U.S. Department of Education

Washington, D.C. 20202-5335

APPLICATION FOR GRANTS UNDER THE

STATEWIDE LONGITUDINAL DATA SYSTEMS
CFDA # 84.372A
PR/Award # R372A090056
Grants.gov Tracking#: GRANT10076429
Receipt Status: Received Late

OMB No. 1890-0004, Expiration Date:
Closing Date: SEP 25, 2008

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OMB Number: 4040-0004
Expiration Date: 01/31/2009

Application for Federal Assistance SF-424 Version 02

* 1. Type of Submission:
- [ ] Preapplication
- [x] Application
- [ ] Changed/Corrected Application

* 2. Type of Application:
- [x] New
- [ ] Continuation
- [ ] Revision

* If Revision, select appropriate letter(s):

* Other (Specify)

* 3. Date Received: 09/25/2008

4. Applicant Identifier:

5a. Federal Entity Identifier:

* 5b. Federal Award Identifier:

State Use Only:

6. Date Received by State:

7. State Application Identifier:

8. APPLICANT INFORMATION:

* a. Legal Name: New York State Education Department

* b. Employer/Taxpayer Identification Number (EIN/TIN): 146013200

* c. Organizational DUNS: 806782173

d. Address:

* Street1: 89 Washington Avenue
Street2:
* City: Albany
County:
* State: NY: New York
Province:
* Country: USA: UNITED STATES
* Zip / Postal Code: 12234

e. Organizational Unit:

Department Name:

Division Name:

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

Prefix:
* First Name: Theresa
Middle Name:
* Last Name: Savo
Suffix:

Title:

Organizational Affiliation:

* Telephone Number: 518-474-2587
Fax Number:

* Email: tsavo@mail.nysed.gov

OMB Number: 4040-0004
Expiration Date: 01/31/2009

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:

84.372

CFDA Title:

Statewide Data Systems

*** 12. Funding Opportunity Number:**

ED-GRANTS-062608-001

* Title:

Statewide Longitudinal Data Systems Grant Program CFDA 84.372

13. Competition Identification Number:

84-372A2009-1

Title:

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

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

Project NextGen - The creation of the next generation of New York State's Longitudinal Data System (LDS).

Attach supporting documents as specified in agency instructions.

Add Attachments Delete Attachments View Attachments

Close Form | Previous | Next | Print Page | About

OMB Number: 4040-0004
Expiration Date: 01/31/2009

Application for Federal Assistance SF-424 Version 02

16. Congressional Districts Of:

* a. Applicant: 21
* b. Program/Project: 21

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

New York Congressional Distr | Add Attachment | Delete Attachment | View Attachment

17. Proposed Project:

* a. Start Date: 04/01/2009
* b. End Date: 03/31/2012

18. Estimated Funding ($):

* a. Federal	7,844,313.00
* b. Applicant	0.00
* c. State	0.00
* d. Local	0.00
* e. Other	0.00
* f. Program Income	0.00
* g. TOTAL	7,844,313.00

*** 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 Explanation

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: Ms. * First Name: Theresa

Middle Name:

* Last Name: Savo

Suffix:

* Title: Deputy Comm. for Operations & Management Svcs

* Telephone Number: 518-474-2547 Fax Number:

* Email: tsavo@mail.nysed.gov

* Signature of Authorized Representative: Mary Drzonsc * Date Signed: 09/25/2008

Authorized for Local Reproduction

Standard Form 424 (Revised 10/2005)
Prescribed by OMB Circular A-102

OMB Number: 4040-0004
Expiration Date: 01/31/2009

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.

New York Congressional Districts & Representatives
September 22, 2008

Bishop, Timothy H.; New York, 1st
Israel, Steve; New York, 2nd
King, Peter T.; New York, 3rd
McCarthy, Carolyn; New York, 4th
Ackerman, Gary L.; New York, 5th
Meeks, Gregory W.; New York, 6th
Crowley, Joseph; New York, 7th
Nadler, Jerrold; New York, 8th
Weiner, Anthony D.; New York, 9th
Towns, Edolphus; New York, 10th
Clarke, Yvette D.; New York, 11th
Velazquez, Nydia M.; New York, 12th
Fossella, Vito; New York, 13th
Maloney, Carolyn B.; New York, 14th
Rangel, Charles B.; New York, 15th
Serrano, Jose E.; New York, 16th
Engel, Eliot L.; New York, 17th
Lowey, Nita M.; New York, 18th
Hall, John J.; New York, 19th
Gillibrand, Kirsten E.; New York, 20th
McNulty, Michael R.; New York, 21st
Hinchey, Maurice D.; New York, 22nd
McHugh, John M.; New York, 23rd
Arcuri, Michael A.; New York, 24th
Walsh, James T.; New York, 25th
Reynolds, Thomas M.; New York, 26th
Higgins, Brian; New York, 27th
Slaughter, Louise McIntosh; New York, 28th
Kuhl, John R. "Randy"; New York, 29th

U.S. DEPARTMENT OF EDUCATION

BUDGET INFORMATION

NON-CONSTRUCTION PROGRAMS

OMB Control Number: 1890-0004

Expiration Date: 06/30/2005

Name of Institution/Organization:
New York State Education Department

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	$ 450,982	$ 469,023	$ 487,782	$ 0	$ 0	$ 1,407,787
2. Fringe Benefits	$ 192,434	$ 200,132	$ 208,137	$ 0	$ 0	$ 600,703
3. Travel	$ 15,000	$ 15,000	$ 15,000	$ 0	$ 0	$ 45,000
4. Equipment	$ 24,000	$ 0	$ 0	$ 0	$ 0	$ 24,000
5. Supplies	$ 30,000	$ 20,000	$ 20,000	$ 0	$ 0	$ 70,000
6. Contractual	$ 1,620,000	$ 1,605,040	$ 1,661,242	$ 0	$ 0	$ 4,886,282
7. Construction	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
8. Other	$ 105,000	$ 105,000	$ 105,000	$ 0	$ 0	$ 315,000
9. Total Direct Costs (lines 1-8)	$ 2,437,416	$ 2,414,195	$ 2,497,161	$ 0	$ 0	$ 7,348,772
10. Indirect Costs*	$ 158,746	$ 165,096	$ 171,699	$ 0	$ 0	$ 495,541
11. Training Stipends	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
12. Total Costs (lines 9-11)	$ 2,596,162	$ 2,579,291	$ 2,668,860	$ 0	$ 0	$ 7,844,313

***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? [X] Yes [ ] No
(2) If yes, please provide the following information:
Period Covered by the Indirect Cost Rate Agreement: From: 4/1/2008 To: 3/31/2009 (mm/dd/yyyy)
Approving Federal agency: [X] ED [ ] Other (please specify): _____
(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)?

ED Form No. 524

U.S. DEPARTMENT OF EDUCATION

BUDGET INFORMATION

NON-CONSTRUCTION PROGRAMS

OMB Control Number: 1890-0004

Expiration Date: 06/30/2005

Name of Institution/Organization:
New York State Education Department

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

OMB Approval No.: 4040-0007
Expiration Date: 04/30/2008

ASSURANCES - NON-CONSTRUCTION PROGRAMS

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 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 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.

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 subagreements.

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 (Clean Air) Implementation Plans under Section 176(c) of the Clean 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. §§1271 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 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 OFFICIAL	* TITLE
Mary Drzonsc	Deputy Comm. for Operations & Management Svcs
* APPLICANT ORGANIZATION	* DATE SUBMITTED
New York State Education Department	09/25/2008

Standard Form 424B (Rev. 7-97) Back

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 an 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 $10,00 0 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 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 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 subjec t to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

* APPLICANT'S ORGANIZATION

New York State Education Department

* PRINTED NAME AND TITLE OF AUTHORIZED REPRESENTATIVE

Prefix: Ms. * First Name: Theresa Middle Name:

* Last Name: Savo Suffix:

* Title: Deputy Comm. for Operations & Management Svcs

* SIGNATURE: Mary Orzorsc * DATE: 09/25/2008

Close Form

SUPPLEMENTAL INFORMATION
REQUIRED FOR
DEPARTMENT OF EDUCATION GRANTS

1. Project Director:

Prefix:	* First Name:	Middle Name:	* Last Name:	Suffix:
Mr.	Peter		Rooney	

Address:

* Street1: 89 Washington Avenue
Street2: Room 301
* City: Albany
County: Albany
* State: NY: New York
* Zip Code: 12234
* Country: USA: UNITED STATES

* Phone Number (give area code): 518-474-5012
Fax Number (give area code):

Email Address: prooney@mail.nysed.gov

2. Applicant Experience:

Novice Applicant ☐ Yes ☐ No ☒ Not applicable to this program

3. Human Subjects Research

Are any research activities involving human subjects planned at any time during the proposed project Period?

☐ Yes ☒ No

Are ALL the research activities proposed designated to be exempt from the regulations?

☐ Yes Provide Exemption(s) #:

☐ No Provide Assurance #, if available:

Please attach an explanation Narrative:

Add Attachment Delete Attachment View Attachment

Project Narrative

Abstract Narrative

Attachment 1:
Title: Pages: Uploaded File: **1234-abstract vers 5.pdf**

ABSTRACT
NEW YORK STATE
LONGITUDINAL EDUCATIONAL DATA SYSTEM
PROJECT NEXTGEN

The New York State Board of Regents ('the Board', 'the Regents') is committed to raising student achievement at all levels. Accurate and timely data are indispensable to accomplishing this goal. The Board has aggressively pursued the use of data to improve student achievement, meet our accountability responsibilities, and provide information to local educators and the public.

The New York State Education Department (NYSED) established a longitudinal data system to accommodate grade 3 through 8 student assessment data beginning in the 2005-06 school year. In 2006-07 the system was expanded to data for grades 9-12. It was expanded once more in 2007-08 to collect and report on data related to Special Education students.

This first generation of the New York State longitudinal data system (NYSLDS) has experienced a number of problems and inefficiencies, detailed in the narrative portion of this grant application. New York State is requesting an investment of $8 million in combined foundation and expansion activities to improve and unify NYSLDS sub-systems in a manner that will produce a Next Generation that is effective and efficient.

Project NextGen will focus proposed activities related to four major objectives that together will create a State LDS that is compliant with the accepted qualities of a good Longitudinal Data System. Project NextGen is organized as follows:

1. Policy and Governance:
    a. Executive Policy Group
    b. Activities Oversight Group
    c. Network of Statewide Stakeholder Advisory Panels

2. Data Quality
    a. CIO Technical Assistance Center
    b. Universal Interface to the NYSLDS
    c. Certification standards for Student Management Systems

3. Data Reporting
    a. Streamline current Accountability Reporting system.
    b. Statewide Data Reporting Center
    c. NYSED Internal Reporting Center

4. Re-engineering and P-16 Data
    a. Upgrade and monitor technical architecture
    b. Build a prototype for expanding to a P-16 system.

Project Narrative

Project Narrative

Attachment 1:
Title: Pages: Uploaded File: **1238-narrative version 9.2.pdf**

Attachment 2:
Title: Pages: Uploaded File: **1239-Appendix A_CELT Report sections.pdf**

SECTION 6
PROJECT NARRATIVE

INTRODUCTION

The New York State Board of Regents envisions the next stage of educational reform based upon a P-16 model: fostering success for all students from pre-kindergarten through high school, and preparing them for success into college and the workforce. To accomplish this, the Regents have crafted a P-16 Action Plan that is mobilizing the entire educational system in New York State behind a series of major actions that are already reaping positive results. Fundamental to carrying out this far-reaching plan is the need for a comprehensive data system that can be used to drive fact-based analysis and decision-making. That is why we are presenting this proposal.

The Board of Regents sets educational policy for New York and governs the University of the State of New York ("USNY"), the most comprehensive and unified educational system in the nation. The University, established in 1784 and recognized by the State Constitution, is a legal corporation with broad powers that encompasses all of education from birth through adulthood and includes more than 225 public and private colleges and universities, 5,000 public and private schools, nearly 7,000 libraries, 750 museums, and 25 public broadcasting facilities. The Regents also license and regulate a million professionals practicing in 47 fields, and certify 250,000 public school teachers and administrators.

For more than a decade, the Regents, the Commissioner and the Department have identified and worked to solve New York's two fundamental educational challenges: first, **the great divide in achievement** along lines of income, race and ethnicity, language, and disability; second, the need to keep up with growing demands for still more knowledge and skill in the face of **increasing competition globally**. Today, as a result of the Board's work, these issues are at the center of statewide public debate and action. The State's political, educational, business, and community leaders are united as never before, and New York now has an unprecedented opportunity to solve these challenges. The Board held a major Education Summit of USNY and other leaders in Fall 2005. From it, the Regents crafted "**P-16 Education: A Plan for Action**", which outlined a set of priority actions including the improvement of academic outcomes for English Language Learners and students with disabilities, the raising of learning standards, the alignment of standards, assessments, curriculum, and instruction across the P-16 continuum, the strengthening of the SED's accountability and school improvement capacity, the creation of a P-16 Data System, and the focusing of regional education networks on joint P-16 strategies.

In pursuing these goals, the Board has emphasized the need to confront and analyze the data, share it broadly, and use it to define where resources and energy should be applied. This includes both recognizing achievements and declaring problems as clearly as possible. Our data can and must be used to drive student achievement at all levels. Accurate and timely data are key to:

- driving appropriate policy decisions;

- providing information for State and federal accountability;
- providing information to improve teaching and learning at the district, school, and classroom levels; and
- informing the public.

In a major step to signal its intentions, the Board of Regents last year established a new P-16 structure, joining the Office of Elementary, Middle, Secondary, and Continuing Education (EMSC) and the Office of Higher Education under one Senior Deputy Commissioner within the State Education Department for a systemic approach to education reform in New York State. The Board of Regents message was clear - the Department must transform the way it does business with the overall goal of raising student performance and closing the achievement gap.

The Regents have applied for and received major foundation grants to help fund the work thus far. In 2007, the Board of Regents received $6.2 million in support from the Bill & Melinda Gates Foundation and The Wallace Foundation for work to improve New York State's high-school graduation rates, college readiness and college completion rates. The support is funding a series of initiatives outlined in the Regents' P-16 Action Plan, a blueprint of actions focused **on raising achievement for all students and closing the achievement gap.** The gap is the great divide in academic achievement along lines of income, race and ethnicity, language, and disability, which is manifest in test scores, high school graduation rates, and college completion.

The foundations' investments are significantly accelerating the state's ongoing work. The Regents and State Education Department leadership are focusing on improving educational leadership across the state, developing a cutting-edge service capacity within the State Education Department, identifying and implementing best practices that improve schools, revising the system by which schools are held accountable, and designing a comprehensive data system that will track the progress of individual students from pre-Kindergarten through college.

The Regents recognized that the State's data systems are fragmented, whereby many data systems which are housed in a variety of different institutions, including local districts, BOCES, SUNY, and CUNY. Each system uses different metrics with different methodologies and identifiers. New York needs a single system that provides a comprehensive view of each student's progress across school, continuing through transitions from elementary to middle to high school and college. A uniform system will help ease the strain of student mobility across districts by speeding access to important data, informing schools about the level of high-school preparation required for success in higher education, and aiding evaluation of the success of district and statewide programs, and much more.

To help reform and unify these systems, the Regents also sought and received $2 million in support from the Gates Foundation to develop a plan for a P-16 data system to track individual students' progress in order to increase high school and higher education graduation rates. The Board of Regents and the State Education Department have created a strong partnership with the State University of New York (SUNY), the City University of New York (CUNY), the New York City Department of Education, and the Yonkers and Syracuse school districts to develop the data system. The Parthenon Group, a leading advisor on systems and data used to drive

education reform, is leading the project. The work involves a fact-based review of all current data systems and the information they provide, an assessment of the system's performance, an analysis of what quantitative and qualitative information is missing and needed, and finally the design of a comprehensive, integrated P-16 data system across the pre-K-12 and higher education systems. Phase I of this work, which identified the current status of the data systems and laid out a set of clear goals for a P-16 system, is already completed; a proposal to fund Phase II is under consideration as this is being written.

The Department also engaged the Center for Educational Leadership and Technology (CELT) to analyze the State's longitudinal data system. CELT identified a number of transactional, governance, and technology issues that are addressed in this grant request.

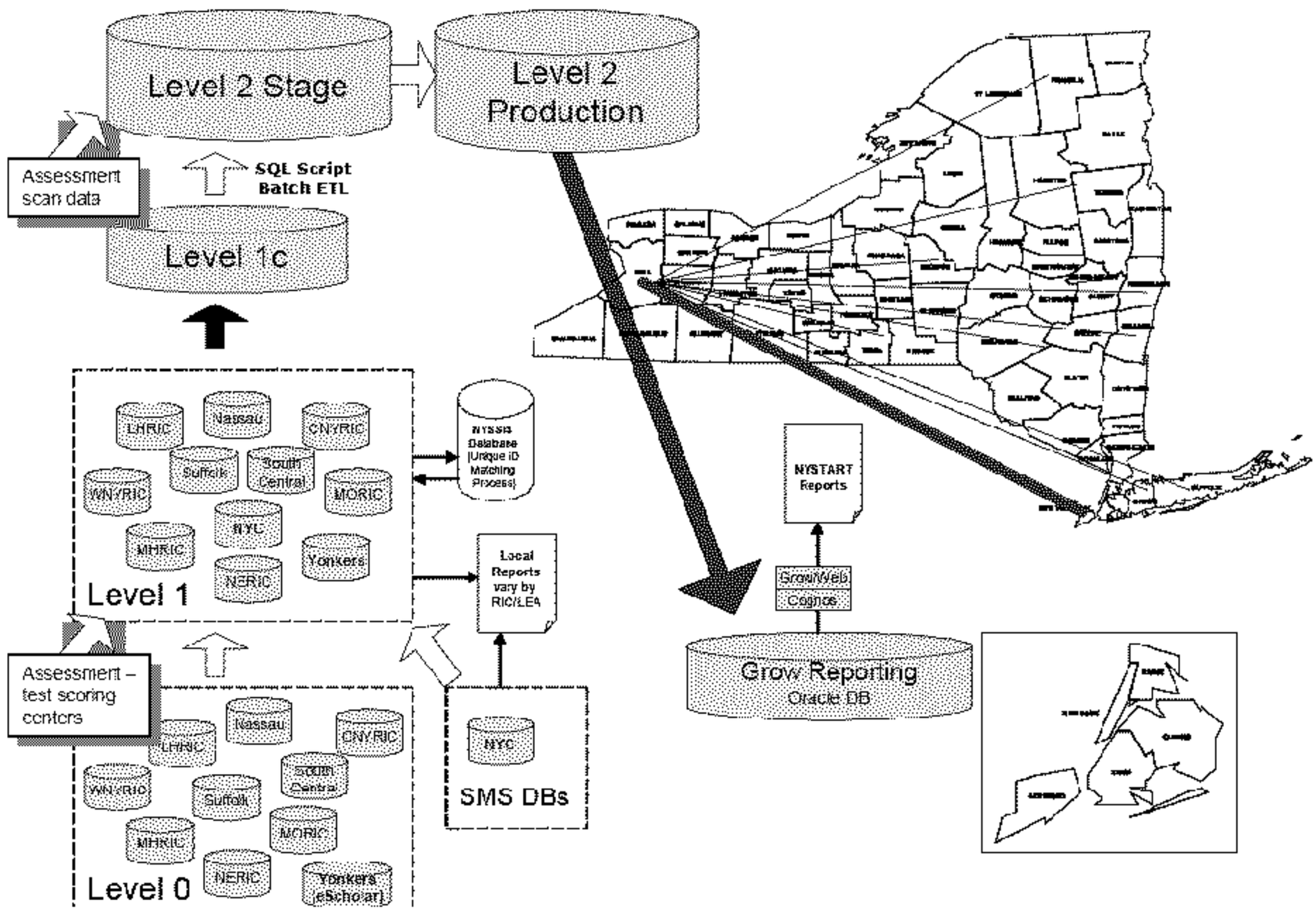
The New York State Education Department is committed to re-engineering its Longitudinal Data System to be more responsive to the needs of its constituents. A re-engineered system will provide increased data quality. The ease and accuracy of local reporting will be improved, the cycle time for SED reporting to USED and the public will be reduced, and data to support Regents policy and District practice to enable improved student achievement will be produced in a more timely fashion.

This grant request is another major step in the Board of Regents plan to strengthen New York's P-16 education strategy. It builds on and carries forward the previous work outlined above. The grant will directly permit New York to improve the quality and timeliness of our current P-12 data system; feed seamlessly into Phase II of the Development of the P-16 data system; expand our data reporting capacity, thus putting important performance data directly in the hands of educators and the public; improve our accountability systems; identify successful programs along the P-16 education continuum and enhance the State's ability to allocate resources; and provide even better information to the Board of Regents to set education policy.

SECTION A: NEED FOR PROJECT

The New York State Education Department (NYSED) established a longitudinal data system to accommodate grade 3 through 8 student data beginning in the 2005-06 school year. In 2006-07 the system was expanded to data for grades 9-12. It was expanded once more in 2007-08 to collect and report on data related to Special Education students. This final expansion made the system a full pre-school through grade 12 statewide data warehouse.

As currently constituted, the State's student data collection system consists of at least seven different levels of data repositories. The following diagram provides a high level view of the system:



Data currently moves from the SMS to level 0, next to level 1, then to level 1c, then level 2, and finally through the staging databases to the Grow Reporting database. These various levels are all separate instances of the same database. However, the time required to move the data between the levels results in different versions of the data at each level.

Additionally, the operation of the LDS is distributed across 11 regional entities, represented in the diagram above as "Level 1". These entities are regional service agencies referred to as Regional Information Centers (RICs). These Centers operate the "Level 1" data warehouses and have primary responsibility for collecting data from local school districts and supporting school districts in that effort.

