

U.S. Department of Education

Washington, D.C. 20202-5335



APPLICATION FOR GRANTS UNDER THE

**STATEWIDE LONGITUDINAL DATA SYSTEM RECOVERY ACT GRANTS
CFDA # 84.384A
PR/Award # R384A100042**

Closing Date: DEC 04, 2009

****Table of Contents****

Forms

| | |
|--|-----|
| 1. Application for Federal Assistance (SF-424) | e1 |
| 2. Standard Budget Sheet (ED 524) | e5 |
| 3. SF 424B - Assurances Non-Construction Programs | e7 |
| 4. Disclosure of Lobbying Activities | e9 |
| 5. ED 80-0013 Certification | e10 |
| 6. Dept of Education Supplemental Information for SF-424 | e11 |

Narratives

| | |
|---|------|
| 1. Project Narrative - (Project Narrative - Project Abstract...) | e12 |
| Project Abstract | e13 |
| 2. Project Narrative - (Project Narrative - Project Narrative...) | e14 |
| Project Narrative | e15 |
| 3. Project Narrative - (Project Narrative - Appendix A, Optional Attach.....) | e45 |
| Appendix A - Optional | e46 |
| 4. Project Narrative - (Project Narrative - Appendix B Resumes of Key P.....) | e55 |
| Appendix B - Resumes | e56 |
| 5. Project Narrative - (Project Narrative - Appendix C Current Status o.....) | e92 |
| Appendix C | e93 |
| 6. Project Narrative - (Project Narrative - Appendix D Letters of Support...) | e97 |
| Appendix D - Letters of Support | e98 |
| 7. Budget Narrative - (Budget Narrative - Budget Justification...) | e116 |
| 7. Budget Narrative (Justification) | e117 |
| 8. Budget Narrative - (Budget Narrative - ED 524 Section C Spreadsheet...) | e135 |
| 4. Budget Information (ED524) - Section C | e136 |

This application was generated using the PDF functionality. The PDF functionality automatically numbers the pages in this application. Some pages/sections of this application may contain 2 sets of page numbers, one set created by the applicant and the other set created by e-Application's PDF functionality. Page numbers created by the e-Application PDF functionality will be preceded by the letter e (for example, e1, e2, e3, etc.).

Application for Federal Assistance SF-424

Version 02

| | | |
|--|---|-------------------|
| * 1. Type of Submission | * 2. Type of Application:* If Revision, select appropriate letter(s): | |
| <input type="checkbox"/> Preapplication | <input checked="" type="checkbox"/> New | |
| <input checked="" type="checkbox"/> Application | <input type="checkbox"/> Continuation | * Other (Specify) |
| <input type="checkbox"/> Changed/Corrected Application | <input type="checkbox"/> Revision | |

| | |
|---------------------|--------------------------|
| * 3. Date Received: | 4. Applicant Identifier: |
| 12/4/2009 | |

| | |
|--------------------------------|---------------------------------|
| 5a. Federal Entity Identifier: | * 5b. Federal Award Identifier: |
| | CFDA 84.384A |

State Use Only:

| | |
|----------------------------|----------------------------------|
| 6. Date Received by State: | 7. State Application Identifier: |
| | |

8. APPLICANT INFORMATION:

* a. Legal Name: Vermont Department of Education

| | |
|---|---------------------------|
| * b. Employer/Taxpayer Identification Number (EIN/TIN): | * c. Organizational DUNS: |
| 036000274 | 884902701 |

d. Address:

| | |
|----------------------|------------------|
| * Street1: | 120 State Street |
| Street2: | |
| * City: | Montpelier |
| County: | Washington |
| State: | VT |
| Province: | |
| * Country: | USA |
| * Zip / Postal Code: | 05620 |

e. Organizational Unit:

| | |
|---------------------------------|------------------------|
| Department Name: | Division Name: |
| Vermont Department of Education | Information Technology |

f. Name and contact information of person to be contacted on matters involving this application:

| | | | |
|--------------|-----|---------------|------|
| Prefix: | Ms. | * First Name: | Lisa |
| Middle Name: | | | |

* Last Name: Gauvin

Suffix:

Title: Information Technology Director

Organizational Affiliation:

Vermont Department of Education

* Telephone Number: (802)828-3719 Fax Number: (802)828-1444

* Email: LISA.GAUVIN@STATE.VT.US

Application for Federal Assistance SF-424

Version 02

9. Type of Applicant 1: Select Applicant Type:

A: State Government

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

* Other (specify):

10. Name of Federal Agency:

U.S. Department of Education

11. Catalog of Federal Domestic Assistance Number:

84.384A

CFDA Title:

Statewide Longitudinal Data System Recovery Act Grants

*** 12. Funding Opportunity Number:**

ED-GRANTS-072909-001

Title:

Statewide Longitudinal Data Systems Grants
under the American Recovery and Reinvestment Act of 2009

13. Competition Identification Number:

84.384A2010-1

Title:

14. Areas Affected by Project (Cities, Counties, States, etc.):

Schools and school districts across the state of Vermont

*** 15. Descriptive Title of Applicant's Project:**

V-DEP - Vermont Data Enhancement Project

Attach supporting documents as specified in agency instructions.

Attachment:

Title :

File :

Attachment:

Title :

File :

Attachment:

Title :

File :

Application for Federal Assistance SF-424

Version 02

16. Congressional Districts Of:

* a. Applicant: VT-01

* b. Program/Project: VT-01

Attach an additional list of Program/Project Congressional Districts if needed.

Attachment:

Title :

File :

17. Proposed Project:

* a. Start Date: 5/3/2010

* b. End Date: 5/3/2013

18. Estimated Funding (\$):

| | |
|--------------|-------------|
| a. Federal | \$ 15747810 |
| b. Applicant | \$ |
| c. State | \$ |
| d. Local | \$ |
| e. Other | \$ |
| f. Program | \$ |
| Income | |
| g. TOTAL | \$ 15747810 |

*** 19. Is Application Subject to Review By State Under Executive Order 12372 Process?**

a. This application was made available to the State under the Executive Order 12372 Process for review on .

b. Program is subject to E.O. 12372 but has not been selected by the State for review.

c. Program is not covered by E.O. 12372.

*** 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes", provide explanation.)**

Yes No

21. *By signing this application, I certify (1) to the statements contained in the list of certifications and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)**

** I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix: * First Name: Armando

Middle Name:

* Last Name: Vilaseca

Suffix:

Title: Commissioner, Vermont Department of Education

* Telephone Number: (802)828-3135 Fax Number: (802)828-3140

* Email: ARMANDO.VILASECA@STATE.VT.US

* Signature of Authorized Representative:

* Date Signed:

Application for Federal Assistance SF-424

Version 02

*** Applicant Federal Debt Delinquency Explanation**

The following field should contain an explanation if the Applicant organization is delinquent on any Federal Debt. Maximum number of characters that can be entered is 4,000. Try and avoid extra spaces and carriage returns to maximize the availability of space.



