMENT:** This is less about the cost to host, as it is the cost to maintain (change or add functionality). Are you saying the alternative is to hire the vendor to maintain the solution? **REVIEWER'S ASSESSMENT #2:** Risk strategy accepted.
5a	**STATE'S RISK RESPONSE:** N/A. No risk noted.
6a	**STATE'S RISK RESPONSE:** N/A. No risk noted.
7a	**STATE'S RISK RESPONSE:** N/A. No risk noted.
7b	**STATE'S RISK RESPONSE:** Mitigate—AOE will discuss this approach with vendor to determine if implementation on one of these platforms fits timeline. We will build into contract if no significant delays or added cost is expected. **REVIEWER'S ASSESSMENT:** Risk strategy accepted.
7c	**STATE'S RISK RESPONSE:** N/A. No risk noted.

8a	**STATE'S RISK RESPONSE:** Mitigate—We believe that our plan meets all federal guidelines and should be accepted as submitted. The plan must be accepted within 120 days of April 3. As a result, the state should know the status of the plan by August 1. The federal plan covers approximately 50% of the total work effort in the project; while we are waiting for federal approval we can progress on the state accountability measures. We will also include in the contract the ability to pause the work if negotiations with the federal government stall. **REVIEWER'S ASSESSMENT:** Risk strategy accepted.
8b	**STATE'S RISK RESPONSE:** N/A. No risk noted.
9a	**STATE'S RISK RESPONSE:** Accept and Mitigate—While SLDS is primary source of data for Report Card, data are currently collected via other means. Thus, data is and will be available in some form or fashion and AOE will be able to compile data in needed formats regardless of SLDS status. AOE will work with vendor to establish plan for filling gaps of data not currently collected. **REVIEWER'S ASSESSMENT:** Risk strategy accepted.
10a	**STATE'S RISK RESPONSE:** N/A. No risk noted.
11a	**STATE'S RISK RESPONSE:** N/A. No risk noted.
12a	**STATE'S RISK RESPONSE:** N/A. No risk noted.

APPENDIX A – DELIVERABLE PAYMENT SCHEDULE

Consider including the following Deliverable Payment content in the Contract.

Acceptance criteria for each deliverable needs to be defined in the contract.

Deliverable	Invoice Date	Amount
Project kickoff, discovery, project documentation development (e.g., project charter)	July 2017	$34,225
Functional requirements and user experience and validation flow	July 2017	$71,268
Hosting – Year 1	July 2017	$32,000
Development Phase 1	August 2017	$74,134
Development Phase 1	September 2017	$74,133
Development Phase 1	October 2017	$74,133
Development Phase 1	November 2017	$74,133
Technical Documentation and Communications Materials Development	November 2017	$64,859
Development Phase 1 Data Load and Beta Testing	January 2018	$61,333
Help desk/support, maintenance, fixes	January 2018	$17,083
Development Phase 2	May 2018	$46,256
Development Phase 2	June 2018	$46,256
Development Phase 2	July 2018	$46,255
Development Phase 2 Data Load and Testing	July 2018	$49,866
Hosting – Year 2	July 2018	$40,000
Development Rollout	August 2018	$18,000
Help desk/support, maintenance, fixes	August 2018	$17,083
Knowledge Transfer, Training, Handoff Report, Final Project Report	February 2019	$58,027
Total		**$899,044**

APPENDIX B – TESTING

Consider including the following Testing-related Scope of Work content in the Contract:

1. Unit Testing: Developers will use a test-driven development approach. Unit tests will be written to validate individual units of logic. These tests will run automatically when the code is built to ensure potential bugs are captured early during the development phase and facilitate regression testing.
2. Load Testing: Visual Studio Enterprise Edition will be used for load testing. Scripts will be created to step through critical pages within the application and the tool will run the script for a significant number of users at a time. During the test, key indicators such as Memory Usage, Average Page Time, Average Response Time, CPU utilization (web and SQL servers), and IIS Queue Size will be monitored.
3. Manual Testing: This will be done by a set of individuals who will test the functionality of the application and ensure that it meets all of the requirements defined within the use cases.
4. Testing Toolset: Jira Software will be used to track testing.
5. User Acceptance Testing:
    a. Will be done at all phases of the design and development process, beginning with the wireframes.
    b. Will continue throughout the development process to ensure that requirements are being met at each step of the development. This testing will be completed in the development and test environments.
    c. When the software is released in the production environment in beta version, additional UAT will be performed. This may potentially include some testing by members of the community.