While providing a foundation for data collection and management, this system has not performed in a fully efficient and effective manner:

- New York State issued final school report cards for the 2006-07 school year in August of 2008 14 months after the referenced school year had closed. We know we can do better than that.
- School districts in New York routinely begin a school year without data from the previous year's assessment administration, making it difficult to make meaningful instructional decisions on curriculum or instructional strategies.
- The system has challenged New York State in meeting many of its Federal reporting requirements in a timely fashion, especially as it relates to accountability and Education Data Exchange Network (EDEN) reporting.

These outcomes can be attributed to problems at many levels of the existing system:

- Policy/Governance governance of the project is distributed across multiple parties;
- Architecture/Design interoperability between LEA data systems and the NYSED warehouse is inefficient;
- Project Management there is no single project management team; management is distributed across multiple groups with no unifying authority;
- Database Design while the inherent logic of the state's data modeling is sound, the complexity of moving data through the multiple levels in the current system has some unintended and undesired consequences;
- Business Rules rules are complex and difficult to communicate to LEAs; no standard communication system exists for this purpose on a statewide basis.

Recognizing these deficiencies, the Regents sought and received major foundation funding and retained two independent expert firms to review and recommend major revisions to the data system. Both parties noted specific areas in need of attention in order to improve the quality of the LDS. While the entire contents of their reports cannot be accommodated in the space permitted in this proposal, their observations note limitations of the current system and an accompanying need for the proposed Project NextGen.

The Center for Educational Leadership and Technology (CELT) made the following comment in a report dated June 2008:

"The CELT team noted over 50 observations and accompanying recommendations…that are necessary to create the type of quality data and reporting needed by the districts and NYSED. The current system for moving data from the schools and districts was developed with no over-arching technology infrastructure, with no real review/inclusion of best practices, and with sensitivity toward established political institutions. This has resulted in a level of complexity not seen in other states and has ***compromised the quality of the data and reporting There are areas of weakness in overall logical operational design, technical architectural design, vendor roles, data governance, and quality assurance."*** (emphasis added) Report of the CELT Group - page 2.

A second study by the Parthenon Group, published in May 2008, recommended improvements in three broad areas. Specific actions were recommended to "ease the burden of data collection and reporting"; to improve "the weak capacity to analyze and make use of data"; and finally to reduce the "inequity of support across districts". report of the Parthenon Group, page 20

Excerpts from these two reports are included in the Appendix. To summarize, these reports identified the following key findings:

- Data flows too slowly and inefficiently through the current data collection processes, from the Local Education Agency (LEA) to the State. The result is that data quality issues need to be reviewed at every step in the process.
- The State is frequently pressured to meet state and federal accountability deadlines.

- Educators, particularly at the school and district level, cannot access reports in a timely and efficient manner.
- While the technology used for the current data collection and management systems is a good foundation, the State has not created a uniform set of business rules that apply across all systems, which results in inefficient data flow.
- The current system will need modification in order to meet impending growth models of assessment and accountability.

The proposed Project NextGen will create work products that will address the deficiencies noted in these reports.

SECTION B: OBJECTIVES OF THE PROPOSED "PROJECT NEXTGEN"

Objective 1.0: Policy/Governance

As noted in the CELT report, "There is no owner or architect at the NYSED for the current process, nor is there a single point of contact responsible for data and applications related to the movement of data from the schools to NYSED." (CELT, May 2008, pg9)

Objective 1.0 will be to create a clear policy/governance structure that is not only visible and obvious to all stakeholders, but takes full responsibility for all aspects of the LDS. At minimum, there will be three components to achieving this objective: creation of an Executive Policy Group, creation of an Activities Oversight Group, and the creation of a Statewide Stakeholders Advisory Panel.

Activity 1.1: The creation of an Executive Policy Group.

Similar to many complex organizations, NYSED has an organizational structure that creates certain "vertical silos" of activity. As it relates to the provision of systemic support for an LDS, this vertical structure has become an inhibitor of success.

The need to collect and report data crosses many functional areas of the NYSED: assessment reporting, special education reporting, and career and technical education reporting are just a few. The conflicts between the nature of these data and the timelines for collecting and reporting these data have caused a certain level of dysfunction in the LDS.

Project NextGen will focus on creating an Executive Policy Group that will be horizontally organized. This group will have the authority to establish policy for the LDS project as it relates to data elements, collection and reporting schedules, compliance with Federal and State regulations, and any other executive level area requiring LDS activity.

Activity 1.2: Creation of an Activities Oversight Group

Perhaps the most glaring deficiency in the current generation of the New York State Longitudinal Data System (NYSLDS) is the lack of a single point of project management.

Project NextGen creates a comprehensive integrated Activities Oversight Group. This office will be responsible for implementing policies established by the Executive Policy Group and for taking overall responsibility for all aspects of the data collection and reporting project. This includes oversight of all the sub-systems of the LDS, setting of all data standards and architecture, establishing the LDS budget, communication of clear timelines, management of third party vendors, and other attributes normally associated with quality project management.

Activity 1.3: The creation of a Stakeholder Advisory Panel

New York State has approximately 3.3 million students housed in over 700 local school districts. These entities are impacted greatly by how the LDS is constructed, how its business rules are created and disseminated, how timelines are created and implemented, and how reports for their use are designed and distributed. Yet, they have little or no input into any of these processes.

Project NextGen will create a system to provide active and ongoing review by local constituents. Regional Advisory Councils will be organized across the state. Major policy initiatives as well as detailed functional plans related to operation of the LDS will routinely be reviewed by these groups. Each of the Regional Groups will have representation on a Statewide Group.

This structure will assure clear and continuing communication across all aspects of the project.

Expected Outcomes of Objective 1.0:

In keeping with accepted best practices, the activities of Objective 1.0 will create a focused governance and policy structure that will endure. The lack of this structure in the current system has been a major contributor to the dysfunction noted by the outside consultants.

Objective 2.0: Data Quality

Both the CELT and Parthenon groups observed data quality issues in New York State. Inequality of support for school districts, the unusually high number of disparate student management systems across the state, and the complexity of the data collection system were all cited as contributing to this problem.

Objective 2.0 create a series of related project products that standardize data quality components.

Specifically, standard training activities and support structures will be created for the local school districts; standard error checking will be created for data at a level that is closest to the origins of the data, and standards will be set for student management systems.

Activity 2.1: Creation of a Chief Information Officer (CIO) Technical Assistance Center.

The inconsistent support for school districts and the resulting inconsistency of quality data are among the primary reasons for ongoing problems in this area.

Project NextGen will create a CIO Technical Assistance Center. This Center will be responsible for the creation of standards for school based staff along with activities to support the implementation and ongoing maintenance of those standards.

The Center will be charged with developing, disseminating, and maintaining a series of training activities for LEA staff responsible of the collection of data and its transmission to the state. The Center will create supporting materials as well as supporting websites and other structures as needed to provide more uniform support for school districts. These activities will be focused on two themes: a) the skill set and daily activities required of a school district CIO, and b) the clear communication of LDS business rules.

In addition to acting as the coordinating body for school district training activities, the CIO Tech Center will have the responsibility for collaborating with the Level 1 Operators to standardize school district support services.

Referring to the diagram on page 1, the Level 1 operators have primary responsibility in supporting local school districts. This includes assisting the district in its data collection effort, reporting on data errors, assistance in the resolution of data errors, and reporting on the state of LEA data at Level 1.

Both CELT and Parthenon noted that the quality of these support services varies greatly across the eleven Level 1 operators. The CIO Technical Assistance Center will be responsible for establishing a standard set of support activities across all Centers and provide quality assurance procedures for the ongoing maintenance of those services.

Activity 2.2: The creation of a Universal Interface to the LDS and the creation of an accompanying universal standard set of error checking routines to be applied at the first instance of data movement from the LEA.

The nature of the accountability rules in New York State is such that the LDS business rules are necessarily complex. Little or no error checking takes place in the LEA student management systems. Consequently, the first opportunity to error check district data against the business rules takes place at what is currently referred to as Level 0. As currently constructed, the edits applied at Level 0 check for many, but not all, errors. Additionally, the error checking focuses on business rules only and does not check for reasonability or exceptions. This has resulted in poor data quality across the system. Therefore errors are found in the higher level repositories late in the process, when correction of that data becomes difficult due to time restrictions.

Additionally, the Level 0 staging tool currently provides school districts with the ability to load and review *only* current data. However, the accountability rules in New York State include managing data related to high school cohorts. This would include data that can span as many as six years.

The proposed project will create a specific product to address these issues. A Universal Interface to the Longitudinal Data System will be created to assist school districts in uploading and managing local data.

This interface will be used by all school districts in the state to stage, edit, and transfer data. All business rules will be incorporated into edit checking routines in this application, thus pushing error checking at a point in the system closest to the source of the data.

Activity 2.3: The creation of a Student Management System Certification Center

The state has a long tradition of local control. School districts use a wide variety of student management systems, school lunch systems, and special education management systems. There is little inter-operability between these systems and the systems vary greatly in their ability to collect and export required state data elements.

Project NextGen will establish a Student Management Systems Certification Center. This Center will work collaboratively with the student management systems, school lunch systems and special education management systems vendors across the state to establish criteria for certifying systems for use by school districts.

Three levels of certification will be proposed for review:

- Basic certification will be available to any system that collects all state required data elements and can successfully export those elements to the Level 0 interface tool.

- Advanced certification will be available to any system that can meet the requirements for Basic certification, but can also incorporate the state's business rules into its application.

- Preferred certification will be available to any system that can meet basic and advanced requirements, but can also accept individual assessment data results from the state for inclusion in report cards and progress reports.

The Center will establish the specifics of these certifications, establish the procedures by which vendor systems become certified, and will maintain the certification process over time.

The Center will become the state's primary vehicle for ongoing communications with vendors. It will be responsible for alerting vendors to proposed changes in the data-dictionary or business rules and will seek vendor advice on the implementation of those changes.

The Center will be responsible for promoting interoperability between and among systems so that, for example, poverty data residing in the school lunch system can easily be accessed by the student management system, or enrollment data in the student management system can easily be accessed by the special education system.

Expected Outcomes of Objective 2.0:

In keeping with the accepted best practices regarding Longitudinal Data Systems, the activities related to Objective 2 will ensure the integrity, security, and quality of the data. These activities

also establish a long term system for the ongoing training of those involved in creating and moving data. Finally, they create a streamlined communication process for managing change in the system as requirements are modified in the future.

Objective 3.0: Data Reporting

As noted previously, NYSED has had challenges related to its required reporting.

Objective 3.0 is to create data reporting structures that address all of the varying needs of the state: accountability reporting, federal reporting, reports to districts for instructional analysis, and ad hoc reporting for NYSED to inform educational policy. Specifically, this will require work products that streamline the current accountability reporting, the creation of a reporting center to serve the needs of school districts, and an additional center to report on and analyze data at the state level.

Activity 3.1: Streamline the current New York Statewide Testing and Accountability Reporting Tool (nyStart) Reporting Process

The original specifications for the nyStart system were at once "over-scoped" and "under-designed".

It was "over-scoped" in the sense that it tried to be "all things to all people" using the same reporting agent to deliver verification reports, assessment reports, accountability reports, and guided analysis reports for instructional improvement.

It was "under-designed" because it could not anticipate the actual nature of the collected data and consequently ignored some important functionality that should have been built into the original specifications. For example, it overlooked the role of staging the data for reporting. With no specific entity identified for this task, it has become one of the points of contention that has resulted in poor reporting performance and extended timelines.

A technical group will be created to review and re-write the functional and technical specifications for the state's primary reporting environment, the nyStart system. These new specifications will reduce the scope of nyStart reporting to state required accountability items only.

This Tech group will define specifically which data elements are included in that domain and create specifications for any and all reports related to accountability including Verification reports, Individual Student Reports, and School/District Report Cards.

Additionally, this Tech Group will define clear roles and responsibilities as they relate to this reporting process. Setting standards for the staging of data will be of particular importance in this regard.

Activity 3.2: Create the Statewide Instructional Data Reporting Center

The area of reporting that has suffered the most from problems in the LDS is the use of data by school districts to engage in instructional planning.

Project NextGen will create the Statewide Instructional Data Reporting Center. This Center will be responsible for collaborating with school districts, psychometricians, and other selected parties to create, disseminate, and support a basic set of assessment analysis reports that will allow districts to engage in appropriate instructional planning.

Reports should be generated in all state-related assessment areas: English Language Arts (ELA), Mathematics, Science, Social Studies, New York State English as a Second Language Achievement Test (NYSESLAT) and New York State Alternate Assessment (NYSAA). Reports should be psychometrically appropriate and the Center will be responsible for establishing a vetting procedure to assure this quality.

We will create a technical infrastructure, hardware, software, and communications environment for making this operational.

This Center will become the state's primary vehicle for ongoing support of school districts in the use of data to improve instructional outcomes. We will establish partnerships with groups across the state that have the capacity to support these reports with professional development activities and other school district support functions. These partnership groups will include local BOCES, colleges and universities, and other professional support groups.

Activity 3.3: Bring Federal reports back into SED and expand the capacity to analyze data for policy purposes.

One of the by-products of using the nyStart system as an all purpose reporting environment is a reduced in-house capacity to generate needed state reports.

The Department will implement additional reporting, using the state-selected Cognos reporting tools. We will operate and expand a reporting center that will generate a variety of ad-hoc reports to support State-level policy analysis.

Expected Outcomes of Objective 3.0:

The activities of Objective 3.0 will create long term structures that will provide information to improve student achievement and reduce achievement gaps among students. It also provides a platform for answering key educational policy questions, providing data for decision-making at multiple levels, and meeting Federal reporting requirements.

Objective 4.0: New Products:

Objectives 1 through 3 above address the major concerns with the current system and create an efficient and effective LDS. They create revised versions of current products and processes. However, while working to improve today's system, it makes sense to simultaneously begin building the future.

There are two major NYSED objectives that require detailed planning before any operational activities can be proposed. Those two areas are the re-engineering of the current data collection process through the creation of an Operational Data Store, and the creation of a full P-16 system.

Objective 4.0 is to improve the technical infrastructure, as identified by the CELT report, and to expand upon the work of the P-16 Data System Strategic Plan and implement a prototype P-16 data system.

Activity 4.1: Reconstructing the current technical infrastructure to include an Operational Data Store.

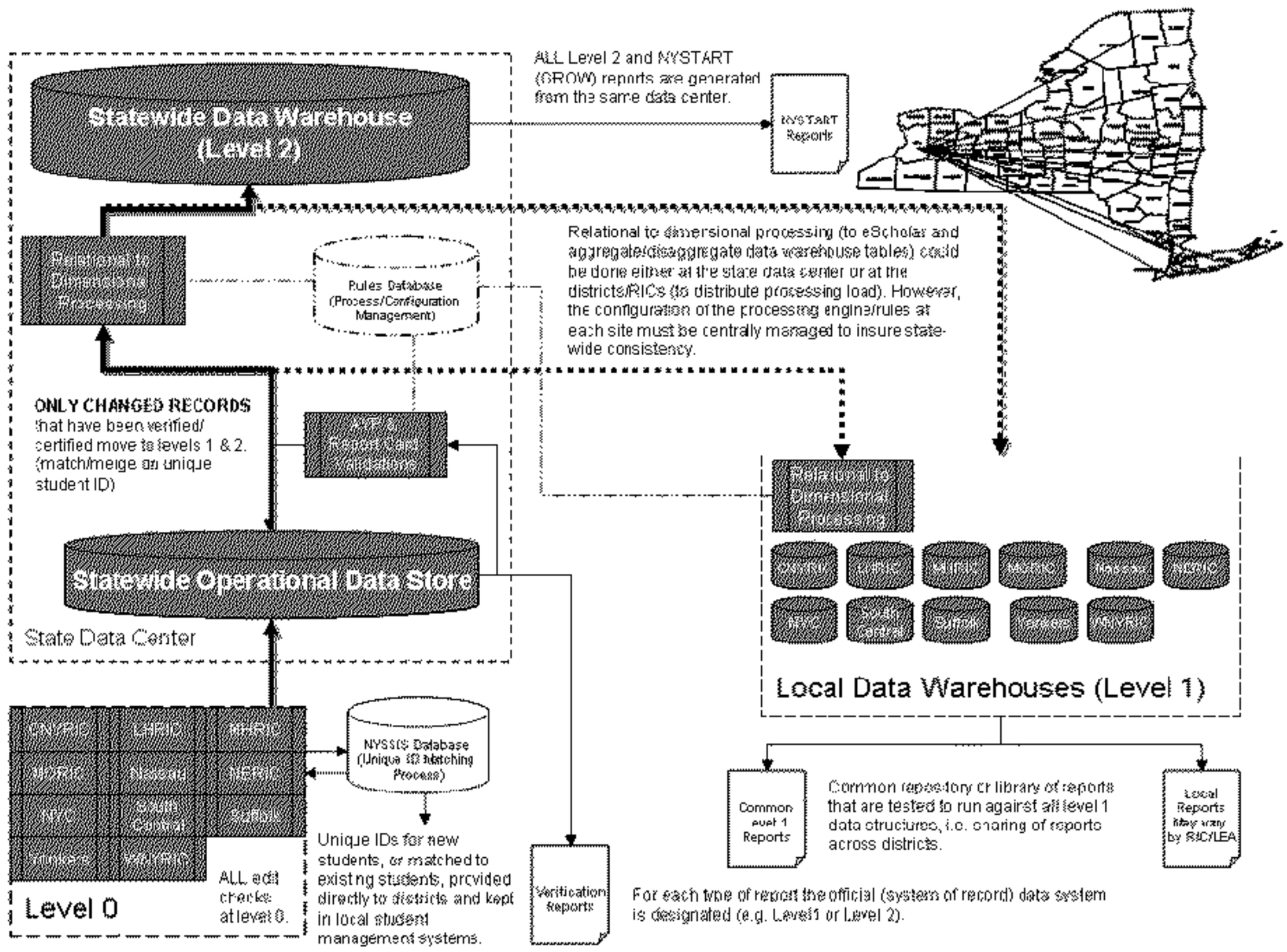
The CELT report recommended a major re-engineering of the entire NYS LDS. Both outside consultant groups, as well as constituent groups, have commented on the multiple levels of data repositories in use in the state and have recommended streamlining this long data trail.

One mechanism for such streamlining is the utilization of an Operational Data Store. Essentially this would be a full statewide data warehouse accessible to school districts. It would allow districts unfettered access to their data, with the ability to edit it, right up to the moment it is released to the state and becomes "official".

The CELT Report said the following:

> Reduce the complexity and the burden on the districts for the data movement from LEA to SEA but also make the district fully responsible for the data until the handoff to the NYSED. Do this by moving all of the data edits to Level 0 and implementing an Operational Data Store (ODS), from which Level 1 and 2 draw their data in parallel instead of a sequential process (Level 0 to Level 1 then Level 2). Establish ownership of the data at the district level until handoff to the NYSED at Level 2.

This represents a substantial re-engineering of the current system. The revised system would look like this:



This diagram proposes a dramatic change in the system architecture. In this process the old "level 0" database is transformed into a comprehensive "district-to-state" data interface. This allows all editing to take place at a level closest to the LEA. Additionally, the LEA maintains complete control of its own data right up to the moment it is handed off to the state.

This diagram also distinguishes between a level designed to manage ever-changing data (the Operational Data Store or ODS), and "frozen" data in the Statewide Data Warehouse. This distinction does not exist in the current system.

The New York State Education Department is committed to re-engineering its Longitudinal Data System to be more responsive to the needs of its constituents. A re-engineered system will provide increased data quality. The ease and accuracy of local reporting will be improved, the cycle time for SED reporting to USED and the public will be reduced, and data to support Regents policy and District practice to enable improved student achievement will be produced in a more timely fashion.

We will ***plan, develop, and test a re-engineered system***. We will assess the effect of creating such a design on all aspects of the system including: the affect on school districts, the affect on collecting and reporting data, the affect on data quality, and the affect on the ability of the state to meet its timelines. Specifically, the group will work in three phases with the following outcomes:

Phase I: Systems Impact Study

- Determine the effect of this re-engineering on every party to the current system including the effect on Student Management System vendors, LEAs, Regional Service Agencies, NYSED, data quality processed, interfaces with assessment systems, data reporting systems, and any other sub-system that will be affected by the proposed change.

Phase II: Detailed Project Plan

- Identify outcomes and goals.
- Determine deliverables and timelines.
- Build a Project Schedule
- Identify human resource, communications, risk assessment, and budget plans that ordinarily accompany such Project Plans.

Phase III: Test and Implement

The fully detailed Project Plan emerging from Phase II above will be used to create and test a functional reengineered system. Once the system is de-bugged and passes quality assurance testing, it will be fully implemented across New York State.

Activity 4.2: P-16 Data System Pilot.

The New York State Education Department (NYSED), with the leadership of the Board of Regents and the partnership of the State University of New York (SUNY), the City University of New York (CUNY), New York City Department of Education (NYCDOE), and Yonkers and Syracuse District Superintendents (the partners), has embraced an ambitious P-16 reform strategy to ensure comprehensive, unified efforts to improve student achievement at all levels. All partners are committed to supporting the creation of a robust P-16 data system for New York State and have assumed ownership and designated significant staff time to do so. Partners envision a P-16 data system that will:

- Provide a unified view of student achievement from year to year across the P-16 system (statewide and district-level views).
- Support programmatic actions to both raise student achievement by giving early indications both of problems and where to apply resources, new practices, and innovations.
- Support policy changes and resource investments.
- Identify the value added by programs at every level (identify select data elements and seek to minimize complexity of measures).

- Build on and combine the strengths and achievements of existing data systems and accountability measures.

- Be secure, accurate, and timely.