U.S. DEPARTMENT OF EDUCATION

BUDGET INFORMATION

NON-CONSTRUCTION PROGRAMS

OMB Control Number: 1894-0008

Expiration Date: 02/28/2011

Name of Institution/Organization:
Vermont Department of Education

Applicants requesting funding for only one year should complete the column under "Project Year 1." Applicants requesting funding for multi-year grants should complete all applicable columns. Please read all instructions before completing form.

SECTION A - BUDGET SUMMARY
U.S. DEPARTMENT OF EDUCATION FUNDS

| Budget Categories | Project Year 1(a) | Project Year 2 (b) | Project Year 3 (c) | Project Year 4 (d) | Project Year 5 (e) | Total (f) |
|-----------------------------------|-------------------|--------------------|--------------------|--------------------|--------------------|---------------|
| 1. Personnel | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 |
| 2. Fringe Benefits | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 |
| 3. Travel | \$ 12,000 | \$ 12,000 | \$ 12,000 | \$ 0 | \$ 0 | \$ 36,000 |
| 4. Equipment | \$ 742,089 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 742,089 |
| 5. Supplies | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 |
| 6. Contractual | \$ 7,958,650 | \$ 4,049,100 | \$ 2,866,900 | \$ 0 | \$ 0 | \$ 14,874,650 |
| 7. Construction | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 |
| 8. Other | \$ 83,907 | \$ 5,582 | \$ 5,582 | \$ 0 | \$ 0 | \$ 95,071 |
| 9. Total Direct Costs (lines 1-8) | \$ 8,796,646 | \$ 4,066,682 | \$ 2,884,482 | \$ 0 | \$ 0 | \$ 15,747,810 |
| 10. Indirect Costs* | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 |
| 11. Training Stipends | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 |
| 12. Total Costs (lines 9-11) | \$ 8,796,646 | \$ 4,066,682 | \$ 2,884,482 | \$ 0 | \$ 0 | \$ 15,747,810 |

***Indirect Cost Information (To Be Completed by Your Business Office):**

If you are requesting reimbursement for indirect costs on line 10, please answer the following questions:

(1) Do you have an Indirect Cost Rate Agreement approved by the Federal government? Yes No

(2) If yes, please provide the following information:

Period Covered by the Indirect Cost Rate Agreement: From: ___/___/___ To: ___/___/___ (mm/dd/yyyy)

Approving Federal agency: ED Other (please specify): _____ The Indirect Cost Rate is _____%

(3) For Restricted Rate Programs (check one) -- Are you using a restricted indirect cost rate that:

Is included in your approved Indirect Cost Rate Agreement? or, Complies with 34 CFR 76.564(c)(2)? The Restricted Indirect Cost Rate is _____%



U.S. DEPARTMENT OF EDUCATION
BUDGET INFORMATION
NON-CONSTRUCTION PROGRAMS

OMB Control Number: 1894-0008

Expiration Date: 02/28/2011

Name of Institution/Organization:
 Vermont Department of Education

Applicants requesting funding for only one year should complete the column under "Project Year 1." Applicants requesting funding for multi-year grants should complete all applicable columns. Please read all instructions before completing form.

SECTION B - BUDGET SUMMARY
NON-FEDERAL FUNDS

| Budget Categories | Project Year 1(a) | Project Year 2 (b) | Project Year 3 (c) | Project Year 4 (d) | Project Year 5 (e) | Total (f) |
|--------------------------------------|-------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------|
| 1. Personnel | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 |
| 2. Fringe Benefits | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 |
| 3. Travel | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 |
| 4. Equipment | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 |
| 5. Supplies | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 |
| 6. Contractual | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 |
| 7. Construction | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 |
| 8. Other | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 |
| 9. Total Direct Costs (lines 1-8) | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 |
| 10. Indirect Costs | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 |
| 11. Training Stipends | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 |
| 12. Total Costs (lines 9-11) | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 | \$ 0 |

ASSURANCES - NON-CONSTRUCTION PROGRAMS

Standard Form 424B (Rev.7-97)

Public reporting burden for this collection of information is estimated to average 15 minutes 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. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to the Office of Management and Budget, Paperwork Reduction Project (0348-0040), Washington DC 20503.

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET. SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.

NOTE: Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the awarding agency. Further, certain Federal awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant, I certify that the applicant:

1. Has the legal authority to apply for Federal assistance, and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project cost) to ensure proper planning, management, and completion of the project described in this application.
2. Will give the awarding agency, the Comptroller General of the United States, and if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the award; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
3. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
4. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
5. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. "4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
6. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. "1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. '794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act
9. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. "276a to 276a-7), the Copeland Act (40 U.S.C. '276c and 18 U.S.C. "874) and the Contract Work Hours and Safety Standards Act (40 U.S.C. " 327-333), regarding labor standards for federally assisted construction sub-agreements.
10. Will comply, if applicable, with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
11. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. "1451 et seq.); (f) conformity of Federal actions to State (Clear Air) Implementation Plans under Section 176(c) of the Clear Air Act of 1955, as amended (42 U.S.C. "7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended, (P.L. 93-523); and (h) protection of endangered species under the Endangered Species Act of 1973, as amended, (P.L. 93-205).
12. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. "1721 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
13. Will assist the awarding agency in assuring compliance

of 1975, as amended (42 U.S.C. " 6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) " 523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. " 290 dd-3 and 290 ee 3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. ' 3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.

7. Will comply, or has already complied, with the requirements of Titles II and III of the uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
8. Will comply, as applicable, with the provisions of the Hatch Act (5 U.S.C. "1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.

with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. '470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. "469a-1 et seq.).

14. Will comply with P.L. 93-348 regarding the protection of human subjects involved in research, development, and related activities supported by this award of assistance.
15. Will comply with the Laboratory Animal Welfare Act of 1966 (P.L. 89-544, as amended, 7 U.S.C. "2131 et seq.) pertaining to the care, handling, and treatment of warm blooded animals held for research, teaching, or other activities supported by this award of assistance.
16. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. "4801 et seq.) which prohibits the use of lead- based paint in construction or rehabilitation of residence structures.
17. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, "Audits of States, Local Governments, and Non-Profit Organizations."
18. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations and policies governing this program.