APPENDIX C – TRAINING

Consider including the following Training-related Scope of Work content in the Contract:

1. Training to Vermont AOE Technical Staff:
    a. Technical knowledge transfer sessions will be scheduled to train the Vermont AOE staff who will be responsible for maintaining the application in the future. This technical training will be inclusive of all components developed as part of the Online Report Card System including, architecture, database design, programming practices, application components, installation, and troubleshooting. It is expected that the Vermont AOE technical staff is knowledgeable and has prior experience developing in the application technology stack as described in this document (e.g., Microsoft SQL Server, Visual Studio, C#, ASP.NET MVC, Bootstrap, etc.).
    b. Other suggestions to Vermont AOE staff includes:
        i. Early participation in the project highly encouraged
        ii. Invited to participate in SCRUM meetings remotely
        iii. Invited to participate in Functional and Technical discussions
        iv. Participate in beta testing
        v. Invited to be part of the development team to get acquainted with the solution early
2. Technical Training Documentation
    a. Battelle for Kids will create and maintain development documentation of the system including: high level architecture diagrams, database diagrams, data dictionary, technical design documents, and hosting and network diagrams. Additionally, the source code will be self-documented with developer notes.
    b. Communication toolkit:
        i. User guide
        ii. Message map
        iii. Sample editorial calendar
        iv. FAQs
        v. Facilitation, parent, and educator guides
        vi. Power point presentation
        vii. Video screencast of application functionality (with narration and animation)
3. Training for the field
    a. BFK proposes to develop a customized toolkit for Vermont school district leaders and principals about the state report card being implemented across the state. The communications toolkit will be a resource to support district leaders and principals who are engaging teachers, parents, community, and other stakeholders in conversations about the report card and how the information can and will be used in the district. The toolkit will offer a comprehensive series of resources for all stakeholder groups to learn about the state report card conceptually, understand benefits of the information, and engage in activities to interpret and reflect on the information.

        BFK will work with the AOE to ensure all communication/training materials are effective, cohesive, and personalized, as

appropriate to all audiences. BFK will develop all content and graphic design for these materials in partnership with the AOE's vision (specific materials to be included in the toolkit are described question #3 below). In addition, BFK will facilitate a strategy conversation with the AOE to inform implementation and recommended channels to reach all audiences (e.g., website, newsletter, social media).

APPENDIX D – SERVICE LEVEL AGREEMENT

Consider including the following Service Level Agreement content in the Contract:

TECH SUPPORT - SERVICE LEVEL AGREEMENT:

BFK will provide 2nd-level technical support to application functionality ("how to" type of questions) and technical issues or difficulties using the system. Shall a support request need escalation to Battelle for Kids, the Vermont AOE support staff will be able to create support tickets 24x7 by going to the BFK technical support website, by sending an email or by calling our tech support line. Typical issues to be escalated include:

- Application errors.
- Access denied conditions to specific users and/or areas of the application that are not related to permissions.
- Unexpected behaviors to commonly used application functionality.
- Problems accessing specific pages or functionality in the system.
- System/website unavailable or unreachable to users.
- Other unusual situations.

In order to ensure prompt resolution to the case, issues will be escalated using the levels defined below:

Critical Errors – Application is unavailable or all users are unable to perform any tasks in the system.

***Business hours**:* Provide all available documentation and call the BFK Support Team number.

***After hours**:* Provide all available documentation and call the after-hours BFK Support number.

Target response time: 2 hours

High – Issue is affecting isolated areas of functionality with no work-around.

Please create a support ticket with all documentation available and email the Battelle for Kids support team indicating that the ticket is a high priority.

Target response time: 8 hours (within next business day)

Medium – Issue is affecting isolated areas of functionality but there is a work-around.

Please create a support ticket with all documentation available.

Target response time: 2 business days

SYSTEM RESPONSE TIME - SERVICE LEVEL AGREEMENT:

1. System response time will be measured using the 90th percentile method. Using this measurement, 90% of the web application pages will load in 5 seconds or less. The response time will be measured using automated testing tools.