While NYSED is focused on improving the existing P-12 system as outlined in all the objectives above, the Department will expand to a P-16 system. The Strategic Planning process has identified the following goals for a P-16 Data System:

- Evaluate existing programs and initiatives and identify the need for new ones.
- Fulfill State and Federal obligations in an accurate and timely manner.
- Determine the effect of earlier preparation on later outcomes.
- Identify key indicators of college readiness.
- Determine what teacher-related factors lead to improved student outcomes.
- Ease the strain of student mobility by speeding access to student data.
- Provide timely student data to help inform programmatic interventions.
- Assess students' success in life beyond college.
- Inform higher education admission standards.
- Facilitate higher education application processes by implementing electronic student record transfers.

Grant funding will be used to create an operational plan to implement the systems goals noted above. Working directly with our partners at SUNY, CUNY, New York City, Yonkers and Syracuse, we will use the work completed by the Parthenon Group and build a prototype P-16 Data System. This pilot project will provide important validation of the business rules, technology, and reporting capacity to inform the creation of a fully-implemented statewide P-16 data system.

Expected Outcomes of Objective 4.0:

The outcomes of Objective 4.0 will be the creation of two products critical to the future of education in New York State. A simplified, streamlined, system architecture for the current P-12 Longitudinal Data System will be the capstone to the other changes proposed in this project through Objectives 1 through 3. Combined with the outcomes of these objectives, the creation of an Operational Data Store will bring New York State's LDS into compliance with all accepted standards of a quality data system.

Creating the initial P-16 version of the LDS, while simultaneously bringing the P-12 system up to standards, will provide NYS with the ability to move in the P-16 direction in an efficient and effective fashion.

SECTION C: PROJECT DESIGN

The state will accomplish the proposed Project using a variety of resource allocation techniques:

- Internal staff currently assigned to the existing LDS operation will be reassigned to roles with more specific duties related to the activities proposed in this Project. There are currently approximately 20 FTE dedicated to this purpose.

- Where possible, new staff will be added.

- New York State has a rich resource through our regional and intermediate service agencies. These public entities were created by the Legislature for the sole purpose of providing services to school districts. The Boards of Cooperative Educational Services (BOCES) and RICs organizations are already the primary partners in implementing the current LDS and will play a major role in achieving the objectives laid out in this proposal.

- The current system also includes strong partnerships with vendors in the area of data modeling and accountability reporting. These partnerships will continue to be a resource in support of the objectives of the proposed project.

The state will position itself to accomplish the objectives of this proposal by engaging in reorganization activities prior to the formal beginning of the Project (see Year 0 timeline below). Specifically, the state will reorganize its governance and policy structure by creating the groups mentioned in Objective 1.0 above ***prior*** to the beginning of the first project year in April 2009.

The existence of the Executive Policy Group, the Activities Oversight Group, and the Statewide Stakeholders Group prior to the beginning of Project activities should provide a substantial platform for success.

The Executive Policy Group will have ultimate oversight responsibility for proposal implementation. The day-in, day-out, operation of the project will reside in the Activities Oversight Group with the Stakeholder Group playing an important advisory role.

While the Activities Oversight Group will manage the project and take leadership over all its activities, many of the major objectives will be maintained by the Regional Information Centers. It is anticipated that the RICs will operate the CIO TAC, the Reporting Center, and the SMS Cert Center.

The Project Design is focused on the elements needed to have a successful SLDS:

- Needs and Uses: The Statewide Reporting Center in conjunction with the building of internal reporting center within NYSED will not only help to improve student achievement and reduce achievement gaps among students, it will also build a platform for informing educational policy.

- Governance: The creation of the Executive Policy Group, the Activities Oversight Group, and the Statewide Stakeholders group complies with all the accepted principles of a good governance structure.

- Institutional Support: NYSED leadership has recognized the deficiencies in the current system and taken action by commissioning the studies already referenced above (CELT and Parthenon). By submitting this application that includes dramatic changes to the current system, the support of NYSED for the needed changes is self-evident. The creation of the Statewide Stakeholders Group will assure a consensus on a shared vision for a new and successful system.

- Sustainability: The key to sustaining the NYSLDS over time is in the strong partnerships already established and those that will be established. NYSED, the RICs, and the primary support vendors have the combined capacity to sustain New York's large and complex system over time.

Additionally, the Project is designed to assure that the technical requirements considered as benchmarks for a good SLDS are in place:

- Federal Reporting: The inclusion of a wide domain of data elements collected from school districts, along with the proposed creation of an internal reporting center within NYSED should comply with all goals in this area.

- Privacy Protection and Data Accessibility: This is one area in which the current system excels. Database security is at a high level. Data accessibility in school districts is available only through a secure gateway. Only the Superintendent of Schools is authorized to allow access to a district's data.

- Data Quality As noted above, current data quality falls below acceptable norms. The activities proposed in the Project, a CIO Tech Center, SMS Certification, and a set of universal edit/exception checks should provide New York State with the highest data quality possible.

- Interoperability Within the various levels of the current SLDS, there is complete interoperability. However, the ability to ubiquitously exchange data between the state and the LEAs is more challenging. The activities proposed in the Project, the use of Level 0 as a universal interface and the creation of the SMS Cert Center, will vastly improve the facile exchange of data.

- Enterprise-Wide Architecture: This is one of the strengths of the current system. A system of universal student IDs allows the tracking of data across time and location. An up-to-date Data Dictionary and set of current Business Rules is available to all on an active internet link. All Data Modeling is completed by the state's partner for this purpose, eScholar LLC, the recognized national leader in this area.

SECTION D: INSTITUTIONAL SUPPORT

There is broad institutional support for the continued operation of an SLDS in New York State. The existence of the current system itself is a measure of that support.

The Board of Regents and the Commissioner of Education consider an improved data system to be crucial to enhance policymaking at the State level and improve teaching and learning at the local level. For that reason, they are overseeing and monitoring the project closely, with detailed monthly updates. Beyond that, State Education Department managers at the highest levels are working on the project:

- Senior Deputy Commissioner, P-16: Provides overall policy direction and support for P-16 education policy and implementation in New York State, including associated data systems;

- Associate Commissioner: Responsibility for the system; the Associate Commissioner and her staff are engaged in system policy issues on a daily basis.

- CIO: Acts in an advisory capacity to the Associate Commissioner and is involved in systems issues at all times.

- Higher Education: Collaborates with team members working with the LDS in preparation for expansion to P-16. This Office will play a major leadership role in the proposed P-16 Planning Activities.

- Information Technology Services (ITS): Operates the current universal ID system, manages 3rd party contracts, and provides some basic level of reporting.

- Information and Reporting Services: Assumes primary responsibility for all data collection and reporting.

- Vocational and Educational Services for Individuals with Disabilities (VESID) : Responsible for collecting and reporting data related to the Special Education population. Staff from this office collaborates on a regular basis with LDS staff.

- Western New York Regional Information Center: This Center houses the State's official data repository, referred to as "Level 2". A schematic of its infrastructure in included in Appendix B.

- The Regional Information Centers: These twelve centers located across the state act as the primary agents for collecting, correcting, and staging LEA data before it is moved to the Level 2 repository. Each Center has extensive infrastructure dedicated to this purpose. In addition to the actual collection of data, these Centers are also the primary conduits for supporting school districts.

- Greater Southern Tier Regional Information Center: This RIC is the author of the Level 0 interface tool.

- Project Managers Group: This group, representing all of the Regional Information Centers, the "Big 5" School Districts, vendors, and NYSED meets monthly to resolve problems related to systems operation.

- Tech/Standards Group: This group meets monthly to resolve any technical issues related to the project. It includes technical staff from the Regional Information Centers and from NYSED.

- Data Core Group: This group of advisors from school districts, NYSED, BOCES and RICs meets quarterly to exchange information.

- Corporate Partners: In support of this project, NYSED has strong and positive partnerships with the following: The Grow Network, Cognos Corporation, eScholar LLC.

These existing groups will be leveraged by the new Project to assure its initial and continued success. While the role of the members of some of these groups will be restructured to focus on the new activities being proposed here, their very existence will assure long term sustainability of the Project.

SECTION E: PROJECT MANAGEMENT PLAN

The Office of the Associate Commissioner, under the auspices of the Senior Deputy Commissioner P-16, has overall responsibility for policies and activities related to the Longitudinal Data System. This places responsibility for Project Management at the highest level of the NYSED, thereby assuring support and sustainability.

The primary modality to provide oversight will be the creation of an Activities Oversight Group established under the leadership of a Project Manager. The Project Manager (PM) will have responsibility for all aspects of implementing the proposed Project and will report directly to the Associate Commissioner.

In addition to supervising all key staff of the Activities Oversight Group, the PM will personally manage the activities related to Objective 1.0. Primarily this will involve the PM in the creation of the regional network of Stakeholder Advisory Councils. The PM will assist in the logistics of managing these groups, help set agendas, establish communication protocols, and provide information to the groups regarding Project plans, activities, accomplishments, and problems.

The PM will be assisted by three area coordinators as follows:

- Data Quality Coordinator (DQC): This person will report to the PM and will have responsibility for implementing the activities related to Objective 2.0.

- Data Reporting Coordinator (DRC): This person will report to the PM and will have responsibility for implementing the activities related to Objective 3.0

- Product Development Coordinator (PDC): This person will report to the PM and will have responsibility for implementing the Planning activities related to Objective 4.0.

This Office will be created during "Year 0" of the project before funding becomes available through this proposal. This will allow the governance and supervisory structure for all grant activities to be fully grounded and in place prior to the beginning of actual grant activities.

Data Quality Activities:

The Data Quality activities include the creation of two Centers in support of Data Quality: the CIO Technical Assistance Center and the Student Management System Certification Center.

The State Education Department is not organized in a fashion that would position it for success in these areas. Consequently, the services proposed for these Centers will be acquired by the state through a competitive procurement process.

The Data Quality Coordinator will establish specifications for Requests for Proposals (RFPs) that will allow the outside entities to compete for housing the CIO Technical Assistance Center and the SMS Certification Center.

The RFP will require the applicants to provide appropriate levels of staff and infrastructure to support the defined activities. The RFP will also provide an evaluation model that will assess the existing level of activity and expertise in the respondents related to the desired outcome. Once the RFPs are evaluated and an award is made, the Data Quality Coordinator will supervise the successful outside party.

This work will emerge over a three year period of time. Much of the time in Year 1 will be dedicated to creating standards, writing the RFPs, evaluating the responses, and starting up the Centers. Year 2 will see the first full flow of services from these Centers, with a complete sustainable set of services delivered in Year 3. Thereafter, the state is committed to sustain the operation of the Centers through state funding.

The creation of the Universal Interface represents another area where outside expertise is needed. A third party will be acquired through a competitive procurement process to create this most important product.

It is anticipated that the specifications for the required reports and edits can be generated in Year 1. Year 1 should also see an initial deployment of edit checks in the existing system. The Universal Interface should be available for beta testing by year 2, with a full supported and sustainable implementation taking place in year 3.

Data Reporting Activities:

One of the three Data Reporting Activities, Activity 3.2 "Create the Statewide Instructional Data Reporting Center" will be implemented using the RFP modality mentioned above. The state has invested heavily in the creation of report writing expertise across the state. NYSED has executed a licensing agreement with the Cognos Corporation to extend its licensed products to all the public education entities in the state. NYSED has also provided training and support for staff engaged in reporting activities. The cost of this software and training absorbed by NYSED is in excess of $2 million.

Once the competitive procurement process is complete and an award is made, the Manager of the created Center will report directly to the Data Reporting Coordinator (DRC). This Reporting Center will function on the same timeline as the other Centers noted above. Most of Year 1 will be dedicated to the creation of an RFP process and the organization of the Center. Year 2 will see the onset of the first operation of the Center with Year 3 seeing a complete sustainable set of services.

The other two activities in this category will be managed in-house at NYSED.

The DRC will work with NYSED's Office of Information Technology Services (ITS) to create the Reporting Office as delineated in the narrative above and interface with offices throughout NYSED to identify reporting needs and create specifications for the variety of reports that will be needed. The DRC will also take responsibility for managing the contract of the current primary report source for New York State, the Grow Corporation. It will be necessary to create new specifications for the Grow contract and create new structures for managing that contract.

New Products Activities:

The Product Development Coordinator (PDC) will take responsibility for providing leadership in the two areas of planning described in this narrative. The PC will reach out to established groups in the state (Project Managers, RIC Directors, Big 5 Coordinators, Tech/Standards Group, NYSED) and others to form a planning group with the needed expertise to evaluate the issue of the Operational Data Store. The PDC will act as chair of this group and direct all the planning activities.

In addition to this standing planning group, the PDC will be authorized to access external expertise and resources as needed. A Data Warehouse Architect will be retained as a consultant to this ongoing process of planning and development.

The PDC will also lead the P-16 planning effort. This is likely to involve more than one group as the planning is truly "starting from scratch". Groups to review existing P-16 systems, groups to look at existing data systems in the state university system, groups to look at the feasibility of extending the current P-12 system, will probably all be necessary. The PDC will coordinate the activities of all these groups and take responsibility for preparing an integrated report for the review of the Executive Policy Group.

SECTION F: PROJECT PERSONNEL AND RESOURCES

The proposed Project personnel are aligned precisely with the Project Objectives all coordinated under the umbrella of the Activities Oversight Group. In addition to these specific positions that will directly support the project, there are numerous resources that will be applied to the Project from ancillary sources.

Note to reader: As described above, several of the activities of this proposal will be contracted to third parties. The staffing patterns below that are related to those contracted services are included here solely for the purpose of estimating the resources it will take for these project activities to be successful. They DO NOT represent positions that will be added to the staff of NYSED.

The primary Project staff and resources are:

Associate Commissioner: Overall responsibility for the Project.

Activities Oversight Group:

- Project Manager: Has daily responsibility for Project Activities; reports to Assoc. Commissioner; supervises Data Quality Coordinator, Data Reporting Coordinator, Product Development Coordinator.
- Data Quality Coordinator: Supervises the managers of the CIO Tech Assistance Center, the SMS Certification Center, and the Standing Committee creating error and reasonability data checks.
- Data Reporting Coordinator: Supervises the Manager of the Data Reporting Center, supports all data reporting activity as outlined above.
- Product Development Coordinator: Supervises all aspects of System Re-engineering and P-16 planning and product development.
- All positions in the Activities Oversight Group are full time positions.

CIO Technical Assistance Center: (A contracted service).

- Manager: Responsible for all activities of the Center; reports to Data Quality Coordinator; estimated at .6FTE
- Programmer: Creates media for electronic statewide distribution; reports to Manager; estimated at . 5FTE
- Professional Developers: Creates all training activities for end-users; reports to Manager; estimated 2FTE.
- Clerical Support; estimated at 1 FTE.

SMS Certification Center: (A contracted service)

- Manager: responsible for all activities of the Center; reports to the Data Quality Manager: estimated at .6 FTE

- Technician: responsible for assessing compliance of SMS; reports to Manager; estimated at 1 FTE.
- Clerical support: estimated at 1 FTE.

Creation of the Universal Interface: (A contracted service)

- Manager: responsible for all aspects of the edit check project; reports to the Data Quality Manager; estimated at .6 FTE
- Programmers: responsible for writing all the code needed to create the desired edits; reports to Manager; estimated at 2 FTE.

Statewide Reporting Center: (A contracted service)

- Manager: responsible for all activities of the Center; reports to the Data Reporting Manager; estimated at .6FTE.
- Programmer: responsible for actual coding of all reports; reports to Manager; estimated at 2 FTE.
- IT Tech: responsible for establishing and implementing hardware/software/communications infrastructure; reports to Manager; estimated at .5 FTE
- Clerical support: estimated at 1FTE.

Creation of NYSED Reporting Office:

- Programmers: responsible for coding of all required reports; reports to existing Director of IT at NYSED. Estimated at 2 FTE.

Product Development Projects:

- The product development projects will be supervised by the Product Development Coordinator from the Project Management staff. All Planning Team members will be selected from among the many Institutional Support groups delineated in Section D above.

- The product development projects will focus on sophisticated systems technology addressing issues of re-engineering the current P-12 data warehouse, and creating the systems architecture for the new P-16 system. A Data Warehouse Architect will be retained to act in a consulting capacity to these groups.

2. Observations and Recommendations

The NYSED has begun a number of good/promising practices and these include:

- Leadership's concern for data quality (as evidenced by participation in this assessment) and commitment to make the changes necessary to begin to build a culture around data quality.
- The existence of comprehensive local-level data warehouses built from the same data model and maintained at the same release level for all districts that use it.
- Established standard formats for data extractions for the local student information systems (SIS) to follow.
- Consistency between the data models for the local (Level 1) and state-level data warehouses.
- Heavy interest in and sense of "ownership" of the Level 1 local data warehouse by the districts.
- A Level 0 data cleansing process.
- The planning for the capacity and resources to support the interim growth model.
- The establishment of the Data Core Group to identify and manage solutions to pressing and long-term issues.

However, these practices do require refinement to make them better and eventually best practices.

The following observations and recommendations from the CELT team are organized by the two key areas of interest, Data Movement and Reporting. The observations and recommendations are also placed into categories and they are as follows:

- Policy/Governance
- Architecture Design
- Project Management
- Database Design
- Business Rules

2.1 Data Movement - Observations

2.1.1 Current-State Architecture

The following diagram is a high-level representation of the flow of data as it moves through the current NYSED system from local districts to a state-level data warehouse and reporting systems:

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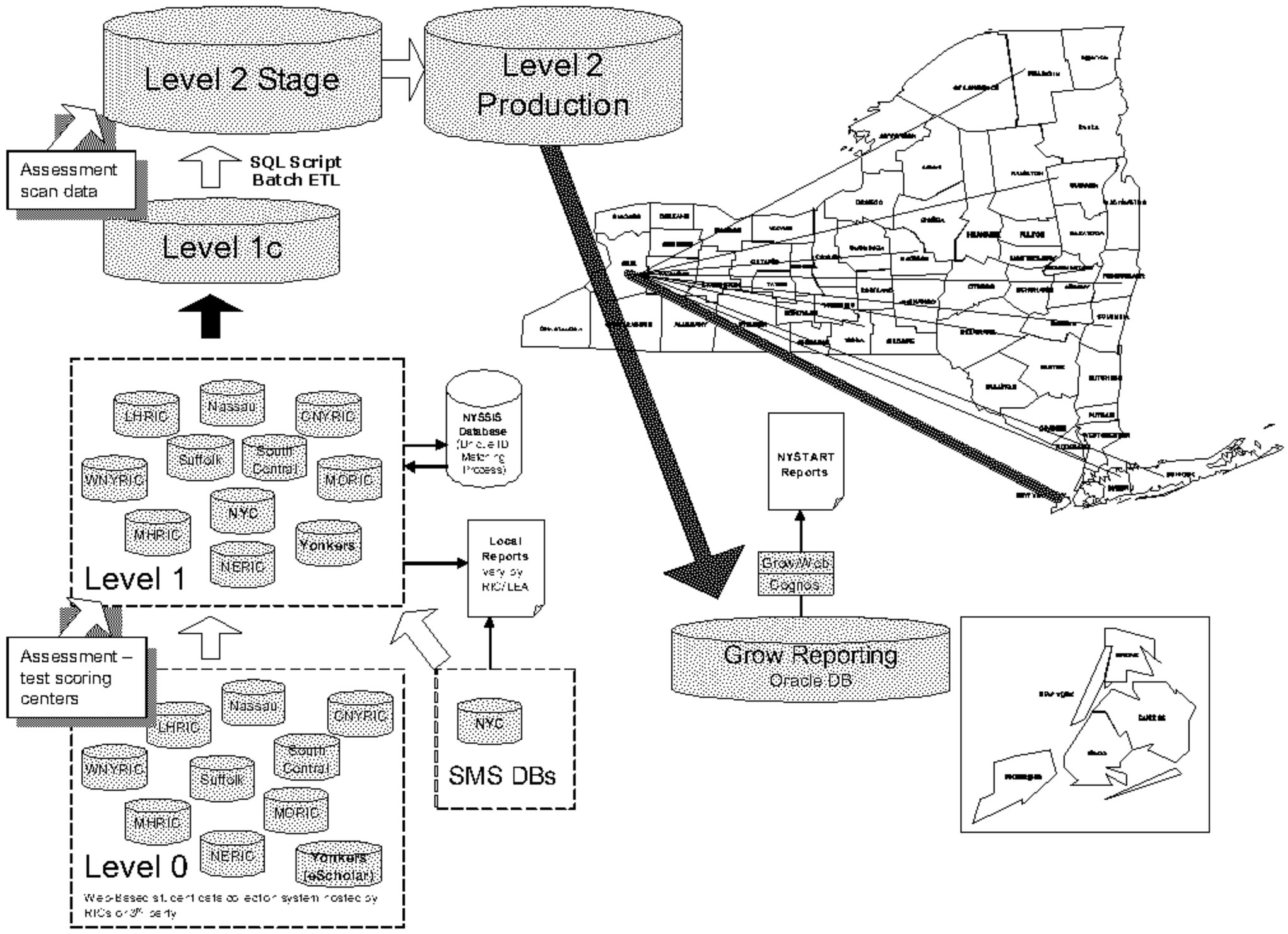

The observations for the data movement area are broken out by Level 0, 1 and 2. The first set of observations is regarding those things that cut across all three (3) levels.