Signature of Authorized Certifying Representative:

Name of Authorized Certifying Representative: Armando Vilaseca

Title: Commissioner

Date Submitted: 12/03/2009

Disclosure of Lobbying Activities

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352

| | | |
|---|--|--|
| 1. Type of Federal Action: <input type="checkbox"/> Contract <input checked="" type="checkbox"/> Grant <input type="checkbox"/> Cooperative Agreement <input type="checkbox"/> Loan <input type="checkbox"/> Loan Guarantee <input type="checkbox"/> Loan Insurance | 2. Status of Federal Action: <input type="checkbox"/> Bid/Offer/Application <input checked="" type="checkbox"/> Initial Award <input type="checkbox"/> Post-Award | 3. Report Type: <input checked="" type="checkbox"/> Initial Filing <input type="checkbox"/> Material Change For Material Change only: Year: 0 Quarter: 0 Date of Last Report: |
| 4. Name and Address of Reporting Entity: <input checked="" type="checkbox"/> Prime <input type="checkbox"/> Subawardee Tier, if known: 0 Name: Vermont Department of Education Address: 120 State Street City: Montpelier State: VT Zip Code + 4: 05620- | 5. If Reporting Entity in No. 4 is a Subawardee, Enter Name and Address of Prime: Name: Address: City: State: Zip Code + 4: - Congressional District, if known: | |
| 6. Federal Department/Agency: Department of Education | 7. Federal Program Name/Description: Statewide, Longitudinal Data Systems CFDA Number, if applicable: 84.384A | |
| 8. Federal Action Number, if known: | 9. Award Amount, if known: \$0 | |
| 10. a. Name of Lobbying Registrant (if individual, last name, first name, MI): Address: City: State: Zip Code + 4: - | b. Individuals Performing Services (including address if different from No. 10a) (last name, first name, MI): Address: City: State: Zip Code + 4: - | |
| 11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure. | Name: Armando Vilaseca Title: Commissioner Applicant: Vermont Department of Education Date: 12/02/2009 | |
| Federal Use Only: | | Authorized for Local Reproduction Standard Form LLL (Rev. 7-97) |

CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements.

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

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal Loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan or cooperative agreement, the undersigned shall complete and submit Standard Form - LLL, "Disclosure of Lobbying Activities," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Statement for Loan Guarantees and Loan Insurance.

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

If any funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee or any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this commitment providing for the United States to insure or guarantee a loan, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions. Submission of this statement is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required statement shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

| |
|--|
| APPLICANT'S ORGANIZATION |
| Vermont Department of Education |
| PRINTED NAME AND TITLE OF AUTHORIZED REPRESENTATIVE |
| Prefix: First Name: Armando Middle Name: |
| Last Name: Vilaseca Suffix: |
| Title: Commissioner |
| Signature: Date: |
| _____ 12/02/2009 |

ED 80-0013

03/04

Project Narrative

Project Narrative - Project Abstract

Attachment 1:

Title: **Project Abstract** Pages: **1** Uploaded File: **C:\Documents and Settings\staceymurdock\Desktop\SLDS\final pdfs\Abstract.pdf**

Vermont Data Enhancement Project (V-DEP)

The overall goal of the V-DEP is to build on Vermont's current work to create a comprehensive, P-20 longitudinal data system that includes all required data system capabilities and elements, markedly improving the ability of the education system at every level to use data to improve achievement, close gaps, and achieve equity.

To achieve this goal, this project will leverage and expand existing P-12, postsecondary, workforce and human service partnerships and seek the involvement of students, parents, educators, researchers and government partners to identify effective instructional practices, inform policy, and create a culture of accountability and continuous improvement. This work will be informed by Vermont's continuing collaboration with the states of Maine, New Hampshire, Rhode Island, and Connecticut through the New England Secondary School Consortium (NESSC), by developing regionally-comparable indicators to evaluate the effectiveness of these instructional strategies and forming a multi-state research partnership.

The project is designed to meet or exceed the seven capabilities and 12 elements as prescribed in the America COMPETES Act, enable timely and accurate reporting, and provide training to stakeholders in collecting and reporting quality data and how to use and interpret data. To support this work, Vermont will carry out the following major activities:

1. Implement a uniform statewide information system toolset for all Vermont districts utilizing the School Interoperability Framework (SIF) including a portal for parents, students, and educators;
2. Develop a state operational data store to house required data elements;
3. Expand the data warehouse to include all required data system elements and increase the frequency of data loads to facilitate state and federal reporting requirements;
4. Provide stakeholder training for statewide student information system, data warehouse reports, and portal;
5. Form a P-20 research partnership to assess stakeholder needs, develop a research agenda, disseminate findings, and institute a professional development/feedback plan to improve education system practices.

The expected outcomes of these activities include:

1. Vermont will meet the seven capabilities and 12 elements required by this longitudinal data systems grant. Specifically,
 - a. Elimination of data gaps including linking teachers to students, transcript data, post-secondary data, and workforce data;
 - b. Improved data exchange between VT DOE and other Vermont agencies;
 - c. Improved accuracy and timeliness of data availability;
 - d. Increased accessibility to data for all stakeholders;
 - e. Increased efficiency in maintaining student identifiers.
2. Vermont will have concrete strategies to ensure that the data will support continuous improvement, especially instructional improvement, and informed decision-making by school, district and education leaders.
3. Vermont will have a comprehensive research plan guiding effective and appropriate use of the available education data.
4. Statewide, Vermont will have improved efficiency and reduced burden of data collecting and reporting.

Project Narrative

Project Narrative - Project Narrative

Attachment 1:

Title: **Project Narrative** Pages: **30** Uploaded File: **C:\Documents and Settings\staceymurdock\Desktop\SLDS\final pdfs\Project_Narrative_Final.pdf**

A. Need for the Project

Overview of Vermont's Current Longitudinal Data System

For the past ten years, the Vermont Department of Education (VT DOE) has dedicated its data efforts toward implementing a statewide student identifier, meeting vastly expanding statutory reporting requirements, and building a data warehouse to provide longitudinal data to its educational community. In 1998 VT DOE implemented a statewide student identifier which now exists in all student-level datasets across the department. The student identifier initially provided student demographic and program participation information. In 2004 our student-level data systems were dramatically expanded to meet the requirements of the No Child Left Behind Act (NCLB). The expansion of the student census allowed tracking of P-12 mobile students and verification of student transfers and dropouts. Also in response to NCLB requirements, Vermont implemented a unique teacher identifier, and an incident level discipline data system.

Shortly thereafter, VT DOE created an Education Data Warehouse (EDW) in collaboration with a consortium of local school districts called the Vermont Data Consortium (VDC). The VDC represents about half of Vermont school districts. The member districts pay consortium dues providing the benefit of loading local data into the district model of the EDW. All districts have access to the state model storing data collected by the state from schools and districts. The EDW contains student, program, teacher, discipline, assessment, and school finance data. Depending on the data, the EDW in the state model contains between six to 13 years of longitudinal data.

There are two important distinctions between the state and district model of the EDW. The state model does not allow the link between teachers and students. The district model allows for this linkage and member districts can upload local assessment data. The population of the district model is available only to VDC members and is entirely optional. Only 13 of the 31 VDC members have loaded local data into the district side of the model.

The new data reporting requirements and implementation of the EDW proved challenging for both the state and local districts. Most local districts lack the financial, technical and human resources necessary to accumulate, clean, report and analyze data. In an attempt to improve data quality and reduce local burden, VT DOE hired a consulting firm (through a National Center for Education Statistics (NCES) cooperative system grant) to conduct site visits and create a best practices guide for meeting core data reporting requirements. Technological barriers documented during the site visits include too few computers, out-of-date computers, no wide area network, and a lack of technology staff (or staff working on contract). A major finding was that, even in districts with no technological barriers, the staff expected to complete data requests lack the time and tools to meet the requirements efficiently. Technical staff members are typically unavailable because of competing needs and the opinion that data reporting is largely a data entry task. Data reporting is a tremendous burden on schools; some school secretaries have to complete the task "gratis" nights, weekends, and after the school year end.