SYSTEM AVAILABILITY - SERVICE LEVEL AGREEMENT (3 9s, 4 9s?):

1. The web application will provide uptime of 99.5% or higher.

BUG FIX – SERVICE LEVEL AGREEMENT:

1. Bug fixes will typically be reported through on of the following mechanisms:

a. Error conditions identified as part of application development testing.
    i. Under this scenario, these bug fixes are identified prior to the functionality being available to end users and as such will be prioritized and put back into the sprint log and be addressed as part of the development cycle. Unit cases will be developed to ensure this condition is addressed before the functionality is released to the production environment.
b. Error conditions identified as part of Support tickets troubleshooting
c. In this situation, the bug fix SLA will follow the Tech Support SLA described above.

HOSTING SERVICE LEVEL AGREEMENT:

1. Expedient Datacenters provide uptime of 99.99% or higher.

DR/BC SERVICE LEVEL AGREEMENT:

1. RPO (recovery point objective): 1 day.
2. RTO (recovery time objective): 24-36 hours.

AGENCY OF EDUCATION: State Report Card Reporting Project - 5 Year Life Cycle

STATEMENT OF: Use of Funds (Expenses), Source of Funds (Revenue), Cash Flow, and Net Change in Operating Cost

Click on the links to the left to go to that data

CASH FLOW ANALYSIS: Click Here

SUMMARY:	
Total Cost:	$1,987,027
Total Funding:	$1,987,027
State Funding:	$954,188
Federal Funding:	$1,032,839
Potential Revenue Recovery:	$0
Funding Excess/(Shortage):	($0)

IMPLEMENTATION and OPERATING COSTS:		
Implementation Costs:	$1,665,723	
New Operating Costs:	$321,304	
Current Operating Costs:	$286,024	
		$
NET CHANGE IN OPERATING COSTS-Decr./(Incr.):		($35,280)
	State Decrease/(Increase):	$22,360
	Federal Decrease/(Increase):	-$57,640

USE OF FUNDS - START

Description	Note	Unit Price	Impl/Ops	Total		Prior Costs	IMP Year 1 (FY18)	IMP Year 2 (FY19)	IMP Year 3 (FY20)	M&O Year 4 (FY21)	M&O Year 5 (FY22)	M&O Year 6 (FY23)	M&O Year 7 (FY24)	M&O Year 8 (FY25)	M&O Year 9 (FY26)	M&O Year 10 (FY27)	Software Total	Source
EXTERNAL-RELATED COSTS																		
VENDOR COSTS																		
SOFTWARE AND SERVICES																		
SOFTWARE ❶																		
Software Being Licensed:																		
Implementation: No NEW software expected to be licensed, rather, considered upgrade/operational costs and noted below			I				$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	IT ABC Form
Operations: No NEW software expected to be licensed, rather, considered upgrade/operational costs and noted below			O				$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0 $0	IT ABC Form
SOFTWARE TOTAL							**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	
Description	**Note**	**Unit Price**	**Impl/Ops**	**Total**			**Year 1 (FY18)**	**Year 2 (FY19)**	**Year 3 (FY20)**	**Year 4 (FY21)**	**Year 5 (FY22)**	**Year 6 (FY23)**	**Year 7 (FY24)**	**Year 8 (FY25)**	**Year 9 (FY26)**	**Year 10 (FY27)**		
SERVICES																		
			Impl/Ops			**Prior Costs**												
Implementation Services	**19 months**																	
Total Hours:	**5076**	**Total Fees:**	**$761,100**															
Project Manager	1185		I				$88,840	$88,840	$0	$0	$0	$0	$0	$0	$0	$0	$177,680	Vendor Proposal
Developers and Data Analysts, including Training	3214		I				$240,955	$240,955	$0	$0	$0	$0	$0	$0	$0	$0	$481,910	Vendor Proposal
Communications	248		I				$18,593	$18,593	$0	$0	$0	$0	$0	$0	$0	$0	$37,185	Vendor Proposal
Subject Matter Experts	210		I				$15,744	$15,744	$0	$0	$0	$0	$0	$0	$0	$0	$31,488	Vendor Proposal
Help Desk	219		I				$16,419	$16,419									$32,837	Vendor Proposal
Travel:	8 Trips		I				$32,972	$32,972	$0	$0	$0	$0	$0	$0	$0	$0	$65,944	Vendor Proposal
Other																		
Contingency	Nothing allocated at present		I				$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	
TOTAL: IMPLEMENTATION SERVICES						**$0**	**$413,522**	**$413,522**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$827,044**	
Other Services:																		
							$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	
Other Services Total:							**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	
SERVICES TOTAL						**$0**	**$413,522**	**$413,522**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$827,044**	
SOFTWARE AND SERVICES TOTAL						**$0**	**$413,522**	**$413,522**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$827,044**	
MAINTENANCE AND OPERATIONS SUPPORT																		
Maintenance fees not expected; Solution expected to be maintained internally							$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0 **$0**	
MAINTENANCE AND OPERATIONS SUPPORT TOTAL				**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	
HARDWARE																		
Hardware for Implementation	No additional hardware expected		I	$0			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	
Hardware for Operations	No additional hardware expected		O	$0			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	
HARDWARE TOTAL							**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	
				$0			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	
HOSTING FEES		**Impl/Ops**																
Hosting Fee via Expedient		I	$0				$32,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$32,000	Vendor Proposal
Hosting Fee via Expedient		O	$0				$0	$40,000	$40,000	$40,000	$40,000	$0	$0	$0	$0	$0	$160,000	Vendor Proposal
HOSTING TOTAL							**$32,000**	**$40,000**	**$40,000**	**$40,000**	**$40,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$192,000**	