2.1.2 Observations that Affect All Levels (0, 1, and 2)

Category	Observation	Degree of Impact
Policy/ Governance	1. There is no single owner or architect at the NYSED for the current process, nor is there a single point of contact responsible for data and applications related to the movement of data from the schools to the NYSED.	High
Policy/ Governance	2. There is not an official IT Review Board (see Appendix A for definition of this group) comprised of executive leadership and other representative constituents (e.g., districts). This Board serves the role of reviewing and approving all NYSED IT projects and technical standards, enforcing IT standards and architectures, approving the IT budget, prioritizing IT work, and representing the functional and program area needs to IT.	High

Category	Observation	Degree of Impact
Policy/ Governance	3. RICs are in the middle between submission of data by the district and the receipt of data by the NYSED – in terms of services, infrastructure, and systems.	High
Policy/ Governance	4. RICs are powerful entities and not equally qualified to assist in the data movement process.	High
Policy/ Governance	5. There is no required certification for the Student Management System (SMS) vendors or RICs that are involved in the process.	High
Policy/ Governance	6. Districts do not take data submissions seriously until a problem arises. The NYSED does not have sufficient policies and practices that would make districts pay attention to the data in the initial release, such as "heads-up" flags for changes in critical performance indicators.	High
Policy/ Governance	7. School districts do not always correct data at the source Student Management System (SMS) level, therefore recreating the problem with the next data submission.	High
Policy/ Governance	8. There is no data governance/management process in place to establish data standards, cross-division collaboration for data sharing and management, and the elimination of "silos" of redundant data.	High
Policy/ Governance	9. There is no position with the full-time responsibility of data quality and for running a continuous data quality improvement process. Data quality is 90% culture and 10% technology. As such, a Data Quality Director (see Appendix A for position description) is a critical position to help the organization and its data stewards and technical staff understand the roles they play with regard to ensuring data quality, collaborating to address data issues, managing requests for data to ensure quality data releases, and sharing data across the department.	High
Project Management	10. The Data Warehouse project data-transmittal calendar and timelines are not clear and change frequently, causing serious confusion in the field.	High
Architecture Design	11. Districts are being asked to validate their data at three different levels with slightly different sets of business rules – although most of these business rules are being built into the Level 0 tool. The edit checks that result in errors send data back to the districts for correction, but these edit checks are not mandatory and are not consistently applied across the State.	High
Business Rules	12. Districts do not understand the use or purpose of the data submitted, nor do they fully understand the business rules for the movement and cleansing of data. This often results in districts sending the wrong information.	High

2.1.3 Observations for Level 0

Category	Observation	Degree of Impact
Policy/ Governance	1. There is no defined process and annual schedule for collecting, communicating, and verifying additional data element extracts required by the NYSED.	High
Policy/ Governance	2. Not all RICs and LEAs use the Level-0 edit checking tool. Some RICs try to replicate the edit check rules in their own software that they provide to extract data directly from the SMS they host (on behalf of the districts).	High
Policy/ Governance	3. While there are standard formats for data extractions for the local SMS to follow, there is no process or procedure for the certification of SMS vendors to correctly create these extracts.	Medium
Policy/ Governance	4. The data movement process does not require the unique state student ID when transmitting data to the RIC/SEA from the LEA SMS.	Medium
Policy/ Governance	5. Many school districts do not store the unique State ID on their local SMS.	Medium
Policy/ Governance	6. There are no criteria for data administrator positions at the local district level.	Medium
Policy/ Governance	7. The NYSED has no established/recommended or even minimum specifications for districts to use in selecting SMS vendors.	Medium
Project Management	8. The roles and responsibilities for the vendors (GrowNet, eScholar, Level 2-WNYRIC) and the NYSED in supporting these projects are not clearly defined.	High
Project Management	9. There is no joint NYSED/RIC/vendor technology committee which oversees and establishes standards. Vendors are allowed to determine design standards and technical architecture. This is creating an unmanageable environment for the data movement and reporting processes. The data model for reporting is one example, where the design of the data model (and the lack of data modeling expertise at Level 2 (WNYRIC) and NYSED) is causing undue pressure on Level 2 (WNYRIC) to process data in a very inefficient manner. This, in turn, is delaying updates to the data warehouse and slowing down the reporting. Another example is the reporting technology, which was selected by a vendor without input from the NYSED and will eventually make it difficult to maintain.	High
Project Management	10. In addition to a lack of guidance to vendors on technology standards, there are limited instructions on how the vendors and support organizations are to "play" together in the same sandbox. For example, there is no development, test, and production environment with rules for how they are used by the vendors.	High
Project Management	11. There is no alternative or backup plan in case the nySTART vendor fails and no internal capacity to maintain and support this project.	Medium

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Category	Observation	Degree of Impact
Project Management	12. There is no distinction between the GROWnet and Data Warehouse projects. The Data Warehouse should serve multiple uses with nySTART being one of them. However, the GROWnet project has not been established as a separate project, which has led to some less than optimal architectural decisions in the Data Warehouse.	Medium
Architecture Design	13. There is no permanent operational data store. Data goes into the data warehouse without an interim stop in a relational database that allows more transactional processing of data. This creates/cascades into other design issues below. In a complete data warehouse design, data should first be staged and corrected in an operational data store before being frozen in the data warehouse.	High
Architecture Design	14. The data warehouse project is being used to transmit data not related to the data warehouse. An example, the forwarding and storing of raw assessment scan-sheet results to the SEA and to the assessment vendor.	Low
Database Design	15. The database design does not support the business rules for graduation rates. There are specific issues with multi-year data needed to longitudinally track cohorts.	Medium

2.1.4 Observations for Level 1

Category	Observation	Degree of Impact
Policy/ Governance	1. Reports that are written for Level 1 could be shared across districts and data warehouses; however, these are neither consistently provided as shared resources nor tested/implemented across Level 1 systems.	Low
Architecture Design	2. The requirement of common due dates for all districts for the movement of data to the State's Level-1c "container" creates a bottleneck, which slows down processing.	High
Architecture Design	3. During the movement of data from Level-0 to Level-1, errors identified are sent back to school districts to correct and the districts are required to resubmit ALL the data for the entire school year through Level-0 to Level-1. The data warehouse collects all student enrollment records, so each transmission of data contains not only the current enrollment of the student, but all prior enrollment activity (admissions, transfers, discharges) within the school year. In urban school districts with a lot of movement this rule creates a much larger data set for transmission and processing.	High

Category	Observation	Degree of Impact
Architecture Design	4. Level-1 systems are currently deployed using 3 different database management systems (Oracle, SQL Server and DB2). This is not an issue that we recommend correcting at this point, but represents an area where consistent standards and technical architecture designs would have created more consistency, lower costs, and easier support.	Low
Architecture Design	5. The data from Level-1 to Level-1c is processed weekly, even if the district has not submitted new data, so the same data may be reprocessed.	Low
Database Design	6. Data is overwritten in the Level-1 warehouse with each monthly transmittal. An entire set of district data may be retransmitted to correct or update a single record.	High
Database Design	7. All district data managed by RICs are being re-staged and transmitted to Level-2 even if only one district's data has changed. This causes significant delays in the transmittal.	High
Database Design	8. The errors in Level-1 are reported back to the school district the next day (overnight processing) rather than an online, real-time edit providing immediate feedback.	Low
Business Rules	9. Invalid location (facility) codes cause significant delays in Level-1 to Level-1c data movement. The location codes are shared, but not up-to-date, so records get rejected. The facility codes (locations) are not standardized across the data warehouse. Synchronizing the facility codes will remove these rejects.	High

2.1.5 Observations for Level 2

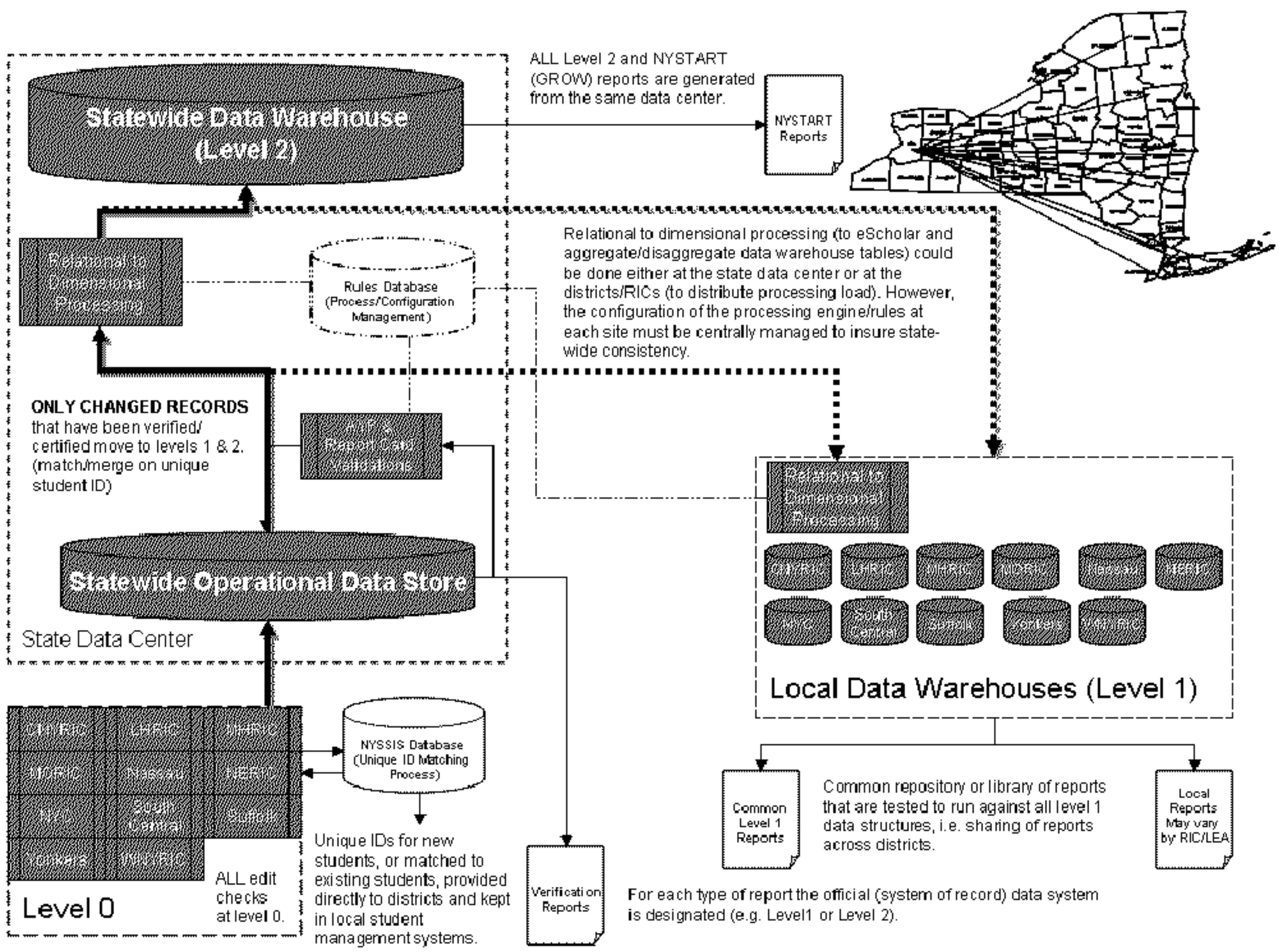
Category	Observation	Degree of Impact
Policy/ Governance	1. Data in Level-2 represents a different version of the "truth" than Level-1 data, because of slightly different business rules and differences in the timing of the data. These two sets of data will always be slightly different and reports should be designed to draw from the "official" and recognized version of the truth – e.g., either Level-1 or 2 but not both.	High
Architecture Design	2. Level-2 data is often overwritten with revised Level-1 data; the previously certified data sets are not maintained, meaning that there is no "official" system of record for historical student-level data at the state level.	High
Architecture Design	3. Level-2 data is reloaded frequently, especially during the process of verification of assessment and Adequate Yearly Progress (AYP) results. The Level-2 data warehouse is being used more as a transactional system to validate data than as a warehouse of the established valid data. This is largely due to the absence of an operation data store at the state level.	High

Category	Observation	Degree of Impact
Database Design	4. The data tables for some of the extensions to Level-2 do not appear to be optimally designed using data warehouse techniques.	High

2.2 Data Movement - Recommendations

2.2.1 Future-State Architecture

The diagram below is a high-level depiction of the recommended future-state architecture for data movement. The recommendations that follow the diagram (specifically those recommendations in the Architecture Design category) further describe this future-state architecture.



2.2.2 Recommendations

Category	Recommendations	Priority
Policy/ Governance	1. Establish NYSED ownership and oversight of the data movement process to improve overall design, vendor performance, as well as the consistency of RIC services to districts (see recommended organization model in Section 3 below).	High
Policy/ Governance	2. Begin developing in-house expertise (within the NYSED) to understand the data and business rules for the Report Card and school and district reporting. This includes both program-area and IT knowledge, skills, and resources. Develop a plan with GROWnet to begin this knowledge transfer.	High
Policy/ Governance	3. Implement a Project Management Oversight process at the NYSED for managing large projects (such as the move to an interim growth model and nySTART).	High
Policy/ Governance	4. Retain a Data Warehouse Architect to help direct the evolution of the data movement process and tools, especially the standards and technical architecture (e.g., capacity, performance, scalability, and security of processing, storage, software/platform, and network).	High
Policy/ Governance	5. Establish configuration management processes governed by NYSED to systemically address version control, testing, issues/resolutions tracking, change order prioritization and processing, documentation revisions, and release management.	High
Policy/ Governance	6. Certify RICs to provide Level 0 data movement services, Level 1 data warehouse hosting services, and data cleansing/editing services.	High
Policy/ Governance	7. Clearly define the roles of Level 2 (WNYRIC), Grow, and eScholar in relationship to the NYSED for the nySTART and Data Warehouse projects (see recommended organization model below).	High
Policy/ Governance	8. Establish policies and guidelines that only permit data corrections to be made at the source – in the district systems.	High
Policy/ Governance	9. Establish Level 0 data transfer record layout standards, specifications, test cases and a certification process for data transfers from the district SMS to Level 0. Use these to certify SMS vendor software.	High
Policy/ Governance	10. Provide reasonability checks on all data submitted to Level 2. This includes historical comparisons, trends in growth, loss, or other errors. Provide feedback and reports back to the districts. Use the data steward positions to do this role at a frequency necessary to ensure data quality, integrity, and completeness.	High
Policy/ Governance	11. Establish a data collection calendar. Also, establish a process and calendar for adding data elements to the collection process. Timelines should be set early in the annual cycle (e.g., establish a date in November for identifying and communicating to districts and vendors all new data elements to be collected in the next school year). Clearly communicate these timelines to all school districts, vendors, BOCES, and RICs. Adhere to the schedule for all data collections from the NYSED.	High

Category	Recommendations	Priority
Policy/ Governance	12. Users need to get timely and clear communications on the final business rules to be used to generate datasets for each school year. These rules need to be provided early in the year and need to be frozen once the year begins. These business rules should identify the subsets of data, the level of detail, the fields to be collected and reported, and the use of the data.	High
Policy/ Governance	13. Over time, build capacity internally (within the NYSED) to support the data warehouse, the Level 0 tool and the generation of the reports.	Medium
Policy/ Governance	14. Establish a set of must-have functional requirements for district-level SMS and require that all districts use this in the selection of the SMS. Require that all SMS vendor selections be approved by the NYSED and include a data transfer certification.	Medium
Policy/Govern ance	15. Require all school districts to store and transmit the unique state student ID on all data submissions.	Medium
Policy/ Governance	16. District staff should have continuous access to the Level-2 Data Warehouse (with governors to limit CPU usage, number of records processed, etc.) to allow them to verify their data in an ongoing manner, but, most importantly, prior to publication.	Medium
Policy/ Governance	17. Establish a training program and require certification for LEAs for the data submission process.	Medium
Policy/ Governance	18. Provide a dashboard of key performance indicators for superintendents, so they are connected with their data in the Level 2 data warehouse. Let them compare their district to other school districts to create additional interest in the data. Also, provide a comparison of data from previous years, so there is a context to their current year figures.	Low
Project Management	19. Acquire a project manager for the nySTART (Grow) project as soon as possible - separate from the data warehouse project (this recommendation has already been addressed).	High
Project Management	20. Limit expansion of the GROWnet contract. Reassess the contract and limit their role to their areas of expertise.	High
Project Management	21. Establish a project manager and a team for the move to the interim growth model.	High
Project Management	22. For large projects in the future (e.g. interim growth model), we recommend doing a pilot and/or proof of concept before implementing it statewide.	High
Project Management	23. Do not expand the scope of the nySTART project until it has been stabilized and meets expectations.	High
Project Management	24. Implement a Project Management Oversight process for the data movement and reporting efforts/projects going forward. Develop a project plan for all current and future recommendations and projects, to include clearly defined deliverables, schedules, estimated costs, responsible person(s), risks, assumptions, benchmarks, and evaluation criteria.	High

Category	Recommendations	Priority
Project Management	25. Establish a vendor management process to ensure contractual deliverables are being met (see recommended organization model below).	High
Architecture Design and Policy/Governance	26. A common and consistent method of edit checks (e.g., use of the Level 0 editing tool) needs to be mandated for all school districts, BOCES, and RICs across the State for all data coming into the Data Warehouse. All data edits and business rules for all data warehouse levels should be built into the Level 0 tool and all validated data should be stored in an operational data store (ODS). The reporting of errors at Level-0 should be online and real-time. This will provide immediate feedback to the school districts and allow them to correct errors in a timelier manner.	High
Architecture Design and Policy/ Governance	27. Reduce the complexity and the burden on the districts for the data movement from LEA to SEA but also make the district fully responsible for the data until the handoff to the NYSED. Do this by moving all of the data edits to Level 0 and implementing an Operational Data Store (ODS), from which Level 1 and 2 draw their data in parallel instead of a sequential process (Level 0 to Level 1 then Level 2). Establish ownership of the data at the district level until handoff to the NYSED at Level 2.	High
Architecture Design	28. Data transmittal for corrections of errors should not require the resending of the entire dataset, but corrected records or a limited subset should be sufficient. The application of updates can be managed with matching pre-processes, to reduce the burden on the school districts. The pre-processing function can identify changed records and apply those to the data warehouse, thus limiting the processing and limiting the updates to the database, which, in turn, will reduce the time required to process all the records. The recommended operational data store at Level 0 can be used to facilitate this process.	High
Architecture Design	29. Create/design a backup plan for the support of the GROWnet reports/project, including developing a plan for the NYSED to bring this in-house. Specifically, use the operational data store as a transactional system to verify assessment data and AYP results instead of the GROWNET reports. Refresh the GROWNET and Level 2 tables less frequently and do not allow districts to over-write this data. Use Level 2 as the historical system of record for longitudinal data analysis at the state level.	High
Architecture Design	30. The GROWnet project and the Data Warehouse should be separated into two distinct projects (see recommended organization model below). GROWnet can use the data warehouse to report, but should not change the data model without working with the data warehouse team. This will enable the data warehouse to serve multiple purposes without being customized for GROWnet's use alone.	High
Architecture Design	31. Establish, monitor, and manage technology standards that are used by the vendors and service providers (see recommended organization model below). The use of non-standard solutions by vendors (e.g., Java reports versus a BI reporting tool) can be avoided with the right standards and technical architecture.	High

Category	Recommendations	Priority
Architecture Design	32. Use industry standard BI tools to develop reports from the eScholar data structures wherever possible.	High
Architecture Design and Policy/ Governance	33. Push the unique student ID back out to the district SMS and require that all student data submissions to the NYSED include the state issued unique student ID.	Medium
Architecture Design	34. Transmittal of data using the data warehouse processes and pipes should be limited to valid (certified) data only. Use of this infrastructure to transmit non data warehouse data (such as raw assessment data) is an overhead and may cause delays in the transmittal of other data. Data processed at Level 2 should be limited to certified data warehouse (dimensional) data.	Low
Database Design	35. Conduct a detailed assessment of the design of the technical architecture and data models for the GROWnet reports to determine what is causing the poor response. From the CELT reviews thus far, this assessment should focus on the hosting of the data warehouse and reporting servers in one location. It should also include a review of the data model as designed by GROWnet to ensure the reporting tables are using optimal data warehouse designs.	High
Database Design	36. Redesign the Data Warehouse architecture and policies to support an "official" system of record for historical student-level data at the state level. The policies and system should both maintain all historically certified data and accommodate new requirements/models (e.g., mandated changes to how student cohorts are counted).	Medium
Database Design	37. Level-2 has both Staging and Reporting environments, where the databases are nearly identical. Processing time may be improved with a procedure that updates the production environment with changes, rather than rebuilding the entire database for each production cycle. This change, however, can only occur after an operational data store has been implemented.	Low
Business Rules	38. Establish documentation and communication policies and procedures for the NYSED and level 2 (WNYRIC) to use to communicate to the districts the purpose of all data requests, as well as the accompanying business rules. Develop a communications plan and annual schedule. These communications should ensure that LEAs understand what data is being requested and how it will be used. Use the data stewards and the recommended organization model below to help establish this process.	High
Business Rules	39. The edit checking processes at all levels of the data flow need to be reduced or eliminated. An example, the invalid location (facility codes) check. If everyone uses the same location codes within the various levels of the data warehouse, this error would come up less often and earlier in the data flow.	High