Another surprising finding in Vermont, which is a strong local control state, was that superintendents were open to or even expected the state to provide a single student information solution. It is important to note, this sentiment expressed by a few superintendents five years ago is currently unanimously held throughout the Vermont Superintendents Association.

The dual data model of the EDW seemed an ideal solution over and above creating more data reporting requirements for local districts to allow linking between student data with teacher data and all the rich analysis that linkage allows. Unfortunately, the implementation of the district side of the model has progressed slowly. As mentioned above, fewer than one third of Vermont

districts have taken advantage of the EDW to link students and teachers to the wealth of performance, program participation and demographic information included in the EDW. Other schools either rely on their local data system or lack the ability to access and analyze linked student/teacher data. Even those districts successful in loading their data into the EDW have difficulty using their data for a number of reasons. Two major issues are the following:

- The local data tends to have many errors in student identifiers. The accuracy of the student identifiers is essential to linking between local and state data and looking at student achievement longitudinally.
- The EDW ad hoc query tool and the extensiveness of the EDW data model prove difficult for most EDW users except those with additional data analysis training. Even districts employing data analysts trained to use the ad hoc query tool do not take advantage of this resource because administrators unaccustomed to using data for decision making do not provide these analysts with questions that can be answered using longitudinal data.

To respond to the difficulties using the ad hoc query tool and to make education information more accessible, VT DOE gained an NCES cooperative system grant to create a data-driven reporting system. We sought to expand and enhance the data warehouse reporting capabilities by developing a series of new report “templates.” These report templates are used to create new reports that can be available to both internal users and the general public via the VT DOE web site. The templates can also be used to clone future reports using the same report design but accessing different aggregated source data.

Once developed or cloned, the report file is published to the report server which then renders the reports on demand for the end-users in HTML when the report is accessed through an URL. The reports draw data from a set of custom tables in the EDW.

The design approach is “database-centric” in that the report definition elements are contained in the report database. Very minimal configuration needs to be done with the report development tool when cloning report templates. One of the guiding principles for this project was to minimize the amount of complex, custom coding for the report templates.

Reports are parameter-driven to focus the report data, typically for a particular school and/or time period. Most reports have dynamic links to automatically change the displayed report statistic (i.e. switch from showing breakdown by race to breakdown by poverty level), as well as offering direct linking to other reports where the linked report parameters are automatically picked up from the linking report. All reports have help pages set up to provide documentation and definitions for the report viewers. One result of this project is that VT DOE is perfectly poised to quickly create data reports cloned from existing report templates and driven through a report database in the EDW.

Vermont’s Current Data System Status and Needs According to the 12 Essential Elements

Vermont has made tremendous gains in developing a longitudinal data system with an agile reporting tool. This grant will provide us with the opportunity to expand our existing system, provide easy access to the information contained in the system, and further analyze education data to inform policy and enhance instructional practices. This planned expansion will be available to all education stakeholders and not limited by VDC membership.

Vermont’s important strides over the past ten years, attest to VT DOE’s commitment to building a robust and valuable longitudinal data system. We recognize that there are still some key gaps, which we haven’t been able to address due to funding and personnel shortages. Local choices and priorities have also resulted in inequitable educator access to high quality

information and system tools to inform instruction. The Vermont Data Enhancement Project (V-DEP) will enable us to target those areas, and create the data system we envision, markedly increasing our ability to use data to measure and improve outcomes for all children in Vermont. In addition, we are coordinating this project with other ARRA grant opportunities. Specifically we are seeking funds to implement a Single Statewide Education Portal (Race to the Top) which will aggregate high quality information and systems resources for educators, parents, students and other stakeholders. We are also planning on using the School Improvement Grant administration funds to implement a Curriculum Managements System which will enable educators to develop and share high quality curriculum and align it to standards.

V-DEP will ensure that Vermont meets all seven capabilities and 12 required data elements required by this grant. At the same time, Vermont is committed to meeting these requirements in a manner that minimizes the burden on local schools and districts to enable educators to focus on instruction. For this reason, we are proposing a statewide student information toolset using a school interoperability framework (SIF) to automate the transfer of data between schools and the state. See Appendix C for a summary.

Following is an explanation of Vermont's current data system status organized by the required capabilities and elements (the capabilities and elements are listed in summary form).

C1. Examine student progress and outcomes over time...[and] include data at the individual student level from preschool through postsecondary education and into the workforce. Status: *Requirement Under Development*

Vermont has invested nearly \$1.5 million in a longitudinal data warehouse. The EDW currently houses P-12 student level information including enrollment, demographics, program participation, and achievement. The EDW includes an ad hoc query tool but most users find this tool and the extensive data model too difficult to use for even the most routine data analysis. With a National Center for Education Statistics (NCES) cooperative system grant and state funds, Vermont has developed a number of "point and click" report templates to present multiple education indicators from the EDW over time at the school, district, supervisory union, and state level. These reports make education information easily accessible to all stakeholders, including educators, parents and the public. One priority of this project is to develop more reports and enhance existing reports to expand the available information beyond P-12.

Identified Need: In order to examine student performance from preschool to postsecondary efforts, VT DOE needs a comprehensive set of P-12, post-secondary and workforce information. Further, this information needs to be easily available to education stakeholders. We will expand EDW data objects to include preschool assessments, SAT scores, advanced placement course taking, college enrollment and workforce information. In addition, we intend to expand EDW reports in order to improve access to information identified in this area. These reports will provide local high schools with information on how well they prepare their students for college and careers and will help inform policy related to reforming secondary education in Vermont.

C2. Facilitate and enable the exchange of data among agencies and institutions within the State and between States so that data may be used to inform policy and practice... Support interoperability...to ensure linkage and connectivity among the various levels and types of data. Status: *Requirement Under Development*

Vermont DOE currently shares a number of datasets with the Agency of Health and Human Services (AHS). The shared data includes weekly updates on students in state custody, monthly updates on students in families receiving food stamps, annual analysis of performance outcomes on students in state custody, annual performance analysis on students receiving mental health

services and homeless students, and Medicaid information. This sharing of information serves many purposes: data regarding students in state custody impacts the state education fund, food stamps information helps ensure that students receive their subsidized meals benefits and other analyses inform policy around supporting students at the greatest risk of academic failure. Typically, student level data are given to the VT DOE and aggregate data is returned to AHS. With two exceptions, there is no automated flow of information between VT DOE and schools. These two exceptions include sharing Youth Risk Behavior Survey data from AHS with local school districts through our EDW. Relevant staff members of AHS and local school districts have access to the EDW for analysis and reporting of these important data. Secondly, VT DOE also shares information from AHS with schools regarding Vermont students eligible for meal benefits.