OTHER FEES																	
		I				$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	
																$0	
																$0	
OTHER TOTAL			**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	
TOTAL VENDOR COSTS			**$0**		**$0**	**$445,522**	**$453,522**	**$40,000**	**$40,000**	**$40,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$1,019,044**	
TOTAL EXTERNAL-RELATED COSTS		TotIO			**$0**	**$445,522**	**$453,522**	**$40,000**	**$40,000**	**$40,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$1,019,044**	
INTERNAL COSTS																	
DEPARTMENTAL INTERNAL COSTS		**Impl/Ops**															
Staffing Costs: ❷																	
Project Management:																	
Internal Project Manager: Patrick Halladay	.5 FTE@$55@2080 hours for 2 years	100% funded by State Funds	I			$57,200	$57,200	$0	$0	$0	$0	$0	$0	$0	$0	$114,400	IT ABC Form
Subject Matter Experts: Data Management:		50% funded by State Funds, 50% Federal Indirect															
Data team: Wendy Geller	0.25 FTE@$55@2080 hours for 2 years		I			$28,600	$28,600	$0	$0	$0	$0	$0	$0	$0	$0	$57,200	
Data team: Glenn Bailey	0.25 FTE@$55@2080 hours for 2 years		I			$28,600	$28,600	$0	$0	$0	$0	$0	$0	$0	$0	$57,200	
Data team: Jennifer Perry	0.25 FTE@$55@2080 hours for 2 years		I			$28,600	$28,600	$0	$0	$0	$0	$0	$0	$0	$0	$57,200	
Data team: Beth-Ann Willey	0.25 FTE@$55@2080 hours for 2 years		I			$28,600	$28,600	$0	$0	$0	$0	$0	$0	$0	$0	$57,200	
Data team: David Kelley	0.25 FTE@$55@2080 hours for 2 years		I			$28,600	$28,600	$0	$0	$0	$0	$0	$0	$0	$0	$57,200	
Data team: Dan Shepard	0.25 FTE@$55@2080 hours for 2 years		I			$28,600	$28,600	$0	$0	$0	$0	$0	$0	$0	$0	$57,200	
Data team: Rachel Stanger	0.25 FTE@$55@2080 hours for 2 years		I			$28,600	$28,600	$0	$0	$0	$0	$0	$0	$0	$0	$57,200	
Data team: Mike Bailey	0.25 FTE@$55@2080 hours for 2 years		I			$28,600	$28,600	$0	$0	$0	$0	$0	$0	$0	$0	$57,200	
Data team: Wendy Geller	0.02 FTE@$55@2080 hours per year		O			$0	$0	$2,288	$2,288	$2,288	$0	$0	$0	$0	$0	$6,864	
Data team: Glenn Bailey	0.075 FTE@$55@2080hours per year		O			$0	$0	$8,580	$8,580	$8,580	$0	$0	$0	$0	$0	$25,740	
Data team: Jennifer Perry	0.02 FTE@$55@2080 hours per year		O			$0	$0	$2,288	$2,288	$2,288	$0	$0	$0	$0	$0	$6,864	
Data team: Beth-Ann Willey	0.02 FTE@$55@2080 hours per year		O			$0	$0	$2,288	$2,288	$2,288	$0	$0	$0	$0	$0	$6,864	
Data team: David Kelley	0.02 FTE@$55@2080 hours per year		O			$0	$0	$2,288	$2,288	$2,288	$0	$0	$0	$0	$0	$6,864	