2.3 Data Reporting - Observations

Category	Observation	Degree of Impact
Policy/ Governance	1. The NYSED needs a process to verify data and reports, especially those related to AYP and the State Report Card. This process needs to be easy on the districts and provide quick-turnaround for showing corrected data. It needs to include a method to inform the districts of their data characteristics before the data is issued, without showing the whole set of state data.	High
Policy/ Governance	2. Districts do not know nor understand the business rules for the data in the State Report Card and AYP calculations.	High
Policy/ Governance	3. The NYSED is required by the state legislature to implement an "interim growth model." The current systems and level of internal knowledge of the data and business rules do not support the accomplishment of this effort.	High
Policy/ Governance	4. The districts currently experience poor response time for NYSTART, especially during the critical time of verifying and revising the data for the AYP and Report Card. The GROWnet data tables and reports are being continuously updated during this process to reflect data corrections as submitted by the district. The GROWnet data warehouse tables are being used during this time to serve the purpose of a transactional system, a purpose for which data warehouses are ill suited.	High
Policy/ Governance	5. COGNOS, as a reporting tool, is being thrust upon GROWnet to implement. GROWnet currently does not have the technical skills to properly design and implement the tool.	High
Policy/ Governance	6. NYSTART has a very bad reputation in the field. The general perception is that it is inaccurate, very slow, unreliable, delayed, and flawed in its design. The data transformation process appears very complex, due in part to the NYSED accountability rules which drive the data warehouse business rules and design.	High
Project Management	7. NYSTART lacks project management from the NYSED perspective and therefore there are no clear timelines, roles, or responsibilities (see recommended organization model below).	High
Architecture Design	8. The design of the data movement process from Level 0 to the GROWnet tables is not suited to provide the quick turnaround needed for the data review process by the districts. The current design requires the resending of all records when only correcting a few student records. This results in batch processes for populating reporting tables running too long, contributing to slow response time to end-users.	High
Architecture Design	9. Vendors are allowed to revise the recognized standard design for the data warehouse tables (e.g., eScholar tables) without proper review and approval by the NYSED. Proper data modeling expertise is lacking to review and support the nySTART project.	High

Category	Observation	Degree of Impact
Architecture Design	10. GROWnet has built a number of its reports using Java. This was done to improve response time, but the decision lacked the proper review and approval of a standards and technical architecture review committee.	High
Architecture Design	11. There appears to be a lack of an effective method for prioritizing vendor resources and work efforts within a project. For example, GROWnet is re-coding the guided analysis functions in Java (a lower-priority effort), while the users desperately want the verification reports improved in terms of accuracy and timeliness (a very high-priority request).	High
Architecture Design	12. The security of the data structures for the reporting tables has not been reviewed and approved by the NYSED data security staff. Rather, the vendors are allowed to revise these structures without proper review and approval. For example, GROWnet has modified the COGNOS security structures, which might create security concerns regarding the data.	Medium

2.4 Data Reporting - Recommendations

Category	Recommendation	Priority
Policy/ Governance	1. COGNOS has offered to pilot the GROWnet reports for $40k – this option should be pursued with a carefully selected and clearly specified set of reports.	High
Policy/ Governance	2. Require that GROWnet develop reports using standard BI tools and restrict the use of program code for this purpose (see recommended organization model below).	High
Policy/ Governance	3. Require that GROWnet developers understand and become certified in the eScholar data model before developing any reports.	High
Policy/ Governance	4. Build the capacity of the departments (including IT) necessary to bring in-house the business rule and data knowledge and technical skills to build and support report generation for the State and the districts.	High
Policy/ Governance	5. Pursue the use of established report templates, canned queries made available on the NYSED Web site, professional development for data stewards in the use of querying tools, and a process for requesting and prioritizing data requests to help reduce demand for Information Technology Services custom-developed reports.	High
Policy/ Governance	6. Implement a Technology Review Board to tie the allocation of IT resources and resource planning to the NYSED strategic plans and initiatives. Resource needs that align with and support the strategic initiatives should be funded along with, and as an integral component of, the initiatives. To this end, elevation of IT priority issues to the IT Review Board is significant. Also consider the use of an executive-level project management oversight committee (PMOC) process to help set priorities for the NYSED's strategies and major initiatives.	High

Category	Recommendation	Priority
Policy/ Governance	7. Prioritize the Verification Reports as an enhancement item to provide users their top request (improved performance on the verification reports).	High
Policy/ Governance	8. Over time, establish the NYSED support services in such a way as not be reliant on external vendors (e.g., GROWnet) to design and implement the standards and technical architectures (e.g., COGNOS) established for the State. Provide support, review, and approval for such designs and implementations from the NYSED. Facilitate coordination between dependent projects/vendors. (See recommendation for systemic configuration management under Data Movement Recommendations.)	High
Policy/ Governance	9. Establish NYSED ownership of business rules/logic for reports. Maintain details of all business rules/logic currently maintained by GROWnet and encoding of rules for reports maintained on GROWnet servers at NYSED.	High
Policy/ Governance	10. All data modeling modifications should be reviewed and approved by an experienced (NYSED) Data Warehouse Architect / Data Modeler before being implemented.	High
Database Design	11. Generate verification reports from an operational data store rather than the data warehouse. Ensure that business rules used at the ODS level and verification reports are not overridden by rules used in Data Warehouse level processing and report generation.	High

Project Narrative

Other Narrative

Attachment 1:
Title: Pages: Uploaded File: **1237-projSpreadSheet_timeline_resumes_ver3.pdf**

Three Year Project Summary

			yr 1	yr 2	yr 3
Personnel	Programmers		$113,118	$117,643	$122,348
	PM		$87,196	$90,684	$94,311
	DQC		$74,667	$77,654	$80,760
	DRC		$74,667	$77,654	$80,760
	PDC		$74,667	$77,654	$80,760
	Clerk		$26,667	$27,734	$28,843
			$450,982	**$469,023**	**$487,782**
Fringe		42.67%	$192,434	$200,132	$208,137
Travel	Oversight Office		$10,000	$10,000	$10,000
	Report Ctr		$5,000	$5,000	$5,000
			$15,000	**$15,000**	**$15,000**
Equipment	Oversight Office		$8,000	$0	$0
	Report Ctr		$16,000	$0	$0
			$24,000	**$0**	**$0**
Supplies	Oversight Office		$10,000		
	Oversight Office		$15,000	$15,000	$15,000
	Report Ctr		$5,000	$5,000	$5,000
			$30,000	**$20,000**	**$20,000**
Contractual	TAC		$458,000	$461,800	$479,272
	Cert Center		$215,000	$218,840	$226,994
	Univ. Interface		$336,000	$340,320	$353,133
	Report Center		$491,000	$464,080	$481,843
	Data Architect		$120,000	$120,000	$120,000
			$1,620,000	**$1,605,040**	**$1,661,242**
Construction					
Other					
	Planning Support		$50,000	$50,000	$50,000
	Stakeholder Suppor		$50,000	$50,000	$50,000
	Report Misc		$5,000	$5,000	$5,000
			$105,000	**$105,000**	**$105,000**
Total Direct Cost			$2,437,416	$2,414,195	$2,497,161
Indirect Cost	.352 of Personal Service Only		$158,746	$165,096	$171,699
Total Costs			$2,596,162	$2,579,291	$2,668,860

Three Year Total	$7,844,313

DATA REPORTING ACTIVITIES - FOUNDATION ACTIVITIES
STATEWIDE DATA REPORTING CENTER (A contrcted service)

IMPORTANT NOTE TO READERS: ***detailed sub-budgets for contracted services are DRAFTS for the purpose of determining a reasonable and customary cost for attaining such a service.***

The positions inluded are used for these estimating purposes. THESE ARE NOT POSITIONS TO BE ADDED TO THE STAFF OF THE NYSED.

BUD CATEGORY		AMOUNT	FTE/QUA	TOT Year 1	Year 2	Year 3	
STAFF							
	Manager	$100,000	0.6	$60,000	$62,400	$64,896	
	Programmer	$80,000	2	$160,000	$166,400	$173,056	
	IT Tech/DBA	$90,000	0.5	$45,000	$46,800	$48,672	
	Clerical	$40,000	1	$40,000	$41,600	$43,264	
EQUIP							
	File Servers	$8,000	3	$24,000			
	Communications	$20,000	1	$20,000			
Supplies	Asstd	$5,000	1	$5,000	$5,000	$5,000	
Travel		$5,000	1	$5,000	$5,000	$5,000	
Misc		$10,000	1	$10,000	$10,000	$10,000	
Benefits	statewide avg estimate 40%			$122,000	$126,880	$131,955	
Total				$491,000	$464,080	$481,843	
Three Year Total							$1,436,923

Create Internal Reporting Center

				Year 1	Year 2	Year 3
Staff	Programmer - SG23	$63,822	1	$63,822	$66,375	$69,030
	Programmer - SG18	$49,296	1	$49,296	$51,268	$53,319

Equip	File Servers	$8,000	2	$16,000	$0	$0	
Supplies		$5,000	1	$5,000	$5,000	$5,000	
Travel		$5,000	1	$5,000	$5,000	$5,000	
Misc		$5,000	1	$5,000	$5,000	$5,000	
Benefits	at42.67%			$48,267	$50,198	$52,206	
Sub-Total				$192,385	$182,841	$189,555	
Indirect cost of .352 for Personnel Costs only				$39,818	$41,410	$43,067	
Total				$232,203	$224,251	$232,621	
Three Year Total							$689,075

Total Three Year Data Reporting Activities

$683,385	$646,921	$671,398	$2,125,998

Data Quality Activities - Foundation Activities
CIO Technical Assistance Center (A contracted service)

IMPORTANT NOTE TO READERS: ***detailed sub-budgets for contracted services are DRAFTS for the purpose of determining a reasonable and customary cost for attaining such a service.***

The positions inluded are used for these estimating purposes. THESE ARE NOT POSITIONS TO BE ADDED TO THE STAFF OF THE NYSED.

BUD CATEGORY		AMOUNT	FTE/QUANT	TOT Year 1	Year 2	Year 3	
STAFF							
	Manager	$100,000	0.6	$60,000	$62,400	$64,896	
	Programmer	$80,000	0.5	$40,000	$41,600	$43,264	
	Prof. Developers	$80,000	2	$160,000	$166,400	$173,056	
	Clerical	$40,000	1	$40,000	$41,600	$43,264	
EQUIP							
	Computers	$2,000	4	$8,000	0		
Supplies	Asstd	$5,000	1	$5,000	$5,000	$5,000	
Travel		$10,000	1	$10,000	$10,000	$10,000	
Misc	Conf Support	$15,000	1	$15,000	$10,000	$10,000	
Benefits	statewide avg estimate 40%			$120,000	$124,800	$129,792	
Total				$458,000	$461,800	$479,272	
Three Year Total							$1,399,072

Student Management System CERT CENTER (A contracted service)

	Year 1	Year 2	Year 3

Staff	Manager	$100,000	0.6	$60,000	$62,400	$64,896	
	SMS Tech	$80,000	1	$80,000	$83,200	$86,528	
Equip	Computers	$2,000	2	$4,000	$0	$0	
Supplies		$5,000	1	$5,000	$5,000	$5,000	
Travel		$5,000	1	$5,000	$5,000	$5,000	
Misc		$5,000	1	$5,000	$5,000	$5,000	
Benefits	statewide avg estimate 40%			$56,000	$58,240	$60,570	
Total				$215,000	$218,840	$226,994	
Three Year Total							$660,834

Creating Univeral Interface (A contracted service)

				Year 1	Year 2	Year 3
Staff	Manager	$100,000	0.6	$60,000	$62,400	$64,896
	Programmers	$80,000	2	$160,000	$166,400	$173,056
Equip	File Server	$8,000	1	$8,000	$0	$0
Software	Asstd	$5,000	1	$5,000	$5,000	$5,000
Supplies		$5,000	1	$5,000	$5,000	$5,000
Travel		$5,000	1	$5,000	$5,000	$5,000
Misc	Support for T/S	$5,000	1	$5,000	$5,000	$5,000
Benefits	statewide avg estimate 40%			$88,000	$91,520	$95,181
Total				$336,000	$340,320	$353,133

Three Year Total				$1,029,453
Sub-Total Three Year Data Quality Activities				
	$1,009,000	$1,020,960	$1,059,398	$3,089,358

Project Wide Expansion Activities

Activities Oversight Office

BUD CATEGORY		AMOUNT	FTE	TOT	Year 1	Year 2	Year 3	TOTAL
STAFF								
	Project Manager	$87,196	1		$87,196	$90,684	$94,311	
	Data Quality Coord	$74,667	1		$74,667	$77,654	$80,760	
	Data Reporting Coord	$74,667	1		$74,667	$77,654	$80,760	
	Planning Coord	$74,667	1		$74,667	$77,654	$80,760	
	Clerical	$26,667	1		$26,667	$27,734	$28,843	
EQUIP								
	Computers	$2,000	4		$8,000	0		
	Software	$10,000	1		$10,000			
Supplies	Asstd	$15,000	1		$15,000	$15,000	$15,000	
Travel		$10,000	1		$10,000	$10,000	$10,000	
Contract Service	Data Warehouse Architect	$120,000	1		$120,000	$120,000	$120,000	
Misc	Planning Support	$50,000	1		$50,000	$50,000	$50,000	
	Stakeholder Support	$50,000	1		$50,000	$50,000	$50,000	
Benefits	at 42.67%				$144,167	$149,933	$155,931	
Total					$745,031	$746,312	$766,364	
Indirect Cost @ .352 of Personnel Costs					$118,928	$123,685	$128,633	
Grand Total					$863,959	$869,997	$894,997	$2,628,953

Section 7. Timeline

Year 0 – This designates the time prior to the onset of actual grant funded Project activities. During that period of time NYSED will begin reorganizing around the grant objectives to establish a platform for success once the grant activities begin.

October 2008:

- Members of the Executive Policy group will be established on an interim basis. The CIO of the NYSED will chair the group until a permanent group is put in place. The initial Executive Policy Group will consist of: the Project Manager, the chairs of the current standing sub-committees, the Coordinator of the Statewide Data Repository, a representative from the Big 5 School Districts, and two representatives of the Regional Information Centers. Once the statewide Stakeholder Group is established, the chair of this group will join the Executive Policy Group.

November 2008:

- Executive Policy Group meets and establishes internal operational guidelines.
- The creation of the Stakeholder Regional Advisory Councils is announced.

December 2008:

- Executive Policy Group becomes fully functional and takes responsibility for all decisions related to the operation of the current LDS and is in place to make all decisions regarding the operation of the Project Activities supported by this Grant.
- The Activities Oversight Group is organized on an interim basis and staffed by reassigning responsibilities to existing staff members. The current P-16 Project Coordinator will be reassigned to act as Project Manager until funding through this grant becomes available to install a permanent Project Manager. The Data Quality Coordinator, Data Reporting Coordinator, and Product Development Coordinator will be assigned from with the Division of Information and Reporting Services.
- Regional activities begin to organize the Stakeholder Regional Advisory Councils.

January-February 2009:

- Executive Policy Group begins functioning on a routine basis.
- Activities Oversight Group becomes operational.
- Regional Stakeholder Groups begin organizing.

March 2009:

- The Statewide Stakeholders Advisory Council is formed by delegates from the Regional Advisory Councils.
- The chair of the group becomes a member of the Executive Policy Group.

Year 1: April 2009 – March 2010 – The First funded Project Year.

April 2009 May 2009

- RFPs are developed to establish the CIO Tech Assistance Center, the Student Management System Cerification Center, and the Statewide Reporting Center.
- A sub-committee of the Technical/Standards Group is created and assigned the task of creating the universal set of edit checks.
- The process of re-writing the specifications for the nyStart reporting site is begun.
- Internal reporting team is identified/hired.
- Hardware/software/communications infrastructure needed for internal reporting is designed.
- The Systems Re-engineering and the P-16 Planning Groups are established.
- The process of replacing the interim Activities Oversight Group with a permanent one is begun.

June 2009:

- RFPs are released .
- Tech/Standards sub-committee begins its review of existing data edits.
- Internal Reporting group undergoes intensive training.
- Acquisition of hardware/software for internal reporting begins.
- Negotiations for a new nyStart contract are begun.
- The two standing Planning Groups become operational.

July August 2009:

- Respondents to the RFP process develop their proposals.
- Tech/Standards Subcommittee begins development work.
- Planning Groups continue with a 6 month timeline to deliver an interim report.

September 2009

- RFPs are submitted by field to SED and reviewed.
- Hardware/Software is installed for internal report team.

October 2009:

- Responses to RFPs are awarded.
- New nyStart contract established.
- Internal Report Team becomes operational.

November 2009 January 2010

- The CIO Tech Center, the SMS Certification Center and the Statewide Report Center begin internal organization activities including the hiring of project staff.

Feb.- March 2010:

- Activities Oversight Group is staffed on a permanent basis.
- The three Centers become operational and begin delivering initial services.
- The two Planning Groups deliver interim Reports.

Year 2:

April 2010 June 2010:

- New edits created by the Tech/Standards group are implemented and training takes place through the CIO Tech Center for startup of the new school year.
- The SMS Certification Center establishes communications with the SMS vendor community and begins process of certification.
- The Statewide Reporting Center continues startup activities.
- Interim Planning Reports are provided to the Executive Policy Group.

July 2010-August 2010:

- In New York State, the 2010-2011 school year begins.
- CIO Tech Assistance Center is fully operational and begins regular services across the state. These services will now continue to be developed, improved, and modified for changing needs across the entire remainder of the Project.
- The Statewide Reporting Center continues startup activities: creating infrastructure and establishing report specifications.
- The SMS Certification Center establishes procedures for certification in final form and allows vendors one full year to become certified. From this point forward this Center is engaged on a full time ongoing basis in this process.
- The Executive Policy Group reviews the Interim Reports of the two Planning Groups.

September 2010 December 2010:

- Executive Policy Group provides feedback to Planning Groups; Planning Groups continue activities for a release of a final report by January 2011.
- The Statewide Reporting Center releases its first reports. From this point forward this Center is engaged full time on an ongoing basis in activities related to statewide reporting.

January 2011:

- Final Reports of Planning Groups submitted to the Executive Policy Group.

February 2011:

- Executive Policy Group reviews Final Reports of Planning Groups.
- By now all other project activities have been established and continue to operate on an ongoing basis under the direct supervision of the Activities Oversight Group with oversight being provided by the Executive Policy Group.

March 2011:

- Planning Groups begin Pilot Projects.

Year 3: April 2011 – March 2012:

By this time all Project Activities have been established and continue to operate on a routine basis. However, there are some key milestones that will be reached in year 3 as follows:

April 2011- Jan. 2012:

- Pilot projects in system re-engineering and P-16 system expansion take place.
- Internal budget planning begins to assure that the products created with these Grant funds will be sustained over time.

July 2011:

- SMS vendors begin first full year in which Certification will be required.

January 2012:

- Pilot Projects are completed.
- Full analyses of these pilots are delivered to the Executive Policy Group for review.

March 2012:

- The three years of Project Activities as funded through this grant come to an end.
- The products of this process are all in place:
    - A revised operational Governance Structure
    - A CIO Technical Assistance Center
    - A SMS Certification Center
    - A Statewide Reporting Center

- An established Internal Reporting Center to report on and analyze data for Federal Reporting and Policy needs.
- A revised nyStart reporting process.
- Operational pilot projects in the critical areas of systems re-engineering and P-16 expansion.

Project Years + 1:

April 2012 and following:

- NYSED supports the ongoing operation of all Project products.
- Pilot Projects are transitioned to fully operational projects across entire state.

DAVID WALSH
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EMPLOYMENT HISTORY

Chief Information Officer
New York State Education Department
August 2000-Present

Project Director
New York State Senate Office Automation Project
June 1989-August 2000

Manager of Analysis and Operations
New York State Senate Office Automation Project
August 1984 - June 1989

Research Analyst
New York State Senate Research Service (SRS)
1980-1984

Deputy County Clerk
Chenango County, Norwich, NY
1976-1979

HIGHLIGHTS and ACCOMPLISHMENTS, EDUCATION DEPARTMENT

- Responsible for the application of information technology and automation tools to the program needs of the Department, covering 3200 employees located throughout the State.

- Promulgated Department **Strategic Objectives for Technology**, tied to Regents goals; and created a set of Information Technology Principles to govern the use of technology within the Department.

- Instituted a technology governance structure to set policy and implement technology investment. Created a prioritized set of technology initiatives, approved by the Commissioner, October 2005.

- Created Departmental Project Management Office to implement project management methodologies across all projects that have a major technology component. Directed development of internal online project portfolio tracking system.

- Instituted a Department Security Policy, and formalized the position of Information Security Officer (ISO).

- Department liaison, Regents Technology Policy and Practices Council, a 28-member Council comprised of technology experts from across the State, responsible for advising the Regents on technology issues within the University of the State of New York (USNY). Council presented recommendations to the Board in September 2007.

HIGHLIGHTS and ACCOMPLISHMENTS, STATE SENATE

DATA ADMINISTRATION AND SUPPORT

- Responsible for **computer and networking services** connecting over 1500 users in Albany and 80 remote locations statewide. Directed project to rewire and network entire Senate complex for data, voice, and video.

- Created a **problem resolution process for computer support** that includes a HelpLine as point of first support, with more technical support as a follow-up.

- Member of team that **migrated Senate's payroll/personnel system** from Ingress/DEC to Oracle/RS6000 platform, and combined two separate computer operations.

- Member of team that wrote legislation creating **State Office for Technology**, 1997.

LEGISLATIVE PROCESS AND ADMINISTRATION

- Part of team that **analyzed the legislative process** and automated the preparation of bills and memos. Led team that migrated legislative information to a web-based system for both internal and public use.

- Analyzed **in-house correspondence process** for Majority Leader; moved correspondence to another unit, and sold duplicative unit to the Governor's office.

- Led a team that **analyzed production and automation needs** at Senate Research to replace mid-range computer system. Helped create image storage/retrieval process for newsclip operation at Senate Research.

- Led Senate team that created Senate home page on the Internet.

MAIL AND PRODUCTION

- **Developed targeted mail system** used by State Senate. Created method of annotating constituent name/address files; designed and implemented on-line mail production system. Brought Senate mail processing from outside contractor to in-house process, saving considerable dollars and providing more efficient processing and faster turn-around for Senate mail.

- **Wrote mail policy** for the Senate. Developed internal mail control procedures, including internal audit reports for mail accounting and tracking.

EDUCATION
B.A., History/Political Science, Lycoming College, Williamsport, PA

PROFESSIONAL AND COMMUNITY INVOLVEMENT
Member, State CIO Council, 2002-present. Co-chair, CIO Council Fiscal and Procurement Committee, 2003-present.