Identified Need: Vermont is currently engaged in an initiative to transform its educational system. Two key components of this transformation are engaging community partners and sharing results and indicators of a successful transformation. Consistent with the goals of this initiative, VT DOE is committed to a research agenda that promotes data exchange between institutions and other agencies. VT DOE will access student-level program participation data from AHS and load these data into the EDW. Role-appropriate access to education indicators by program area will be allowed for AHS staff. VT DOE will also receive data from the VT Department of Labor, including wage earnings information. Vermont State Colleges has agreed to provide course-taking (including remedial courses) information to VT DOE. As a participant in NESSC (See Appendix A, Artifact 6 for more information) we have agreed to develop a standard New England data ask to receive from National Student Clearinghouse data capturing other college enrollment information. We will continue to receive student-level data from the College Board. We will expand EDW data objects and reports to include this information. A priority of our research advisory council is to define the best approach for sharing this newly available information among agencies, institutions and researchers to best inform education policy and improve essential services for Vermont citizens.

C3. Link student data with teachers, i.e...so that a given student may be matched with particular teachers primarily responsible for providing instruction in various subjects.

Status: Requirement Under Development.

Vermont assigns educators, candidates for educator licensing and graduates of Vermont educator preparation programs a unique educator identifier. Vermont conducts an annual census of educators by employing district; this census links educators to the schools they serve and the courses they teach. This educator census provides the information for our Highly Qualified Teacher analysis. The educator census and certification information is available through the EDW. Local districts are able to link students and teachers through their own data systems or using the district model of the EDW. Vermont DOE does not currently have the capacity to link student, course and teacher information. This sort of linked data can be very useful for identifying which teachers have the greatest impact on student achievement in select courses. For instance, a teacher may want to know how a particular student performed on the math assessment after spending a year in the classroom with this teacher. These data can also be viewed in aggregate by school administrators to identify highly effective teachers or those in need of professional development. Only when teachers and students are linked together can these sorts of analysis take place.

Identified Need: VT DOE intends to collect information that allows student/course/teacher linkages from all school districts. In order to collect this information without increasing the data

reporting burden on local districts, we intend to implement a statewide student information system (including course scheduling) with SIF vertical reporting to allow real-time data in a state level operational data store. This data reporting will be mandatory for districts. These data will be loaded into the EDW in a timely manner and available to teachers and administrators as well as VT DOE analysts and research partners. Research goals include confirming the equitable distribution of highly qualified teacher in schools with the highest poverty to assist in closing the achievement gap in those schools. We will further use the information to evaluate individual teacher impact on student achievement.

C4. The system must enable the matching of teachers with information about their certification and teacher preparation programs, including the institutions at which teachers received their training. Status: *Work Completed Enhanced Capability planned*

Vermont collects information regarding in-state educator preparation programs and program graduates. In addition, Vermont has paper files, including the location of the preparation program or if the teacher achieved credentialing through out-of-state or alternative pathways. Information about educator preparation is not currently readily available to stakeholders.

Identified Need: In order to maximize our state's resources and to enable greater quality, comparability, and portability of training and licensure throughout the New England region, VT DOE has embarked on a collaborative effort with the five other New England states (Maine, New Hampshire, Rhode Island, Massachusetts, and Connecticut). This new effort is called the New England Collaborative for Educator Quality and Effectiveness and is designed to enable each state to improve and coordinate its educator recruitment, preparation, licensing, induction and mentoring, evaluation, professional development, and career development processes. Facilitation is provided by the New England Comprehensive Center (NECC). The New England Regional Education Laboratory (NE-REL) and National Comprehensive Center for Teacher Quality (NCCTQ) provide research support. This work will be funded by Vermont and is not a part of this grant opportunity.

C5. Enable data to be easily generated for continuous improvement and decision-making, including timely reporting to parents, teachers, and school leaders on the achievement of their students. Status: *Requirement Under Development*

Vermont's EDW has been available to state and local users for over five years. Time has proven that the EDW ad hoc query tool is highly functional but challenging for the casual user of the EDW. Some of the difficulty of using the EDW in support of data-driven decision making is the extensiveness of our data model which will just grow as we add new data objects. In an effort to simplify data use from the EDW Vermont has created a number of point and click reports of education indicators available at the school, district, supervisory union, and state levels. These indicators include student demographic breakouts, student information such as attendance rate and graduation rate, and school information such as average teacher salary and percentage of teachers on emergency licenses. In addition, Vermont intends to upgrade our EDW and one of the new features of the upgrade is a district level performance dashboard with student level drill-down capabilities. However, facilitating the use of the EDW does not address the need for timely data reporting. Currently the data in the EDW are refreshed twice per year. This load cycle is insufficient for supporting continuous improvement.

Identified Need: Vermont intends to implement a statewide student information system with SIF vertical reporting. The state will maintain an operational data store that receives real-time information from district information systems. These data will be regularly loaded into the EDW increasing the timeliness of the data available from the EDW and the reports system. Further, a

required feature of the system is a portal where students, parents, educators and school leaders can access student information.

C6. Ensure the quality and integrity of data contained in the system. Status: *Requirement Under Development*.

Over the past six years Vermont DOE has extensively expanded its documentation and quality checks of all the core data requirements. Documentation includes a data dictionary, data classification, and business rules for assessing data quality. We have adopted standardized naming conventions and data types. We maintain business rules that validate data at the cell, row, table, and across table levels. These business rules will be included in the validity checks used by the SIF process. Vermont is in the process of documenting school and district data quality in terms of accuracy and timeliness. Our intention in this project is to identify districts that can benefit from targeted technical support in meeting their requirements.

Identified Need: Consistent with our current practice, VT DOE will fully document the data in the statewide student information toolset. This includes updating our existing data dictionary, classifying all data elements for confidentiality and constructing business rules to ensure the quality of the data transmitted to the state operational data store. As a part of this project, school staff members will receive training and ongoing support on using the statewide system.

C7. Provide the State with the ability to meet reporting requirements of the Department, especially reporting progress on the metrics established for the State Fiscal Stabilization Fund and the reporting requirements in *EDFacts*. Status: *Requirement Under Development*

VT DOE employs three analysts who submit EDFacts files. Two of the analysts report all files related to children with disabilities, achievement data and accountability information. All other files are created by the EDFacts Coordinator using information from VT DOE data silos. While most of the data required by EDFacts is stored in the EDW, the EDW load cycle is bi-annual and does not allow the EDW to be used to meet our EDFacts reporting requirements. The process is inefficient because our EDFacts Coordinator must contact numerous program staff to gain access to their data and information transfer is often slow due to competing work demands.

Identified Need: VT DOE will be able to increase the EDW data load as we will receive real-time data rather than on a bi-annual data collection cycle. EDFacts data can then be extracted from the EDW, greatly facilitating EDFacts file submission. Incorporating the student/course/teacher link in the EDW will be essential to meeting State Fiscal Stabilization Fund requirements.

E1. A unique statewide student identifier that does not permit a student to be individually identified by users of the system (except as allowed by Federal and State law). Status: *Work Completed*

VT DOE has maintained a unique longitudinal student identifier for public, independent and home study students since 1998. The identifier is not personally identifiable (not constructed from name, date of birth, or other demographic information). The master list of students with unique student identifier is stored on a protected network drive at VT DOE. The data steward for this data element is a business analyst on the IT Team. The matching algorithm which searches for exact and partial (potential) matches was developed internally and utilizes name, DOB, gender, other demographic information and Soundex to match to existing identifiers or return possible matches based on strength of match. Current policy allows only this data steward to identify unknown students or to assign new ids. Unknown students come into the department at several points during the year including the receipt of fall and spring student census data; the children with disabilities data collection; and data from program offices including migrant

education, English Language Learners, technical center students and student level data received from other Vermont agencies.