Data team: Dan Shepard	0.02 FTE@$55@2080 hours per year		O			$0	$0	$2,288	$2,288	$2,288	$0	$0	$0	$0	$0	$6,864	
Data team: Rachel Stanger	0.075 FTE@$55@2080hours per year	Based ongoing maintenance on hours included in vendor's powerpoint and knowledge of SME areas of expertise. Assuming that one statistician will be primarily responsible for loading/maintenance with support from other SMEs including slightly greater lift from assessment/accountability SME annually.	O			$0	$0	$8,580	$8,580	$8,580	$0	$0	$0	$0	$0	$25,740	
Data team: Mike Bailey	0.02 FTE@$55@2080 hours per year		O			$0	$0	$2,288	$2,288	$2,288	$0	$0	$0	$0	$0	$6,864	
LEA Trainers:		50% funded by State Funds, 50% Federal Indirect															
Training team	.25 FTE@$55@2080 hours for 2 years		I			$28,600	$28,600	$0	$0	$0	$0	$0	$0	$0	$0	$57,200	IR
Software Development Team		50% funded by State Funds, 50% General															
Software Developers: Janelle Gallison	.25 FTE@$55@2080 for 2 years during implementation		I			$28,600	$28,600	$0	$0	$0	$0	$0	$0	$0	$0	$57,200	
Software Developers: Bill Schwartz	.25 FTE@$55@2080 for 2 years during implementation		I			$28,600	$28,600	$0	$0	$0	$0	$0	$0	$0	$0	$57,200	
Software Developers: Janelle Gallison	.1 FTE@$55@2080 per year		O			$0	$0	$11,440	$11,440	$11,440	$0	$0	$0	$0	$0	$34,320	
Software Developers: Bill Schwartz	.1 FTE@$55@2080 per year		O			$0	$0	$11,440	$11,440	$11,440	$0	$0	$0	$0	$0	$34,320	
Other Internal Costs:																	
WAN Costs			O			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	
Other 3rd Party Software			I			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	
DEPARTMENTAL INTERNAL COSTS TOTAL						**$371,800**	**$371,800**	**$53,768**	**$53,768**	**$53,768**	**$0**	**$0**	**$0**	**$0**	**$0**	**$904,904**	
TOTAL INTERNAL COSTS		TotIO				$371,800	$371,800	$53,768	$53,768	$53,768	$0	$0	$0	$0	$0	$904,904	
DII FEES																	
Project Implementation Costs Summary:						**$817,322**	**$785,322**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$1,602,644**	
3% Charge for DII PMO/EA Services Project Implementation Costs:			I			$24,520	$23,560	$0	$0	$0	$0	$0	$0	$0	$0	$48,079	
Independent Review			I			$15,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$15,000	
DII FEES TOTAL		**TotIO**				**$39,520**	**$23,560**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$63,079**	