Director, Glenville Rotary Club, 2003-2004. International Youth Exchange Chair, 2003-present.

President, Executive Board, New York State Forum for Information Resource Management (NYSFIRM), 1998-1999; Vice-president, 1997-1998; member since 1988. Involved in teams analyzing citizen access to government information; state oversight of information technology; and state technology standards.

President, Lycoming College Alumni Association Executive Board, 2004-2005. Member, 1999-present.

Member, Editorial Board, The Church Herald, national publication of Reformed Church in America, 2008 2011.

Member, Glenville Environmental Conservation Commission, 1997-2004, Vice-chair, 2001-2004; Glenville Sales Tax Commission, 1997-1998.

Co-Chair, Camp Fowler Capital Campaign Committee, Regional Synod of Albany for the Reformed Church in America, 2004-present. A $2.4 million campaign to implement a new facility master plan for the Camp in Speculator, New York.

Member of Consistory, First Reformed Church of Scotia, 1992-1997, 2000-2002. Elder Vice-President, 1995-1997. Youth Group advisor, 1993-1994. Led capital fund campaign that raised $350,000 in 1996-1999. Chair, Interior Site Committee, redesigning church space for future needs, including a capital fund drive, 2003-2005. Choir member, 1988-present; brass ensemble, 1995-present.

Village Trustee, Village of Schoharie, 1983-1985. Vice-President, Schoharie County Village Officers Association, 1984-1985.

Member, Society of American Baseball Research; President of local chapter, 1993-1995.

Member, Scotia-Glenville School Superintendent Search Committee, March 1996.

9-2008

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EDUCATION:

NYU, Doctoral Candidate; completed all course work.

Hofstra University, 1978, CAS Ed. Admin.

St. John's University, 1972, MA, Mathematics

Marist College, 1967, B.A., Mathematics

PROFESSIONAL EXPERIENCE:

July 2008- Present: New York State Education Department – P-16 Project Coordinator

Responsible for coordinating activities related to the operation of the state's P-12 Longitudinal Data System; also responsible for planning the expansion to a P-16 system.

2000-2008: Educational Consultant

Clients Include:

Amityville UFSD: Interim Assistant Superintendent:

Responisble for district technology, management systems, data, and assessments.

New York State Regional Information Centers:

Managed statewide project for development of data warehouses. Activities included organizing development activities, negotiating vendor contracts, presentations to outside groups, managing relationships with partner agencies, developing strategies for use of data in improving instruction, and other related activities.

Capital Region BOCES:

Conducted a comprehensive organizational analysis of the Northeast Regional Information Center

Adjunct Professor - New York University – From 2000- 2005 taught courses in the School of Education in:

Management Information Systems
Leadership and Decision Making

1990-2000: Executive Director, Division of Instructional Support Services
Western Suffolk BOCES, 507 Deer Park Rd., Dix Hills, N.Y. 11746.

Responsibilities include: Administration and supervision of one of the three Divisions of the Western Suffolk BOCES. The Division includes programs in: ESL, Outdoor Environmental Education, Gifted & Talented, Drugs Education, Aids Education, Nutrition Education, School Library Systems, Effective Schools Program, Staff Development, Curriculum Development, Micrographics, Planning, Pre-K, and Instructional Technologies. Additionally, the Director acts as a consultant to Boards, Superintendents, and Assistant Superintendents in a variety of areas related to instruction, curriculum, and management.

1985-1990: Director, Center For Learning Technologies, Suffolk BOCES III, Dix Hills, New York. (Renamed Western Suffolk BOCES in 1994)

Responsibilities included: Development of instructional technology services for the 72 school districts of Suffolk County. Developed and supervised all aspects of instructional technology planning and implementation including: Models Schools Planning Strategy; Wide area and Local area networks; Acquisition, installation, and support of various computer systems; Curriculum integration of technology services in classrooms, on-line information services, and other innovative implementations of technologies in the teaching/learning environment.

1983-1985: Director of Student Services, North Babylon UFSD, North Babylon, New York.

Duties included: Supervision of : Special Education program, instructional and administrative computer systems, and district wide attendance program.

1982-83: Senior Planner, Suffolk BOCES III, Dix Hills, N.Y. 11746

Duties included: Long range demographic and facilities planning for school districts in Suffolk County and throughout New York State, Grant research and writing, coordination of district staff development programs, liaison to NYSED for a variety of State initiatives in instruction and curriculum.

1979-82: Director of Research and Planning, Rockville Centre UFSD, Rockville Centre, New York
1972-79: Teacher of Mathematics, Rockville Centre UFSD, Rockville Centre, New York

1967-72: Teacher of Mathematics, St. Pius X High School, Uniondale, New York

Certifications:

NYS School District Administrator, Permanent
NYS School Administrator and Supervisor, Permanent
NYS Mathematics, 7-12, Permanent

Related Professional Experience:

- Former Chair: District Superintendents' Data Advisory Committee
- Former Chair of the Western Suffolk BOCES Assistant Superintendents' Council
- Frequent guest speaker and keynote speaker on Technology in Education and Education Reform
- Adjunct professor - Dowling College (1992-1994)
- Adjunct professor: NYU (2000-2005)

- Former member of the WLIW ITV Service Committee
- Former Policy Board member of Suffolk's Edge Teacher Center
- Former Board member - Eastern Suffolk School Library System

- **References Available Upon Request**

KENNETH J. MASON
5 Ouimet Drive
Troy, New York 12180

EDUCATION:

Siena College
Major: Accounting
Concentration: Computer Science
Degree: B.B.A., May 1983

Hudson Valley Community College
Major: Business Administration
Degree: A.S., May 1981

WORK EXPERIENCE:

July 1983 - Present: New York State Education Department, Albany, New York. Chief of Data Processing Technical Services, Manager of Data Processing Technical Services (Data Communications), Data Communications Specialist II, Data Communications Specialist I, Senior Computer Programmer/Analyst, Computer Programmer.

As Chief of Data Processing Technical Services, I am responsible for management of all aspects of technology infrastructure and technical support within the Information Technology Services division at the New York State Education Department. This includes the oversight of 7 managers and approximately 50 staff in the Network, Database, Server, E-Mail, Internet Technical Services, and Automation Support units.

Responsibilities also include serving as technology coordinator for the New York State Testing and Accountability Reporting Tool (nySTART). In this role I coordinate technical activities being performed by vendors supporting the nySTART system with an emphasis on the use of best practices, problem resolution, and escalation of critical path issues to senior management.

CORE SKILLS:

- Administrative skills including budgeting, development and execution of work plans, procurement of hardware and services, and supervision of staff.
- Mentoring.
- Technical project management.
- Managing relationships with vendors and other New York State Agencies.
- Mainframe and open systems tiered architecture.
- Network architecture.
- Information security.

Budget Narrative

Budget Narrative

Attachment 1:
Title: Pages: Uploaded File: **1236-budgetnarrative vers 8.pdf**

8. Budget Narrative:

Foundation Activities

Section 1: Data Quality Activities

The Proposal calls for three substantial Data Quality activities:

A. The creation of a CIO Technical Assistance Center
B. The creation of a Student Management Systems Certification Center
C. The creation of the Universal Interface

A. ***The CIO Technical Assistance Center***. (This is contracted service; staff levels are included here solely as a means of estimating an appropriate budget)

This activity will be awarded to a 3rd party through a competitive procurement process.

Staff:

Center Manager:

The Center will be led by a Center Manager who is responsible for all activities created by the Center. This position is estimated at .6 fte with an annualized cost of $100,000[1] and a net cost of $60,000 in year one. This position is maintained in years 2 and 3 of the Project with raises for each year estimated at 4%.

Professional Developers:

The main activity of this Center is to create and distribute Professional Development activities and Training materials for CIOs across the entire state. New York State has over 700 school districts with over 3.2 million students.

For this volume of work the Center will be staffed with 2 Professional Developers. These positions will account for 2 full ftes estimated at $80,000 annually with 4% raises estimated over the two additional years of the project.

Programmer:

[1] This salary and all other salaries referenced in this narrative for contracted services reflects the usual and customary salaries associated with the described positions reflecting an average incorporating regional differences in various labor markets.

Many of the Professional Development activities of the Center will be in computer based electronic format. This will require the support of a programmer.

This position is estimated at .5 fte with an annualized cost of $80,000 for a net cost of $40,000. Again 4% raises were estimated for the two additional years of the project.

Clerical Support:

The volume of Professional Development material produced by this Center will require the support of one full time clerical position.

This cost is estimated at $40,000 for year 1 with 4% increases in subsequent years.

Equipment, Supplies, Miscellaneous Costs:

A total of $13,000 has been allocated for equipment and supplies to support the development and dissemination of training materials.

The Center will predominantly use a "train-the-trainer" model to disseminate Professional Development activities. This will require travel to other training centers across the state. An allocation of $10,000 has been made to support this travel.

The Center will conduct statewide conferences related to Professional Development and training. An allocation of $15,000 in year 1 and $10,000 in subsequent years has been made for this purpose.

Benefits:

All employee fringe benefits will include applicable rates charged by the contractor but have been calculated using NYSED's base fringe rate.

Indirect Costs

No indirect costs are computed for contracted services.

B. ***The Student Management System Certification Center*** (This is contracted service; staff levels are included here solely as a means of estimating an appropriate budget)

This activity will be awarded through a competitive procurement process.

Staff:

Center Manager:

The Center will be led by a Center Manager who is responsible for all activities created by the Center. This position is estimated at .6 fte with an annualized cost of $100,000 and a net cost of $60,000 in year one. This position is maintained in years 2 and 3 of the Project with raises for each year estimated at 4%.

Student Management System Technician:

The Center will be responsible for setting technical standards and conducting tests of Student Management Systems, Special Education Systems, and School Lunch Systems. This will require the support of technician dedicated to this purpose.

The cost of this is allocated as 1 fte at a year one cost of $80,000 with increases of 4% per year in each subsequent year.

Equipment, Supplies, and Misc.

Items needed in these categories to support the operation of the Center are estimated at a total of $14,000.

Travel to certain statewide meetings will be required. An allocation of $5000 to support this travel has been included.

Benefits:

All employee fringe benefits will include applicable rates charged by the contractor but have been calculated using NYSED's base fringe rate.

Indirect Costs

No indirect costs are computed for contracted services.

C. ***The Creation of the Universal Interface*** (This is contracted service; staff levels are included here solely as a means of estimating an appropriate budget)

This activity will be awarded through a competitive procurement process.

Staff:

Manager:

The Activity will be led by a Manager who is responsible for all activities related to the creation of these system edits.. This position is estimated at .6 fte with an annualized cost of $100,000 and a net cost of $60,000 in year one. This position is maintained in years 2 and 3 of the Project with raises for each year estimated at 4%.

Programmers:

The primary function of this activity is to create computer programs that check the data transmitted from the LEA's Student Management Systems for errors against the business rules established by the state. This will require a substantial and ongoing programming effort.

This requires an allocation of 2fte at an initial cost of $80,000 per position with salary increases of 4% in subsequent years.

Equipment, Supplies, Misc.

The needed hardware and software in provide the needed environment is estimated at $13,000 in year 1 with maintenance fees of $5000 in subsequent years.

Some travel will be required to state meetings. $5000 per annum has been allocated for this purpose.

Benefits:

All employee fringe benefits will include applicable rates charged by the contractor but have been calculated using NYSED's base fringe rate.

Indirect Costs

No indirect costs are computed for contracted services.

.

Section 2: Data Reporting Activities

This proposal calls for three primary Data Reporting Activities:

A. The creation of a Statewide Reporting Center
B. The building of internal capacity at NYSED to support Federal reporting and policy analysis.
C. The re-structuring of the nyStart contract for service.

The third activity listed the re-structuring of the contract is NOT a budgeted item. That activity will take place in the Activity Oversight Group and does not require a separate allocation.

A. ***The Creation of the Statewide Data Reporting Center*** (This is contracted service; staff levels are included here solely as a means of estimating an appropriate budget)

This activity will be awarded to one of the Regional Information Centers through an RFP process.

Center Manager:

The Center will be led by a Center Manager who is responsible for all activities created by the Center. This position is estimated at .6 fte with an annualized cost of $100,000 and a net cost of $60,000 in year one. This position is maintained in years 2 and 3 of the Project with raises for each year estimated at 4%.

Programmers:

The primary function of this activity is to create computer programs that will allow school districts to use data to analyze curriculum and improve instructional outcomes. This will require a substantial and ongoing programming effort.

This requires an allocation of 2fte at an initial cost of $80,000 per position with salary increases of 4% in subsequent years.

IT Tech/Database Administrator:

The reports created by this Center must be transmitted electronically to every district in the State of New York. This will require the support of an IT Tech.

This position is estimated at .5 fte with an year 1 allocation of $90,000 for a net cost of $45,000 with 4% increase in each subsequent year.

Clerical Support:

The Center will engage in ongoing communications with school districts and Regional Information Centers. This will require the support of one full time clerical position.

This is estimated at a year 1 cost of $40,000 with annual increases of 4% in subsequent years.

Equipment, Supplies, Misc.

The hardware, software, and communications equipment needed to implement this process is estimated at $28,000 in year 1 with a $10,000 per year miscellaneous allocation to provide for maintenance and growth.

Travel to state meetings will be required. A $5000 allocation has been created for this purpose.

Benefits:

All employee fringe benefits will include applicable rates charged by the contractor but have been calculated using NYSED's base fringe rate.

Indirect Costs

No indirect costs are computed for contracted services.

B. Building The NYSED Reporting Center

Staff:

Programmers.

Two programmers will be added to the staff of the NYSED Office of IT for this purpose.

These positions are estimated to be at an SG-23 and SG-18 grade level with estimated starting salaries of $63,822 and $49,296, respectively; 4% salary increases have been included for each of the subsequent project years.

Equipment, Supplies, Misc.

Support for the activities of these new staff member is estimated at $41,000 in year one with an annual allocation of $15,000 in subsequent years for maintenance and support.

Benefits:

All employee benefits have been estimated at 42.67% of salary.

Indirect Costs[2]

The allowable indirect cost rate of .352 or personal services has been applied. All Direct Costs are summarized in the attached spreadsheets.

Expansion Activities

The Expansion Activities in this proposal include the creation of the Activities Oversight Group and the creation of the Planning Groups. The Planning activities will take place within the Oversight structure. The budget allocation for the planning activity is included in this section of the budget.

[2] This budget assumes an unrestricted rate of 35.20% applied to the NYSED personal service category.

A. Activities Oversight Group

This group has overall responsibility for the day-in, day-out, supervision and operation of the proposed project.

Staff:

Project Manager:

The Project Manager has responsibility for all aspects of the project and reports directly to the Executive Policy Group.

This key position is estimated to be an SG-29 grade and budgeted at 1 fte with a year one cost of $87,196 with annual raises estimated at 4%.

Data Quality Coordinator:

The DQC reports to the Project Manager and supervises all aspects of the CIO Technical Assistance Center, the Student Management Certification Center, and the Tech/Standards editing project.

This position is estimated as a SG-26 grade and is budgeted at $74,667 in year 1 with annual increases of 4%.

Data Reporting Coordinator:

The DRC reports to the Project Manager and supervises all aspects of the Statewide Reporting Center, manages the nyStart contract, and is the Project's primary interface with the Office of IT for supporting internal reporting processes including Federal reporting and policy analysis.

This position is estimated as a SG-26 grade and is budgeted at $74,667 in year 1 with annual increases of 4%.

Product Development Coordinator:

The PDC reports to the Project Manager and is responsible for supervising both Planning Projects proposed in this document.

This position is estimated as a SG-26 grade and is budgeted at $74,667 in year 1 with annual increases of 4%.

The PDC will be managing the development of two highly sophisticated data warehouse systems. He/she will be responsible for the oversight of the planning for an Operational Data Store in the P-12 system, and the Data Warehouse structure for the P-16 system. As such, a Data Warehouse Architect will be retained to assist in this effort. A professional service of this natured is estimated at $120,000 per year.

Clerical Support:

Estimated as an SG-6 grade at 1fte with a year one budget of $26,667 and annual increases at 4%.

Equipment, Supplies, Misc.

Initial equipment and supplies is estimated at $43,000 with an ongoing annual allocation of $15,000 to provide maintenance and support.

The two product development groups will require substantial support from the office of the Project Manager providing every aspect of logistical details including: supplies, travel, meeting space, research, etc. An allocation of $50,000 per group per year has been allocated for this purpose.

Additionally, since these groups will be in product development for sophisticated data warehousing solutions, a Data Warehouse Architect will be retained as a consultant to these groups. $120,000 annually is budgeted for this highly technical professional service.

Benefits:

All employee benefits have been estimated at 42.67% of salary.

Indirect Costs[3]

The allowable indirect cost rate of .352 of personal services has been applied. All Direct Costs are summarized in the attached spreadsheets.

[3] This budget assumes an unrestricted rate of 35.20% applied to the NYSED personal service catagory.

U.S. Department of Education

Washington, D.C. 20202-5335

APPLICATION FOR GRANTS UNDER THE

STATEWIDE LONGITUDINAL DATA SYSTEMS
CFDA # 84.372A
PR/Award # R372A090056
Grants.gov Tracking#: GRANT10076429
Receipt Status: Received Late

OMB No. 1890-0004, Expiration Date:
Closing Date: SEP 25, 2008

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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.).

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OMB Number: 4040-0004
Expiration Date: 01/31/2009

Application for Federal Assistance SF-424 Version 02

* 1. Type of Submission:
- [ ] Preapplication
- [x] Application
- [ ] Changed/Corrected Application

* 2. Type of Application:
- [x] New
- [ ] Continuation
- [ ] Revision

* If Revision, select appropriate letter(s):

* Other (Specify)

* 3. Date Received: 09/25/2008

4. Applicant Identifier:

5a. Federal Entity Identifier:

* 5b. Federal Award Identifier:

State Use Only:

6. Date Received by State:

7. State Application Identifier:

8. APPLICANT INFORMATION:

* a. Legal Name: New York State Education Department

* b. Employer/Taxpayer Identification Number (EIN/TIN): 146013200

* c. Organizational DUNS: 806782173

d. Address:

* Street1: 89 Washington Avenue
Street2:
* City: Albany
County:
* State: NY: New York
Province:
* Country: USA: UNITED STATES
* Zip / Postal Code: 12234

e. Organizational Unit:

Department Name:

Division Name:

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

Prefix:
* First Name: Theresa
Middle Name:
* Last Name: Savo
Suffix:

Title:

Organizational Affiliation:

* Telephone Number: 518-474-2587
Fax Number:

* Email: tsavo@mail.nysed.gov

OMB Number: 4040-0004
Expiration Date: 01/31/2009

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:

84.372

CFDA Title:

Statewide Data Systems

*** 12. Funding Opportunity Number:**

ED-GRANTS-062608-001

* Title:

Statewide Longitudinal Data Systems Grant Program CFDA 84.372

13. Competition Identification Number:

84-372A2009-1

Title:

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

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

Project NextGen - The creation of the next generation of New York State's Longitudinal Data System (LDS).

Attach supporting documents as specified in agency instructions.

Add Attachments Delete Attachments View Attachments

Close Form | Previous | Next | Print Page | About

OMB Number: 4040-0004
Expiration Date: 01/31/2009

Application for Federal Assistance SF-424 Version 02

16. Congressional Districts Of:

* a. Applicant: 21
* b. Program/Project: 21

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

New York Congressional Distr | Add Attachment | Delete Attachment | View Attachment

17. Proposed Project:

* a. Start Date: 04/01/2009
* b. End Date: 03/31/2012

18. Estimated Funding ($):

* a. Federal	7,844,313.00
* b. Applicant	0.00
* c. State	0.00
* d. Local	0.00
* e. Other	0.00
* f. Program Income	0.00
* g. TOTAL	7,844,313.00

*** 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 Explanation

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: Ms. * First Name: Theresa

Middle Name:

* Last Name: Savo

Suffix:

* Title: Deputy Comm. for Operations & Management Svcs

* Telephone Number: 518-474-2547 Fax Number:

* Email: tsavo@mail.nysed.gov

* Signature of Authorized Representative: Mary Drzonsc * Date Signed: 09/25/2008

Authorized for Local Reproduction

Standard Form 424 (Revised 10/2005)
Prescribed by OMB Circular A-102

OMB Number: 4040-0004
Expiration Date: 01/31/2009

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.