E2. Student-level enrollment, demographic, and program participation information.

Status: Requirement Under Development

P-12 student-level enrollment and demographic information is collected using the spring and fall student census. Program participation data is collected using separate data systems. All enrollment and demographic data are made available through the EDW. English Language Learners and migrant students are tagged for participating in their respective programs.

Identified Need: VT DOE must integrate post-secondary data from National Student Clearinghouse and add post-secondary indicators to school reports to clarify to stakeholders how well Vermont high schools prepare students for college.

E3. Student-level information about the points at which students exit, transfer in, transfer out, drop out, or complete P-16 education programs. Status: Requirement Under Development.

Vermont's student census is a collection of enrollment instances. In other words, if a single student exits a school mid-year and then re-enters the school before the end of the school year, that student would have two records of enrollment in the school's census. Each enrollment instance includes begin and end dates along with admission and exit codes. In this way, we are able to know when students exist, transfer in, transfer out, drop out or complete programs. We have access to this information for P-12 students enrolled in public schools. The census is currently collected both at the beginning and at the end of the school year. This method of collecting information allows us to meet our reporting requirements but limits our ability to use census data to potentially influence experience in school for that year. For instance, we currently collect aggregate attendance data at the end of the school year so we cannot use chronic absences in a tool to identify students at risk of dropping out of school. In addition to the bi-annual data collection limitation, we do not have this information for post-secondary students.

Identified Need: VT DOE is working collaboratively with NESSC and the National Student Clearinghouse (NSC) to access customized data extracts from NSC. We will obtain the NSC data and load it into our EDW to provide access to exit and transfer information for post-secondary students. VT DOE will expand the P-12 data elements received at the state level via the operational data store and the increased load frequency into the EDW will allow for reporting information that can influence instruction, including a student-level early warning report and college readiness report. Report data elements and contents will be identified in collaboration with NESSC, a research advisory board and Vermont colleges and university. These reports will allow high schools to better prepare students for college and identify those in need of extra support to keep them in school.

E4. The capacity to communicate with higher education data systems. Status:

Requirement Under Development. VT DOE currently can communicate with higher education data systems by receiving student names, dates of birth and gender. This communication has been limited to a few approved education research projects driven by the researcher and the needs of program offices. Vermont has committed to expand research into the post-secondary realm to include post-secondary enrollment, readiness and success.

Identified Need: Vermont, with our NESSC partners, is committed to creating and publishing currently unavailable indicators of college enrollment, readiness and success. To meet this commitment we will exchange data with higher education systems and make these data available to all education stakeholders through the EDW and EDW driven reports.

E5. A State data audit system assessing data quality, validity, and reliability. Status: Requirement Under Development. Vermont has multiple ways of assessing data quality, validity and reliability utilizing best industry practices. We have fully documented our core data collections including data dictionary, business rules and data classification. Business rules for each data collection are implemented as data are received by VT DOE. We check data at the cell, row, table, and across table levels. Student data is checked for duplicate enrollment instances and disputed students (i.e., students enrolled at the same time in more than one school). The fall and spring Census are checked against each other to ensure that enrollment records do not get dropped over the course of a year. Most collections are compared to prior year data to look for reporting anomalies. VT DOE is now developing a school and supervisory union level report on the timeliness and accuracy of data submitted to the Department. The goal is to identify and work with schools in need of technical support to improve their data quality.

Identified Need: With regard to data quality and auditing, VT DOE intends to update its current practices appropriate to the newly implemented system. With a real-time student information system, the audit system will require substantial retooling. Business rules will be implemented at the district level and the state level (including those edits that can only be conducted with a statewide set of student records) and will ensure data quality.

E6. Yearly test records of individual students with respect to assessments under section 1111(b) of the Elementary and Secondary Education Act of 1965. Status: Work Completed. VT DOE has annual assessment records of individual students. These data are stored in the EDW and available through the ad hoc query tool or served up in a “point and click” report. Our assessment report allows all education stakeholders, including parents and the public to see school, district, or state level assessment reports by subgroup, over time or across tests.

E7. Information on students not tested, by grade and subject. Status: Work Completed. Vermont collects information on students not tested including the student’s identity and the reason they were not tested.

E8. A teacher identifier system with the ability to match teachers to students. Status: Requirement Under Development. Vermont conducts an annual educator census which includes the schools where teachers provides services and the courses they teach. These data are collected in support of our determination of Highly Qualified Teachers (HQT). At this time we do not require districts to submit data linking students to teachers or courses at the state level. The primary goal behind implementing the statewide student solution is to allow Vermont to capture the data that links teachers to students without creating an extra burden on schools.

Identified Need: VT DOE intends to mandate reporting of teacher/student/course information for all districts. We will facilitate reporting through a statewide student information system that is SIF certified, allowing automated data transfer. We will provide the data to districts through the EDW and develop EDW driven reports to support schools’ work on student achievement.

E9. Student-level transcript information, including information on courses completed and grades earned. Status: Requirement Under Development. VT DOE does not currently collect transcript information, including courses and grades earned, nor do we have the capacity to collect these data with our current system. Many schools and districts in Vermont are unable to share transcript information either between schools or with VT DOE. Facilitating the transfer of transcript information between schools will ensure that a newly enrolling school has the proper information to provide instructional services to individual students.

Identified Need: Vermont’s implementation of a statewide student information system with SIF integrated state operational data store will enable the automated collection of student level

transcript information. In addition, our NESSC partners are piloting an electronic transcript exchange with regional colleges and universities. Vermont is not currently in a position to participate in this pilot. However, the ambitious transcript project goal of allowing school-to-school-student record transfer across P-12 schools in New England as well as post-secondary institutions is one embraced by Vermont. Following the implementation of our statewide student solution, VT DOE will be able to capture transcript information and local schools will be able to share records with other schools and institutions of higher education as students transfer between schools as determined by the transcript project.

E10. Student-level college readiness test scores: Vermont recently began purchasing SAT data from the College Board. As part of our partnership with NESSC, we will be creating and publishing multiple indicators of college readiness. Among these indicators will be participation and performance on the SAT and remedial course taking. In order to meet this commitment, we will continue to access SAT data and access data from the Vermont State Colleges on remedial courses. The University of Vermont does not offer remedial courses.

Identified Need: Vermont will access student-level data to assess college readiness including, but not limited to, SAT data and remedial course taking data. Other indicators of college preparedness will be developed in conjunction with a research advisory board. College readiness data will be loaded into the EDW and college readiness reports at multiple levels will be created using these data. At the state level, these reports will allow policy makers to understand how well Vermont's high schools are preparing students for college. High school principals can use these indicators to understand how well their school competes with regard to college preparedness.