TOTAL COSTS (IMPLEMENTATION and OPERATIONS)				$0	$856,842	$848,882	$93,768	$93,768	$93,768	$0	$0	$0	$0	$0	$1,987,027	

COST BREAKOUT (IMPLEMENTATION and OPERATIONS)

Implementation	$0	$856,842	$808,882	$0	$0	$0	$0	$0	$0	$0	$0	$1,665,723	
Operations	$0	$0	$40,000	$93,768	$93,768	$93,768	$0	$0	$0	$0	$0	$321,304	
COST BREAKOUT TOTALS (IMPLEMENTATION and OPERATIONS)	$0	$856,842	$848,882	$93,768	$93,768	$93,768	$0	$0	$0	$0	$0	$1,987,027	$0

USE OF FUNDS - END

SOURCE OF FUNDS - START

Revenue Source:				**Prior**	**Year 1 (FY18)**	**Year 2 (FY19)**	**Year 3 (FY20)**	**Year 4 (FY21)**	**Year 5 (FY22)**	**Year 6 (FY23)**	**Year 7 (FY24)**	**Year 8 (FY25)**	**Year 9 (FY26)**	**Year 10 (FY27)**	**TOTAL**
															$0
Assume Year 1 and 2 are Implementation related, Years 3-x are Operations related															
❸															
STATE FUNDING: Implementation: Operating Budget	37.67%	State Medicaid Special Fund	I	$0	$512,237	$236,299	$0	$0	$0	$0	$0	$0	$0	$0	$748,536
STATE FUNDING: Operations: Operating Budget	6.07%	State Medicaid Special Fund/General Fund	O	$0	$0	$10,000	$36,884	$36,884	$36,884	$0	$0	$0	$0	$0	$120,652
Grant Funding: Implementation	4.28%	Nellie Mae Contribution	I	$0	$85,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$85,000
Grant Funding: Operations	0.00%	Nellie Mae Contribution	O	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
FEDERAL FUNDING: Implementation	10.07%	SLDS Reallocation	I	$0	$200,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$200,000
FEDERAL FUNDING: Implementation	31.82%	SARA Funding/Title I Assessment Fund	I	$0	$285,072	$347,115	$0	$0	$0	$0	$0	$0	$0	$0	$632,187
FEDERAL FUNDING: Operations:	10.10%	SARA Funding/Title I Assessment Fund	O	$0	$0	$0	$66,884	$66,884	$66,884	$0	$0	$0	$0	$0	$200,652
TOTAL:	**100.00%**			**$0**	**$1,082,309**	**$593,414**	**$103,768**	**$103,768**	**$103,768**	**$0**	**$0**	**$0**	**$0**	**$0**	**$1,987,027**

Summary by State and Federal:

State Funding:	**$954,188**			0	$597,237	$246,299	$36,884	$36,884	$36,884	$0	$0	$0	$0	$0
Federal Funding:	**$1,032,839**			$0	$485,072	$347,115	$66,884	$66,884	$66,884	$0	$0	$0	$0	$0

Implementation Funds:	**$1,665,723**	**Funding Overage/(Shortage):**
Implementation Costs:	**$1,665,723**	**($0)**
Operational Funds:	**$321,304**	
Operational Costs:	**$321,304**	**$0**

SOURCE OF FUNDS - END

PROJECT CASH FLOW - START

IMPLEMENTATION	**Prior**	**Year 1 (FY18)**	**Year 2 (FY19)**	**Year 3 (FY20)**	**Year 4 (FY21)**	**Year 5 (FY22)**	**Year 6 (FY23)**	**Year 7 (FY24)**	**Year 8 (FY25)**	**Year 9 (FY26)**	**Year 10 (FY27)**	**TOTAL**
Use	$0	$856,842	$808,882	$0	$0	$0	$0	$0	$0	$0	$0	$1,665,723
Source	$0	$797,237	$236,299	$0	$0	$0	$0	$0	$0	$0	$0	$1,033,536
Net Cash by Fiscal Year:	$0	($59,605)	($572,583)	$0	$0	$0	$0	$0	$0	$0	$0	($632,187)
Cash Flow:	**$0**	**($59,605)**	**($632,187)**	**($632,187)**	**($632,187)**	**($632,187)**	**($632,187)**	**($632,187)**	**($632,187)**	**($632,187)**	**($632,187)**	**($632,187)**

OPERATIONS	**Prior**	**Year 1 (FY18)**	**Year 2 (FY19)**	**Year 3 (FY20)**	**Year 4 (FY21)**	**Year 5 (FY22)**	**Year 6 (FY23)**	**Year 7 (FY24)**	**Year 8 (FY25)**	**Year 9 (FY26)**	**Year 10 (FY27)**	**TOTAL**
Use	$0	$0	$40,000	$93,768	$93,768	$93,768	$0	$0	$0	$0	$0	$321,304
Source	$0	$285,072	$357,115	$36,884	$36,884	$36,884	$0	$0	$0	$0	$0	$752,839
Net Cash by Fiscal Year:	$0	$285,072	$317,115	($56,884)	($56,884)	($56,884)	$0	$0	$0	$0	$0	$431,535
Cash Flow:	**$0**	**$285,072**	**$602,187**	**$545,303**	**$488,419**	**$431,535**	**$431,535**	**$431,535**	**$431,535**	**$431,535**	**$431,535**	**$431,535**