New York Congressional Districts & Representatives
September 22, 2008

Bishop, Timothy H.; New York, 1st
Israel, Steve; New York, 2nd
King, Peter T.; New York, 3rd
McCarthy, Carolyn; New York, 4th
Ackerman, Gary L.; New York, 5th
Meeks, Gregory W.; New York, 6th
Crowley, Joseph; New York, 7th
Nadler, Jerrold; New York, 8th
Weiner, Anthony D.; New York, 9th
Towns, Edolphus; New York, 10th
Clarke, Yvette D.; New York, 11th
Velazquez, Nydia M.; New York, 12th
Fossella, Vito; New York, 13th
Maloney, Carolyn B.; New York, 14th
Rangel, Charles B.; New York, 15th
Serrano, Jose E.; New York, 16th
Engel, Eliot L.; New York, 17th
Lowey, Nita M.; New York, 18th
Hall, John J.; New York, 19th
Gillibrand, Kirsten E.; New York, 20th
McNulty, Michael R.; New York, 21st
Hinchey, Maurice D.; New York, 22nd
McHugh, John M.; New York, 23rd
Arcuri, Michael A.; New York, 24th
Walsh, James T.; New York, 25th
Reynolds, Thomas M.; New York, 26th
Higgins, Brian; New York, 27th
Slaughter, Louise McIntosh; New York, 28th
Kuhl, John R. "Randy"; New York, 29th

U.S. DEPARTMENT OF EDUCATION

BUDGET INFORMATION

NON-CONSTRUCTION PROGRAMS

OMB Control Number: 1890-0004

Expiration Date: 06/30/2005

Name of Institution/Organization:
New York State Education Department

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	$ 450,982	$ 469,023	$ 487,782	$ 0	$ 0	$ 1,407,787
2. Fringe Benefits	$ 192,434	$ 200,132	$ 208,137	$ 0	$ 0	$ 600,703
3. Travel	$ 15,000	$ 15,000	$ 15,000	$ 0	$ 0	$ 45,000
4. Equipment	$ 24,000	$ 0	$ 0	$ 0	$ 0	$ 24,000
5. Supplies	$ 30,000	$ 20,000	$ 20,000	$ 0	$ 0	$ 70,000
6. Contractual	$ 1,620,000	$ 1,605,040	$ 1,661,242	$ 0	$ 0	$ 4,886,282
7. Construction	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
8. Other	$ 105,000	$ 105,000	$ 105,000	$ 0	$ 0	$ 315,000
9. Total Direct Costs (lines 1-8)	$ 2,437,416	$ 2,414,195	$ 2,497,161	$ 0	$ 0	$ 7,348,772
10. Indirect Costs*	$ 158,746	$ 165,096	$ 171,699	$ 0	$ 0	$ 495,541
11. Training Stipends	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
12. Total Costs (lines 9-11)	$ 2,596,162	$ 2,579,291	$ 2,668,860	$ 0	$ 0	$ 7,844,313

***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? [X] Yes [ ] No
(2) If yes, please provide the following information:
Period Covered by the Indirect Cost Rate Agreement: From: 4/1/2008 To: 3/31/2009 (mm/dd/yyyy)
Approving Federal agency: [X] ED [ ] Other (please specify): _____
(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)?

ED Form No. 524

U.S. DEPARTMENT OF EDUCATION

BUDGET INFORMATION

NON-CONSTRUCTION PROGRAMS

OMB Control Number: 1890-0004

Expiration Date: 06/30/2005

Name of Institution/Organization:
New York State Education Department

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

OMB Approval No.: 4040-0007
Expiration Date: 04/30/2008

ASSURANCES - NON-CONSTRUCTION PROGRAMS

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 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 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.

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 subagreements.

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 (Clean Air) Implementation Plans under Section 176(c) of the Clean 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. §§1271 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 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 OFFICIAL	* TITLE
Mary Drzonsc	Deputy Comm. for Operations & Management Svcs
* APPLICANT ORGANIZATION	* DATE SUBMITTED
New York State Education Department	09/25/2008

Standard Form 424B (Rev. 7-97) Back

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 an 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 $10,00 0 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 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 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 subjec t to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

* APPLICANT'S ORGANIZATION

New York State Education Department

* PRINTED NAME AND TITLE OF AUTHORIZED REPRESENTATIVE

Prefix: Ms. * First Name: Theresa Middle Name:

* Last Name: Savo Suffix:

* Title: Deputy Comm. for Operations & Management Svcs

* SIGNATURE: Mary Orzorsc * DATE: 09/25/2008

Close Form

SUPPLEMENTAL INFORMATION
REQUIRED FOR
DEPARTMENT OF EDUCATION GRANTS

1. Project Director:

Prefix:	* First Name:	Middle Name:	* Last Name:	Suffix:
Mr.	Peter		Rooney	

Address:

* Street1: 89 Washington Avenue
Street2: Room 301
* City: Albany
County: Albany
* State: NY: New York
* Zip Code: 12234
* Country: USA: UNITED STATES

* Phone Number (give area code): 518-474-5012
Fax Number (give area code):

Email Address: prooney@mail.nysed.gov

2. Applicant Experience:

Novice Applicant ☐ Yes ☐ No ☒ Not applicable to this program

3. Human Subjects Research

Are any research activities involving human subjects planned at any time during the proposed project Period?

☐ Yes ☒ No

Are ALL the research activities proposed designated to be exempt from the regulations?

☐ Yes Provide Exemption(s) #:

☐ No Provide Assurance #, if available:

Please attach an explanation Narrative:

Add Attachment Delete Attachment View Attachment

Project Narrative

Abstract Narrative

Attachment 1:
Title: Pages: Uploaded File: **1234-abstract vers 5.pdf**

ABSTRACT
NEW YORK STATE
LONGITUDINAL EDUCATIONAL DATA SYSTEM
PROJECT NEXTGEN

The New York State Board of Regents ('the Board', 'the Regents') is committed to raising student achievement at all levels. Accurate and timely data are indispensable to accomplishing this goal. The Board has aggressively pursued the use of data to improve student achievement, meet our accountability responsibilities, and provide information to local educators and the public.

The New York State Education Department (NYSED) established a longitudinal data system to accommodate grade 3 through 8 student assessment data beginning in the 2005-06 school year. In 2006-07 the system was expanded to data for grades 9-12. It was expanded once more in 2007-08 to collect and report on data related to Special Education students.

This first generation of the New York State longitudinal data system (NYSLDS) has experienced a number of problems and inefficiencies, detailed in the narrative portion of this grant application. New York State is requesting an investment of $8 million in combined foundation and expansion activities to improve and unify NYSLDS sub-systems in a manner that will produce a Next Generation that is effective and efficient.

Project NextGen will focus proposed activities related to four major objectives that together will create a State LDS that is compliant with the accepted qualities of a good Longitudinal Data System. Project NextGen is organized as follows:

1. Policy and Governance:
    a. Executive Policy Group
    b. Activities Oversight Group
    c. Network of Statewide Stakeholder Advisory Panels

2. Data Quality
    a. CIO Technical Assistance Center
    b. Universal Interface to the NYSLDS
    c. Certification standards for Student Management Systems

3. Data Reporting
    a. Streamline current Accountability Reporting system.
    b. Statewide Data Reporting Center
    c. NYSED Internal Reporting Center

4. Re-engineering and P-16 Data
    a. Upgrade and monitor technical architecture
    b. Build a prototype for expanding to a P-16 system.

Project Narrative

Project Narrative

Attachment 1:
Title: Pages: Uploaded File: **1238-narrative version 9.2.pdf**

Attachment 2:
Title: Pages: Uploaded File: **1239-Appendix A_CELT Report sections.pdf**

SECTION 6
PROJECT NARRATIVE

INTRODUCTION

The New York State Board of Regents envisions the next stage of educational reform based upon a P-16 model: fostering success for all students from pre-kindergarten through high school, and preparing them for success into college and the workforce. To accomplish this, the Regents have crafted a P-16 Action Plan that is mobilizing the entire educational system in New York State behind a series of major actions that are already reaping positive results. Fundamental to carrying out this far-reaching plan is the need for a comprehensive data system that can be used to drive fact-based analysis and decision-making. That is why we are presenting this proposal.

The Board of Regents sets educational policy for New York and governs the University of the State of New York ("USNY"), the most comprehensive and unified educational system in the nation. The University, established in 1784 and recognized by the State Constitution, is a legal corporation with broad powers that encompasses all of education from birth through adulthood and includes more than 225 public and private colleges and universities, 5,000 public and private schools, nearly 7,000 libraries, 750 museums, and 25 public broadcasting facilities. The Regents also license and regulate a million professionals practicing in 47 fields, and certify 250,000 public school teachers and administrators.

For more than a decade, the Regents, the Commissioner and the Department have identified and worked to solve New York's two fundamental educational challenges: first, **the great divide in achievement** along lines of income, race and ethnicity, language, and disability; second, the need to keep up with growing demands for still more knowledge and skill in the face of **increasing competition globally**. Today, as a result of the Board's work, these issues are at the center of statewide public debate and action. The State's political, educational, business, and community leaders are united as never before, and New York now has an unprecedented opportunity to solve these challenges. The Board held a major Education Summit of USNY and other leaders in Fall 2005. From it, the Regents crafted "**P-16 Education: A Plan for Action**", which outlined a set of priority actions including the improvement of academic outcomes for English Language Learners and students with disabilities, the raising of learning standards, the alignment of standards, assessments, curriculum, and instruction across the P-16 continuum, the strengthening of the SED's accountability and school improvement capacity, the creation of a P-16 Data System, and the focusing of regional education networks on joint P-16 strategies.

In pursuing these goals, the Board has emphasized the need to confront and analyze the data, share it broadly, and use it to define where resources and energy should be applied. This includes both recognizing achievements and declaring problems as clearly as possible. Our data can and must be used to drive student achievement at all levels. Accurate and timely data are key to:

- driving appropriate policy decisions;

- providing information for State and federal accountability;
- providing information to improve teaching and learning at the district, school, and classroom levels; and
- informing the public.

In a major step to signal its intentions, the Board of Regents last year established a new P-16 structure, joining the Office of Elementary, Middle, Secondary, and Continuing Education (EMSC) and the Office of Higher Education under one Senior Deputy Commissioner within the State Education Department for a systemic approach to education reform in New York State. The Board of Regents message was clear - the Department must transform the way it does business with the overall goal of raising student performance and closing the achievement gap.

The Regents have applied for and received major foundation grants to help fund the work thus far. In 2007, the Board of Regents received $6.2 million in support from the Bill & Melinda Gates Foundation and The Wallace Foundation for work to improve New York State's high-school graduation rates, college readiness and college completion rates. The support is funding a series of initiatives outlined in the Regents' P-16 Action Plan, a blueprint of actions focused **on raising achievement for all students and closing the achievement gap.** The gap is the great divide in academic achievement along lines of income, race and ethnicity, language, and disability, which is manifest in test scores, high school graduation rates, and college completion.

The foundations' investments are significantly accelerating the state's ongoing work. The Regents and State Education Department leadership are focusing on improving educational leadership across the state, developing a cutting-edge service capacity within the State Education Department, identifying and implementing best practices that improve schools, revising the system by which schools are held accountable, and designing a comprehensive data system that will track the progress of individual students from pre-Kindergarten through college.

The Regents recognized that the State's data systems are fragmented, whereby many data systems which are housed in a variety of different institutions, including local districts, BOCES, SUNY, and CUNY. Each system uses different metrics with different methodologies and identifiers. New York needs a single system that provides a comprehensive view of each student's progress across school, continuing through transitions from elementary to middle to high school and college. A uniform system will help ease the strain of student mobility across districts by speeding access to important data, informing schools about the level of high-school preparation required for success in higher education, and aiding evaluation of the success of district and statewide programs, and much more.

To help reform and unify these systems, the Regents also sought and received $2 million in support from the Gates Foundation to develop a plan for a P-16 data system to track individual students' progress in order to increase high school and higher education graduation rates. The Board of Regents and the State Education Department have created a strong partnership with the State University of New York (SUNY), the City University of New York (CUNY), the New York City Department of Education, and the Yonkers and Syracuse school districts to develop the data system. The Parthenon Group, a leading advisor on systems and data used to drive

education reform, is leading the project. The work involves a fact-based review of all current data systems and the information they provide, an assessment of the system's performance, an analysis of what quantitative and qualitative information is missing and needed, and finally the design of a comprehensive, integrated P-16 data system across the pre-K-12 and higher education systems. Phase I of this work, which identified the current status of the data systems and laid out a set of clear goals for a P-16 system, is already completed; a proposal to fund Phase II is under consideration as this is being written.

The Department also engaged the Center for Educational Leadership and Technology (CELT) to analyze the State's longitudinal data system. CELT identified a number of transactional, governance, and technology issues that are addressed in this grant request.

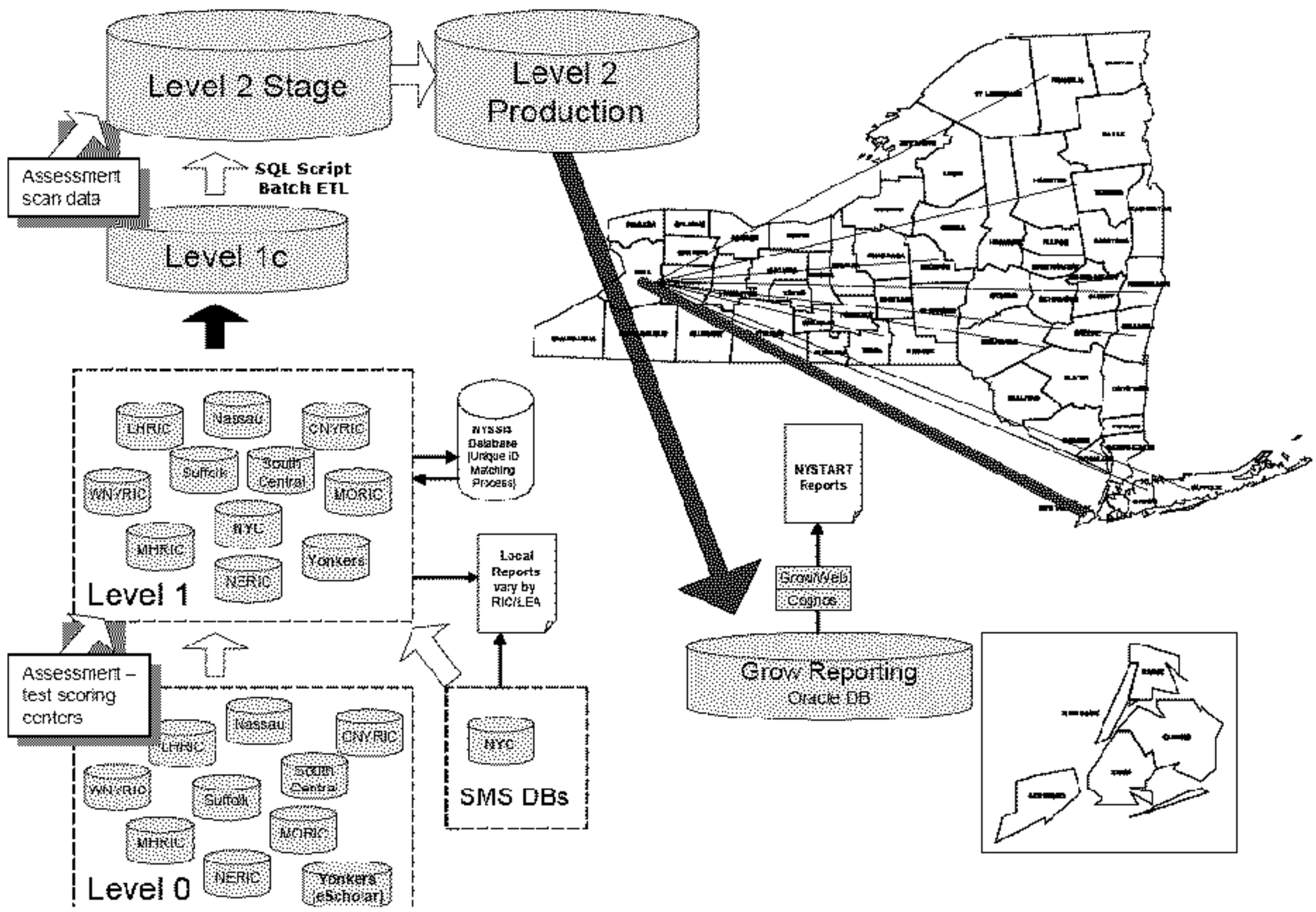
The New York State Education Department is committed to re-engineering its Longitudinal Data System to be more responsive to the needs of its constituents. A re-engineered system will provide increased data quality. The ease and accuracy of local reporting will be improved, the cycle time for SED reporting to USED and the public will be reduced, and data to support Regents policy and District practice to enable improved student achievement will be produced in a more timely fashion.

This grant request is another major step in the Board of Regents plan to strengthen New York's P-16 education strategy. It builds on and carries forward the previous work outlined above. The grant will directly permit New York to improve the quality and timeliness of our current P-12 data system; feed seamlessly into Phase II of the Development of the P-16 data system; expand our data reporting capacity, thus putting important performance data directly in the hands of educators and the public; improve our accountability systems; identify successful programs along the P-16 education continuum and enhance the State's ability to allocate resources; and provide even better information to the Board of Regents to set education policy.

SECTION A: NEED FOR PROJECT

The New York State Education Department (NYSED) established a longitudinal data system to accommodate grade 3 through 8 student data beginning in the 2005-06 school year. In 2006-07 the system was expanded to data for grades 9-12. It was expanded once more in 2007-08 to collect and report on data related to Special Education students. This final expansion made the system a full pre-school through grade 12 statewide data warehouse.

As currently constituted, the State's student data collection system consists of at least seven different levels of data repositories. The following diagram provides a high level view of the system:



Data currently moves from the SMS to level 0, next to level 1, then to level 1c, then level 2, and finally through the staging databases to the Grow Reporting database. These various levels are all separate instances of the same database. However, the time required to move the data between the levels results in different versions of the data at each level.

Additionally, the operation of the LDS is distributed across 11 regional entities, represented in the diagram above as "Level 1". These entities are regional service agencies referred to as Regional Information Centers (RICs). These Centers operate the "Level 1" data warehouses and have primary responsibility for collecting data from local school districts and supporting school districts in that effort.

While providing a foundation for data collection and management, this system has not performed in a fully efficient and effective manner:

- New York State issued final school report cards for the 2006-07 school year in August of 2008 14 months after the referenced school year had closed. We know we can do better than that.
- School districts in New York routinely begin a school year without data from the previous year's assessment administration, making it difficult to make meaningful instructional decisions on curriculum or instructional strategies.
- The system has challenged New York State in meeting many of its Federal reporting requirements in a timely fashion, especially as it relates to accountability and Education Data Exchange Network (EDEN) reporting.

These outcomes can be attributed to problems at many levels of the existing system:

- Policy/Governance governance of the project is distributed across multiple parties;
- Architecture/Design interoperability between LEA data systems and the NYSED warehouse is inefficient;
- Project Management there is no single project management team; management is distributed across multiple groups with no unifying authority;
- Database Design while the inherent logic of the state's data modeling is sound, the complexity of moving data through the multiple levels in the current system has some unintended and undesired consequences;
- Business Rules rules are complex and difficult to communicate to LEAs; no standard communication system exists for this purpose on a statewide basis.

Recognizing these deficiencies, the Regents sought and received major foundation funding and retained two independent expert firms to review and recommend major revisions to the data system. Both parties noted specific areas in need of attention in order to improve the quality of the LDS. While the entire contents of their reports cannot be accommodated in the space permitted in this proposal, their observations note limitations of the current system and an accompanying need for the proposed Project NextGen.

The Center for Educational Leadership and Technology (CELT) made the following comment in a report dated June 2008:

"The CELT team noted over 50 observations and accompanying recommendations…that are necessary to create the type of quality data and reporting needed by the districts and NYSED. The current system for moving data from the schools and districts was developed with no over-arching technology infrastructure, with no real review/inclusion of best practices, and with sensitivity toward established political institutions. This has resulted in a level of complexity not seen in other states and has ***compromised the quality of the data and reporting There are areas of weakness in overall logical operational design, technical architectural design, vendor roles, data governance, and quality assurance."*** (emphasis added) Report of the CELT Group - page 2.

A second study by the Parthenon Group, published in May 2008, recommended improvements in three broad areas. Specific actions were recommended to "ease the burden of data collection and reporting"; to improve "the weak capacity to analyze and make use of data"; and finally to reduce the "inequity of support across districts". report of the Parthenon Group, page 20

Excerpts from these two reports are included in the Appendix. To summarize, these reports identified the following key findings:

- Data flows too slowly and inefficiently through the current data collection processes, from the Local Education Agency (LEA) to the State. The result is that data quality issues need to be reviewed at every step in the process.
- The State is frequently pressured to meet state and federal accountability deadlines.

- Educators, particularly at the school and district level, cannot access reports in a timely and efficient manner.
- While the technology used for the current data collection and management systems is a good foundation, the State has not created a uniform set of business rules that apply across all systems, which results in inefficient data flow.
- The current system will need modification in order to meet impending growth models of assessment and accountability.

The proposed Project NextGen will create work products that will address the deficiencies noted in these reports.

SECTION B: OBJECTIVES OF THE PROPOSED "PROJECT NEXTGEN"

Objective 1.0: Policy/Governance

As noted in the CELT report, "There is no owner or architect at the NYSED for the current process, nor is there a single point of contact responsible for data and applications related to the movement of data from the schools to NYSED." (CELT, May 2008, pg9)

Objective 1.0 will be to create a clear policy/governance structure that is not only visible and obvious to all stakeholders, but takes full responsibility for all aspects of the LDS. At minimum, there will be three components to achieving this objective: creation of an Executive Policy Group, creation of an Activities Oversight Group, and the creation of a Statewide Stakeholders Advisory Panel.

Activity 1.1: The creation of an Executive Policy Group.

Similar to many complex organizations, NYSED has an organizational structure that creates certain "vertical silos" of activity. As it relates to the provision of systemic support for an LDS, this vertical structure has become an inhibitor of success.

The need to collect and report data crosses many functional areas of the NYSED: assessment reporting, special education reporting, and career and technical education reporting are just a few. The conflicts between the nature of these data and the timelines for collecting and reporting these data have caused a certain level of dysfunction in the LDS.

Project NextGen will focus on creating an Executive Policy Group that will be horizontally organized. This group will have the authority to establish policy for the LDS project as it relates to data elements, collection and reporting schedules, compliance with Federal and State regulations, and any other executive level area requiring LDS activity.

Activity 1.2: Creation of an Activities Oversight Group

Perhaps the most glaring deficiency in the current generation of the New York State Longitudinal Data System (NYSLDS) is the lack of a single point of project management.

Project NextGen creates a comprehensive integrated Activities Oversight Group. This office will be responsible for implementing policies established by the Executive Policy Group and for taking overall responsibility for all aspects of the data collection and reporting project. This includes oversight of all the sub-systems of the LDS, setting of all data standards and architecture, establishing the LDS budget, communication of clear timelines, management of third party vendors, and other attributes normally associated with quality project management.