E11. Data that provide information regarding the extent to which students transition successfully from secondary school to postsecondary education, including whether students enroll in remedial coursework. Status: Requirement Under Development. Along with the other states in NESSC, Vermont will collect and report multiple measures of transition to and success with postsecondary education. We will measure postsecondary matriculation by calculating a percentage of students who enroll in a postsecondary education institution. We will collect and report on remedial course taking and SAT performance. We will also calculate a postsecondary success rate (i.e., the percentage of students who graduate from college in a set period of time). In order to meet this goal, Vermont will have to access NSC data, remedial course data, and SAT data. In addition to the work with NESSC, Vermont is interested in other postsecondary information and will conduct a gap analysis based on "The Ideal State Postsecondary Data System, 15 Essential Characteristics and Required Functionality" (authored by State Higher Education Executive Officers) to identify other data of interest.

Identified Need: Vermont will access data to assess college success, including college enrollment, remedial course taking data and college completion. Other indicators of college success will be developed in conjunction with a research advisory board. In addition, we will obtain financial aid information to determine whether access to financial aid is contributing to Vermont student's persistence and success in college. These data will be loaded into the EDW, with college success reports created using these data.

E12. Data that provide other information determined necessary to address alignment and adequate preparation for success in postsecondary education. Status: Requirement Under Development. VT DOE is in the process of determining alignment between its Grade Level Expectations and the Common Core Standards for Career and College Readiness. In addition we are correlating state assessment scores with SAT scores. Should any other information be

identified in the need to address alignment and adequate preparation for postsecondary success, VT DOE will make it available.

B. Project Outcomes related to System Requirements and Implementation

Vermont's Comprehensive LDS Development Strategies

Vermont has developed five broad strategies to expand and strengthen our current LDS. Through this integrated approach, Vermont will meet the requirements of the America COMPETES Act including this grant application, State Fiscal Stabilization Fund, and Race to the Top. We have specifically designed our strategies to produce outcomes that fill the gaps identified in the previous section. These five comprehensive objectives are described below and a system diagram is presented in Appendix A (Artifact 3). Following this, the specific outcomes for each of the required LDS capabilities and elements are listed (see also *Appendix C, Current Status of Longitudinal Data System*, for the outcomes in table form).

Strategy 1: Uniform Statewide Information System Toolset for all Vermont districts

Vermont will implement a uniform statewide student information toolset. This toolset will include a system that contains a standardized set of information on students, program participation, teachers, course taking, grades achieved, disciplinary actions, and achievement information, with both horizontal and vertical interoperability via a SIF data model. This toolset will improve the efficiency of many VT DOE and local school data processes. However, the primary goal is to integrate data linking teachers to students and transcript information without creating further data reporting burdens for local school districts. This approach will also improve the timeliness and accuracy of the data VT DOE uses for analysis and reporting. The comprehensive data will provide school administrators and teachers with valuable information to which most do not yet have access. Statewide professional development will be provided for school staff, including teachers, administrators, technical staff, and registrars to enable them to use and understand the relevance of the data and to promote data-driven decision making.

Strategy 2: State Level Operational Data Store

Vermont will implement a state level operational data store. This data store will receive real-time data from local information systems, enabling VT DOE to meet all reporting requirements and research goals without increasing the data reporting burden on local districts. The operational data store will incorporate relevant data validity checks to ensure data quality. The data store serves as the staging for quality data subsequently loaded into our Education Data Warehouse.

Strategy 3: Enhanced Education Data Warehouse (EDW)

Vermont's EDW contains PK-12 information related to students, enrollment, attendance, school finance, educators, discipline, and program participation. Implementing a statewide information toolset with vertical interoperability will allow us to expand the number of data objects to include pre-kindergarten assessments, postsecondary, workforce, and additional PK-12 information. Further, VT DOE will be able to increase the frequency of the data load cycle so that teachers and others can use the data housed in the warehouse to directly influence instruction of individual students. Included in the budget for this grant opportunity is report development. To increase accessibility to the information contained in the EDW, we intend to build reports from the EDW that support the work of teachers and school administrators. VT DOE is in an excellent position to rapidly design and create reports having just completed a data-driven reports system project. Furthermore, we will design reports aimed at other stakeholders, such as parents, business groups, and higher education providers, promoting public transparency about Vermont's educational system.

Strategy 4: Multi-State P-20 Research Agenda

Vermont and its NESSC partners have agreed to enter into a multi-state P-20 research partnership with research institutes (including University of Maine, the James M. Jeffords Center at the University of Vermont, and the Donahue Institute at the University of Massachusetts). The priorities of this research partnership will build upon existing work of NESSC to develop comparable metrics and benchmarks across the following five indicator areas: Graduation Rates; Drop-out Rates; College Enrollment; College Preparation; and College Success and is the first step in developing methods for exchanging student data across the region. Beyond the work of the multi-state partnership, Vermont is developing a research advisory council to help define Vermont's research priorities and to identify researchers with whom the VT DOE will facilitate the confidential sharing of education data to allow the research required to inform education policy and enhance achievement for Vermont's students.

Project Outcomes for Capabilities and Elements**C1. Examine student progress and outcomes over time...include data at the individual student level from preschool through postsecondary education and into the workforce.**

Outcome C1.1: Create and populate data warehouse objects including student-level pre-kindergarten assessment scores, SAT scores, Advanced Placement course taking, National Student Clearinghouse (college enrollment) information, and workforce data.

Outcome C1.2: Publish EDW driven reports to increase accessibility and analysis of the newly acquired data.

C2. Facilitate and enable exchange of data among agencies and institutions within the State and between States so that data may be used to inform policy and practice... Support interoperability...to ensure linkage and connectivity among the various levels and types of data.

Outcome C2.1: Develop a comprehensive research/indicator development plan in collaboration with a multi-state research partnership (through NESSC). Research topics include college readiness, college success, early warning indicators, and program effectiveness indicators for students receiving services in specified programs. The plan will include detailed documentation for how data will be exchanged between agencies and institutions, data element definitions, and indicator calculations and limitations. An explicit goal of the research group is the design and reporting of regionally-comparable education indicators to improve decision-making with regard to improving education and improve instructional and other services to students.

Outcome C2.2: Integrate data and indicators identified in the research plan into the existing EDW with role-appropriate access to relevant stakeholders in other agencies, institutions, and states. Point-and-click reports will be developed to make it easy for users to access this information.

C3. Link student data with teachers, i.e...so that a given student may be matched with particular teachers primarily responsible for providing instruction in various subjects.

Outcome C3.1: Implement a statewide student information toolset for all Vermont school districts. The toolset will include a standardized data model with information on teachers, students, courses, grades earned, enrollment, demographic information, and program participation. The toolset will be SIF enabled to allow for both vertical and horizontal interoperability.

Outcome C3.2: Design and implement a state operational data store capable of receiving real-time information from local student information systems. The operational data store will include the information linking teachers to students.

Outcome C3.3: VT DOE is planning an upgrade of the EDW, to be completed using state funds. This upgrade will provide a foundation for the new dashboard feature not possible with our current EDW. This dashboard includes district level performance with student drill down capabilities. The dashboard will allow educators to readily see student-level longitudinal achievement information. Implementing the dashboard will be funded under this grant.