CASH FLOW - END

NET CHANGE IN OPERATING COSTS - START

			Year 1 (FY18)	Year 2 (FY19)	Year 3 (FY20)	Year 4 (FY21)	Year 5 (FY22)	Year 6 (FY23)	Year 7 (FY24)	Year 8 (FY25)	Year 9 (FY26)	Year 10 (FY27)	TOTAL
Proposed Operating Costs:													
Total Operating Costs	*See COST BREAKOUT section above*		$0	$40,000	$93,768	$93,768	$93,768	$0	$0	$0	$0	$0	$321,304
Total: Proposed Operating Costs:			**$0**	**$40,000**	**$93,768**	**$93,768**	**$93,768**	**$0**	**$0**	**$0**	**$0**	**$0**	**$321,304**
Current Operating Costs:	For purposes of comparing operating costs to new operating costs, we only include years 3-5 as those are the years the new operating costs will exist, except for hosting which shows years 2-5												
Software Licenses	Per IT ABC Form				$5,400	$5,400	$5,400	$0	$0	$0	$0	$0	$16,200
Hosting	Per IT ABC Form			$40,000	$40,000	$40,000	$40,000	$0	$0	$0	$0	$0	$160,000
State Labor:	Per Brian Townsend	Current operating costs largely understated on ABC form as existing activities for piecemealed report card web page not fully considered.											
Subject Matter Experts: Data Management:													
Data team: Wendy Geller	0.02 FTE@$55@2080 hours per year				$2,288	$2,288	$2,288	$0	$0	$0	$0	$0	$6,864
Data team: Glenn Bailey	0.05 FTE@$55@2080hours per year				$5,720	$5,720	$5,720	$0	$0	$0	$0	$0	$17,160
Data team: Jennifer Perry	0.02 FTE@$55@2080 hours per year				$2,288	$2,288	$2,288	$0	$0	$0	$0	$0	$6,864
Data team: Beth-Ann Willey	0.02 FTE@$55@2080 hours per year				$2,288	$2,288	$2,288	$0	$0	$0	$0	$0	$6,864
Data team: David Kelley	0.02 FTE@$55@2080 hours per year				$2,288	$2,288	$2,288	$0	$0	$0	$0	$0	$6,864
Data team: Dan Shepard	0.02 FTE@$55@2080 hours per year				$2,288	$2,288	$2,288	$0	$0	$0	$0	$0	$6,864
Data team: Rachel Stanger	0.05 FTE@$55@2080hours per year				$5,720	$5,720	$5,720	$0	$0	$0	$0	$0	$17,160
Data team: Mike Bailey	0.02 FTE@$55@2080 hours per year				$2,288	$2,288	$2,288	$0	$0	$0	$0	$0	$6,864
Software Development Team													
Software Developers: Bill Schwartz	.1 FTE @55@2080 per year				$11,440	$11,440	$11,440	$0	$0	$0	$0	$0	$34,320
					$0	$0	$0	$0	$0	$0	$0	$0	$0
Total: Current Operating Costs:			***$0***	***$40,000***	***$82,008***	***$82,008***	***$82,008***	***$0***	***$0***	***$0***	***$0***	***$0***	***$286,024***
Net Operating Cost Decrease/(Increase)			**$0**	**$0**	**($11,760)**	**($11,760)**	**($11,760)**	**$0**	**$0**	**$0**	**$0**	**$0**	**($35,280)**
New Operating Costs funded by SOV Sources	Source: See above		$0	$10,000	$36,884	$36,884	$36,884	$0	$0	$0	$0	$0	$120,652
Current Operating Costs funded by SOV Sources	Source: General fund @ 50%		$0	$20,000	$41,004	$41,004	$41,004	$0	$0	$0	$0	$0	$143,012
❹ **Net SOV Operating Cost Decrease/(Increase)**			**$0**	**$10,000**	**$4,120**	**$4,120**	**$4,120**	**$0**	**$0**	**$0**	**$0**	**$0**	**$22,360**
New Operating Costs funded by Federal Sources	Source: See above		$0	$66,884	$66,884	$66,884	$0	$0	$0	$0	$0	$0	$200,652
Current Operating Costs funded by Federal Sources	Source: SARA/Title I assessment funds @ 50%		$0	$20,000	$41,004	$41,004	$41,004	$0	$0	$0	$0	$0	$143,012
❺ **Net Federal Operating Cost Decrease/(Increase)**			**$0**	**($46,884)**	**($25,880)**	**($25,880)**	**$41,004**	**$0**	**$0**	**$0**	**$0**	**$0**	**($57,640)**

NET CHANGE IN OPERATING COSTS - END

NOTES / ASSUMPTIONS:

❶ No new license costs allocated as this is a custom solution; Relicense of existing software expected
❷ Staffing levels anticipated through this project
❸ Funding Sources
❹ Net State Operating Cost Changes
❺ Net Federal Operating Cost Changes