C4. The system must enable the matching of teachers with information about their certification and teacher preparation programs, including the institutions at which teachers received their training

Vermont has the ability to match teachers with information about their preparation programs. We are in the process of expanding that capability and research in that area, funded by Vermont, and there are no anticipated outcomes related to this grant opportunity.

C5. Enable data to be easily generated for continuous improvement and decision-making, including timely reporting to parents, teachers, and school leaders on the achievement of their students.

Outcome C5.1: Automate data transfer from local school districts to state operational data store to EDW and EDW reports to substantially improve the timeliness of the data available to education stakeholders.

Outcome C5.2: Implement a statewide student information toolset which includes an important feature of a portal allowing connections between parents, students, and teachers.

C6. Ensure the quality and integrity of data contained in the system.

Outcome C6.1: Implement multiple-level data audits and validity checks utilizing a SIF agent. Local data systems will have business rules preventing the entry and transfer of invalid data. The state operational data store will have an expanded set of business rules including those that can only take place when data from all districts are available (e.g., reporting one student enrolled in two schools).

Outcome C6.2: Implement a professional development plan to ensure that school staff members are skilled in using the statewide student information toolset and appreciate its value in improving instruction and student educational outcomes.

C7. Provide the State with the ability to meet reporting requirements of the Department, especially reporting progress on the metrics established for the State Fiscal Stabilization Fund and the reporting requirements included in *EDFacts*.

Outcome C7.1: Improve timeliness of data stored in EDW to allow *EDFacts* coordinator to access required data from the EDW rather than silo systems.

Outcome C7.2: Create EDW driven reports that meet the public reporting requirements of the State Fiscal Stabilization Fund.

E1. A unique statewide student identifier that does not permit a student to be individually identified by users of the system (except as allowed by Federal and State law).

This work is completed. There are no expected outcomes related to this element.

E2. Student-level enrollment, demographic, and program participation information.

Outcome E2.1: Integrate student-level postsecondary information into the EDW.

Outcome E2.2: Add postsecondary enrollment indicators to existing EDW reports.

E3. Student-level information about the points at which students exit, transfer in, transfer out, drop out, or complete P-16 education programs.

Outcome E3.1: EDW expansion includes the creation and population of a data object for National Student Clearinghouse (college enrollment) data.

E4. The capacity to communicate with higher education data systems.

Outcome E4.1: Develop post-secondary indicators through ongoing collaboration with research partners. The development of these indicators will allow VT DOE to assess the effectiveness of Vermont high schools in preparing students for post-secondary efforts.

Outcome E4.2: Expand EDW data model and EDW reports to provide role appropriate access to post-secondary data.

E5. A State data audit system assessing data quality, validity, and reliability.

Outcome E.5.1: Expand system of data audits and validity checks utilizing a SIF agent as appropriate for the statewide student information system and state operational data store. This new data system will contain data that has not previously been collected at the state level and must contain checks to ensure these edits.

E6. Yearly test records of individual students with respect to assessments under section 1111(b) of the Elementary and Secondary Education Act of 1965.

VT DOE currently has yearly test records. No outcomes are planned related to this data element.

E7. Information on students not tested, by grade and subject:

VT DOE currently has information on students not tested by grade and subject. No outcomes are planned related to this data element.

E8. A teacher identifier system with the ability to match teachers to students:

Outcome E8.1: Implement a statewide student information toolset with SIF compliant vertical reporting to the state data operational store that will provide teacher information linked to students and courses.

Outcome E8.2: Published reports including the EDW dashboard feature, with role-appropriate access, of student performance information by teacher generated from the EDW following the incorporation of the linked student-teacher information into the EDW data model.

E9. Student-level transcript information, including information on courses completed and grades earned

Outcome E9.1: Implement the statewide student information toolset and state data store to provide automated transfer of transcript information, including courses completed and grades earned, from districts to the state, between districts and to institutions of higher education.

E10. Student-level college readiness test scores.

Outcome E10.1: Create student level college readiness reports including SAT test scores and other indicators of college readiness as determined by VT DOE research partners.

Outcome E10.2: Integrate SAT test scores into the EDW.

E11. Data that provide information regarding the extent to which students transition successfully from secondary school to postsecondary education, including whether students enroll in remedial coursework.

Outcome E11.1: Integrate data including National Student Clearinghouse, remedial course taking information from Vermont State Colleges, and financial aid data into the EDW to allow research on college success.

Outcome E11.2: Create high school and state level reports with indicators of postsecondary success, such as the percentage of graduates enrolled in college, the percentage of students enrolled in remedial courses, and the percentage of graduates successfully completing two and four year college programs.

E12. Data that provide other information determined necessary to address alignment and adequate preparation for success in postsecondary education.

Outcome E12.1: Identification of other information necessary to address alignment through VT DOE research partners.

C. Timeline for Project Outcomes

Key for Responsible Party Column (See D. Project Management and Governance and E. Staffing for more information.)

EDW Team - Refers to the project team implementing the Enhanced Education Data Warehouse. The reports contractor and TetraData are part of the team.

ODS & SIS Team - Refers to the team charged with designing and implementing the State Operational Data Store and Uniform Information System Toolset. The contractors for these systems are part of the team.

Reports Contractor - Refers to the contractor who will develop advanced “point and click” reports for the EDW.

TetraData - Contractor for the education data warehouse.

V-DEP Team - is the lead implementation team for the Vermont Data Enhancement Project.

V-RAC - is the Vermont Research Advisory Council.

VDC – Vermont Data Consortium

Note: The Vermont Department of Education wants to ensure the success of this and other proposed ARRA competitive grant projects. To ensure the foundations for this success are in place, we are completing some very important tasks, such as identification of business requirements, enterprise data architecture development and alignment to SIF prior the grant award. This work will ensure that we will have navigated through a significant portion of the procurement process by the time the grant award is issued. Details on the scope and the timeline for these foundation activities are in Artifact 1 of Appendix A.

| Task/Milestone | Responsible Party | Start/End |
|--|-------------------|-----------|
| Outcome C1.1: Expanded EDW data including PK Assessment, SAT, AP, National Student Clearinghouse (NSC), and workforce data. | | |
| Outcome C1.2: Expanded EDW reports to increase longitudinal analysis of these data. | | |
| a. Secure SAT and NSC Data | EDW Team | 6/10-7/10 |
| b. Design and Build SAT and NSC Data Objects | TetraData | 6/10-9/10 |
| c. Secure PK Assessment and Workforce Data | EDW Team | 6/11-7/11 |
| d. Design and Build PK and Workforce Data Objects | TetraData | 6/11-9/11 |
| e. Secure AP Data | EDW Team | 1/13-3/13 |
| f. Design and Build AP Data Objects | TetraData | 3/10-5/13 |
| Outcome C2.1: A research /indicator development plan with the assistance of research partners to develop readiness, predictive, early warning and program effectiveness indicators for students receiving services from other agencies. | | |
| a. Form Vermont Research Advisory Council (VRAC) | Commissioner | 8/10 |
| b. Hold first VRAC meeting. Discuss charter, and VT DOE’s research priorities and other items for research agenda consideration | VRAC & V-DEP Team | 7/10 |