Activity 1.3: The creation of a Stakeholder Advisory Panel

New York State has approximately 3.3 million students housed in over 700 local school districts. These entities are impacted greatly by how the LDS is constructed, how its business rules are created and disseminated, how timelines are created and implemented, and how reports for their use are designed and distributed. Yet, they have little or no input into any of these processes.

Project NextGen will create a system to provide active and ongoing review by local constituents. Regional Advisory Councils will be organized across the state. Major policy initiatives as well as detailed functional plans related to operation of the LDS will routinely be reviewed by these groups. Each of the Regional Groups will have representation on a Statewide Group.

This structure will assure clear and continuing communication across all aspects of the project.

Expected Outcomes of Objective 1.0:

In keeping with accepted best practices, the activities of Objective 1.0 will create a focused governance and policy structure that will endure. The lack of this structure in the current system has been a major contributor to the dysfunction noted by the outside consultants.

Objective 2.0: Data Quality

Both the CELT and Parthenon groups observed data quality issues in New York State. Inequality of support for school districts, the unusually high number of disparate student management systems across the state, and the complexity of the data collection system were all cited as contributing to this problem.

Objective 2.0 create a series of related project products that standardize data quality components.

Specifically, standard training activities and support structures will be created for the local school districts; standard error checking will be created for data at a level that is closest to the origins of the data, and standards will be set for student management systems.

Activity 2.1: Creation of a Chief Information Officer (CIO) Technical Assistance Center.

The inconsistent support for school districts and the resulting inconsistency of quality data are among the primary reasons for ongoing problems in this area.

Project NextGen will create a CIO Technical Assistance Center. This Center will be responsible for the creation of standards for school based staff along with activities to support the implementation and ongoing maintenance of those standards.

The Center will be charged with developing, disseminating, and maintaining a series of training activities for LEA staff responsible of the collection of data and its transmission to the state. The Center will create supporting materials as well as supporting websites and other structures as needed to provide more uniform support for school districts. These activities will be focused on two themes: a) the skill set and daily activities required of a school district CIO, and b) the clear communication of LDS business rules.

In addition to acting as the coordinating body for school district training activities, the CIO Tech Center will have the responsibility for collaborating with the Level 1 Operators to standardize school district support services.

Referring to the diagram on page 1, the Level 1 operators have primary responsibility in supporting local school districts. This includes assisting the district in its data collection effort, reporting on data errors, assistance in the resolution of data errors, and reporting on the state of LEA data at Level 1.

Both CELT and Parthenon noted that the quality of these support services varies greatly across the eleven Level 1 operators. The CIO Technical Assistance Center will be responsible for establishing a standard set of support activities across all Centers and provide quality assurance procedures for the ongoing maintenance of those services.

Activity 2.2: The creation of a Universal Interface to the LDS and the creation of an accompanying universal standard set of error checking routines to be applied at the first instance of data movement from the LEA.

The nature of the accountability rules in New York State is such that the LDS business rules are necessarily complex. Little or no error checking takes place in the LEA student management systems. Consequently, the first opportunity to error check district data against the business rules takes place at what is currently referred to as Level 0. As currently constructed, the edits applied at Level 0 check for many, but not all, errors. Additionally, the error checking focuses on business rules only and does not check for reasonability or exceptions. This has resulted in poor data quality across the system. Therefore errors are found in the higher level repositories late in the process, when correction of that data becomes difficult due to time restrictions.

Additionally, the Level 0 staging tool currently provides school districts with the ability to load and review *only* current data. However, the accountability rules in New York State include managing data related to high school cohorts. This would include data that can span as many as six years.

The proposed project will create a specific product to address these issues. A Universal Interface to the Longitudinal Data System will be created to assist school districts in uploading and managing local data.

This interface will be used by all school districts in the state to stage, edit, and transfer data. All business rules will be incorporated into edit checking routines in this application, thus pushing error checking at a point in the system closest to the source of the data.

Activity 2.3: The creation of a Student Management System Certification Center

The state has a long tradition of local control. School districts use a wide variety of student management systems, school lunch systems, and special education management systems. There is little inter-operability between these systems and the systems vary greatly in their ability to collect and export required state data elements.

Project NextGen will establish a Student Management Systems Certification Center. This Center will work collaboratively with the student management systems, school lunch systems and special education management systems vendors across the state to establish criteria for certifying systems for use by school districts.

Three levels of certification will be proposed for review:

- Basic certification will be available to any system that collects all state required data elements and can successfully export those elements to the Level 0 interface tool.

- Advanced certification will be available to any system that can meet the requirements for Basic certification, but can also incorporate the state's business rules into its application.

- Preferred certification will be available to any system that can meet basic and advanced requirements, but can also accept individual assessment data results from the state for inclusion in report cards and progress reports.

The Center will establish the specifics of these certifications, establish the procedures by which vendor systems become certified, and will maintain the certification process over time.

The Center will become the state's primary vehicle for ongoing communications with vendors. It will be responsible for alerting vendors to proposed changes in the data-dictionary or business rules and will seek vendor advice on the implementation of those changes.

The Center will be responsible for promoting interoperability between and among systems so that, for example, poverty data residing in the school lunch system can easily be accessed by the student management system, or enrollment data in the student management system can easily be accessed by the special education system.

Expected Outcomes of Objective 2.0:

In keeping with the accepted best practices regarding Longitudinal Data Systems, the activities related to Objective 2 will ensure the integrity, security, and quality of the data. These activities

also establish a long term system for the ongoing training of those involved in creating and moving data. Finally, they create a streamlined communication process for managing change in the system as requirements are modified in the future.

Objective 3.0: Data Reporting

As noted previously, NYSED has had challenges related to its required reporting.

Objective 3.0 is to create data reporting structures that address all of the varying needs of the state: accountability reporting, federal reporting, reports to districts for instructional analysis, and ad hoc reporting for NYSED to inform educational policy. Specifically, this will require work products that streamline the current accountability reporting, the creation of a reporting center to serve the needs of school districts, and an additional center to report on and analyze data at the state level.

Activity 3.1: Streamline the current New York Statewide Testing and Accountability Reporting Tool (nyStart) Reporting Process

The original specifications for the nyStart system were at once "over-scoped" and "under-designed".

It was "over-scoped" in the sense that it tried to be "all things to all people" using the same reporting agent to deliver verification reports, assessment reports, accountability reports, and guided analysis reports for instructional improvement.

It was "under-designed" because it could not anticipate the actual nature of the collected data and consequently ignored some important functionality that should have been built into the original specifications. For example, it overlooked the role of staging the data for reporting. With no specific entity identified for this task, it has become one of the points of contention that has resulted in poor reporting performance and extended timelines.

A technical group will be created to review and re-write the functional and technical specifications for the state's primary reporting environment, the nyStart system. These new specifications will reduce the scope of nyStart reporting to state required accountability items only.

This Tech group will define specifically which data elements are included in that domain and create specifications for any and all reports related to accountability including Verification reports, Individual Student Reports, and School/District Report Cards.

Additionally, this Tech Group will define clear roles and responsibilities as they relate to this reporting process. Setting standards for the staging of data will be of particular importance in this regard.

Activity 3.2: Create the Statewide Instructional Data Reporting Center

The area of reporting that has suffered the most from problems in the LDS is the use of data by school districts to engage in instructional planning.

Project NextGen will create the Statewide Instructional Data Reporting Center. This Center will be responsible for collaborating with school districts, psychometricians, and other selected parties to create, disseminate, and support a basic set of assessment analysis reports that will allow districts to engage in appropriate instructional planning.

Reports should be generated in all state-related assessment areas: English Language Arts (ELA), Mathematics, Science, Social Studies, New York State English as a Second Language Achievement Test (NYSESLAT) and New York State Alternate Assessment (NYSAA). Reports should be psychometrically appropriate and the Center will be responsible for establishing a vetting procedure to assure this quality.

We will create a technical infrastructure, hardware, software, and communications environment for making this operational.

This Center will become the state's primary vehicle for ongoing support of school districts in the use of data to improve instructional outcomes. We will establish partnerships with groups across the state that have the capacity to support these reports with professional development activities and other school district support functions. These partnership groups will include local BOCES, colleges and universities, and other professional support groups.

Activity 3.3: Bring Federal reports back into SED and expand the capacity to analyze data for policy purposes.

One of the by-products of using the nyStart system as an all purpose reporting environment is a reduced in-house capacity to generate needed state reports.

The Department will implement additional reporting, using the state-selected Cognos reporting tools. We will operate and expand a reporting center that will generate a variety of ad-hoc reports to support State-level policy analysis.

Expected Outcomes of Objective 3.0:

The activities of Objective 3.0 will create long term structures that will provide information to improve student achievement and reduce achievement gaps among students. It also provides a platform for answering key educational policy questions, providing data for decision-making at multiple levels, and meeting Federal reporting requirements.

Objective 4.0: New Products:

Objectives 1 through 3 above address the major concerns with the current system and create an efficient and effective LDS. They create revised versions of current products and processes. However, while working to improve today's system, it makes sense to simultaneously begin building the future.

There are two major NYSED objectives that require detailed planning before any operational activities can be proposed. Those two areas are the re-engineering of the current data collection process through the creation of an Operational Data Store, and the creation of a full P-16 system.

Objective 4.0 is to improve the technical infrastructure, as identified by the CELT report, and to expand upon the work of the P-16 Data System Strategic Plan and implement a prototype P-16 data system.

Activity 4.1: Reconstructing the current technical infrastructure to include an Operational Data Store.

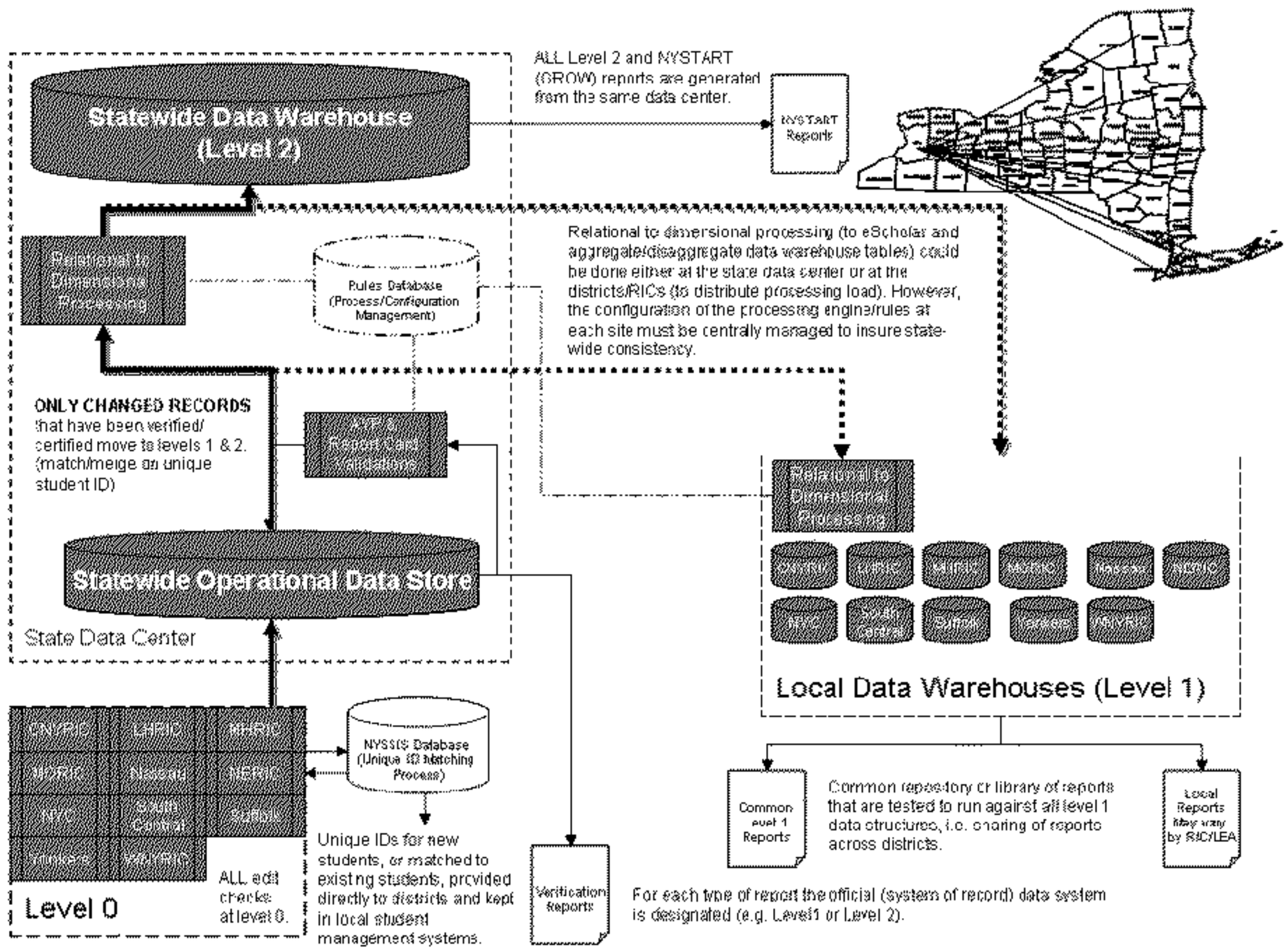
The CELT report recommended a major re-engineering of the entire NYS LDS. Both outside consultant groups, as well as constituent groups, have commented on the multiple levels of data repositories in use in the state and have recommended streamlining this long data trail.

One mechanism for such streamlining is the utilization of an Operational Data Store. Essentially this would be a full statewide data warehouse accessible to school districts. It would allow districts unfettered access to their data, with the ability to edit it, right up to the moment it is released to the state and becomes "official".

The CELT Report said the following:

> Reduce the complexity and the burden on the districts for the data movement from LEA to SEA but also make the district fully responsible for the data until the handoff to the NYSED. Do this by moving all of the data edits to Level 0 and implementing an Operational Data Store (ODS), from which Level 1 and 2 draw their data in parallel instead of a sequential process (Level 0 to Level 1 then Level 2). Establish ownership of the data at the district level until handoff to the NYSED at Level 2.

This represents a substantial re-engineering of the current system. The revised system would look like this:



This diagram proposes a dramatic change in the system architecture. In this process the old "level 0" database is transformed into a comprehensive "district-to-state" data interface. This allows all editing to take place at a level closest to the LEA. Additionally, the LEA maintains complete control of its own data right up to the moment it is handed off to the state.

This diagram also distinguishes between a level designed to manage ever-changing data (the Operational Data Store or ODS), and "frozen" data in the Statewide Data Warehouse. This distinction does not exist in the current system.

The New York State Education Department is committed to re-engineering its Longitudinal Data System to be more responsive to the needs of its constituents. A re-engineered system will provide increased data quality. The ease and accuracy of local reporting will be improved, the cycle time for SED reporting to USED and the public will be reduced, and data to support Regents policy and District practice to enable improved student achievement will be produced in a more timely fashion.

We will ***plan, develop, and test a re-engineered system***. We will assess the effect of creating such a design on all aspects of the system including: the affect on school districts, the affect on collecting and reporting data, the affect on data quality, and the affect on the ability of the state to meet its timelines. Specifically, the group will work in three phases with the following outcomes:

Phase I: Systems Impact Study

- Determine the effect of this re-engineering on every party to the current system including the effect on Student Management System vendors, LEAs, Regional Service Agencies, NYSED, data quality processed, interfaces with assessment systems, data reporting systems, and any other sub-system that will be affected by the proposed change.

Phase II: Detailed Project Plan

- Identify outcomes and goals.
- Determine deliverables and timelines.
- Build a Project Schedule
- Identify human resource, communications, risk assessment, and budget plans that ordinarily accompany such Project Plans.

Phase III: Test and Implement

The fully detailed Project Plan emerging from Phase II above will be used to create and test a functional reengineered system. Once the system is de-bugged and passes quality assurance testing, it will be fully implemented across New York State.

Activity 4.2: P-16 Data System Pilot.

The New York State Education Department (NYSED), with the leadership of the Board of Regents and the partnership of the State University of New York (SUNY), the City University of New York (CUNY), New York City Department of Education (NYCDOE), and Yonkers and Syracuse District Superintendents (the partners), has embraced an ambitious P-16 reform strategy to ensure comprehensive, unified efforts to improve student achievement at all levels. All partners are committed to supporting the creation of a robust P-16 data system for New York State and have assumed ownership and designated significant staff time to do so. Partners envision a P-16 data system that will:

- Provide a unified view of student achievement from year to year across the P-16 system (statewide and district-level views).
- Support programmatic actions to both raise student achievement by giving early indications both of problems and where to apply resources, new practices, and innovations.
- Support policy changes and resource investments.
- Identify the value added by programs at every level (identify select data elements and seek to minimize complexity of measures).

- Build on and combine the strengths and achievements of existing data systems and accountability measures.

- Be secure, accurate, and timely.

While NYSED is focused on improving the existing P-12 system as outlined in all the objectives above, the Department will expand to a P-16 system. The Strategic Planning process has identified the following goals for a P-16 Data System:

- Evaluate existing programs and initiatives and identify the need for new ones.
- Fulfill State and Federal obligations in an accurate and timely manner.
- Determine the effect of earlier preparation on later outcomes.
- Identify key indicators of college readiness.
- Determine what teacher-related factors lead to improved student outcomes.
- Ease the strain of student mobility by speeding access to student data.
- Provide timely student data to help inform programmatic interventions.
- Assess students' success in life beyond college.
- Inform higher education admission standards.
- Facilitate higher education application processes by implementing electronic student record transfers.

Grant funding will be used to create an operational plan to implement the systems goals noted above. Working directly with our partners at SUNY, CUNY, New York City, Yonkers and Syracuse, we will use the work completed by the Parthenon Group and build a prototype P-16 Data System. This pilot project will provide important validation of the business rules, technology, and reporting capacity to inform the creation of a fully-implemented statewide P-16 data system.

Expected Outcomes of Objective 4.0:

The outcomes of Objective 4.0 will be the creation of two products critical to the future of education in New York State. A simplified, streamlined, system architecture for the current P-12 Longitudinal Data System will be the capstone to the other changes proposed in this project through Objectives 1 through 3. Combined with the outcomes of these objectives, the creation of an Operational Data Store will bring New York State's LDS into compliance with all accepted standards of a quality data system.

Creating the initial P-16 version of the LDS, while simultaneously bringing the P-12 system up to standards, will provide NYS with the ability to move in the P-16 direction in an efficient and effective fashion.

SECTION C: PROJECT DESIGN

The state will accomplish the proposed Project using a variety of resource allocation techniques:

- Internal staff currently assigned to the existing LDS operation will be reassigned to roles with more specific duties related to the activities proposed in this Project. There are currently approximately 20 FTE dedicated to this purpose.

- Where possible, new staff will be added.

- New York State has a rich resource through our regional and intermediate service agencies. These public entities were created by the Legislature for the sole purpose of providing services to school districts. The Boards of Cooperative Educational Services (BOCES) and RICs organizations are already the primary partners in implementing the current LDS and will play a major role in achieving the objectives laid out in this proposal.

- The current system also includes strong partnerships with vendors in the area of data modeling and accountability reporting. These partnerships will continue to be a resource in support of the objectives of the proposed project.

The state will position itself to accomplish the objectives of this proposal by engaging in reorganization activities prior to the formal beginning of the Project (see Year 0 timeline below). Specifically, the state will reorganize its governance and policy structure by creating the groups mentioned in Objective 1.0 above ***prior*** to the beginning of the first project year in April 2009.

The existence of the Executive Policy Group, the Activities Oversight Group, and the Statewide Stakeholders Group prior to the beginning of Project activities should provide a substantial platform for success.

The Executive Policy Group will have ultimate oversight responsibility for proposal implementation. The day-in, day-out, operation of the project will reside in the Activities Oversight Group with the Stakeholder Group playing an important advisory role.

While the Activities Oversight Group will manage the project and take leadership over all its activities, many of the major objectives will be maintained by the Regional Information Centers. It is anticipated that the RICs will operate the CIO TAC, the Reporting Center, and the SMS Cert Center.

The Project Design is focused on the elements needed to have a successful SLDS:

- Needs and Uses: The Statewide Reporting Center in conjunction with the building of internal reporting center within NYSED will not only help to improve student achievement and reduce achievement gaps among students, it will also build a platform for informing educational policy.

- Governance: The creation of the Executive Policy Group, the Activities Oversight Group, and the Statewide Stakeholders group complies with all the accepted principles of a good governance structure.

- Institutional Support: NYSED leadership has recognized the deficiencies in the current system and taken action by commissioning the studies already referenced above (CELT and Parthenon). By submitting this application that includes dramatic changes to the current system, the support of NYSED for the needed changes is self-evident. The creation of the Statewide Stakeholders Group will assure a consensus on a shared vision for a new and successful system.

- Sustainability: The key to sustaining the NYSLDS over time is in the strong partnerships already established and those that will be established. NYSED, the RICs, and the primary support vendors have the combined capacity to sustain New York's large and complex system over time.

Additionally, the Project is designed to assure that the technical requirements considered as benchmarks for a good SLDS are in place:

- Federal Reporting: The inclusion of a wide domain of data elements collected from school districts, along with the proposed creation of an internal reporting center within NYSED should comply with all goals in this area.

- Privacy Protection and Data Accessibility: This is one area in which the current system excels. Database security is at a high level. Data accessibility in school districts is available only through a secure gateway. Only the Superintendent of Schools is authorized to allow access to a district's data.

- Data Quality As noted above, current data quality falls below acceptable norms. The activities proposed in the Project, a CIO Tech Center, SMS Certification, and a set of universal edit/exception checks should provide New York State with the highest data quality possible.

- Interoperability Within the various levels of the current SLDS, there is complete interoperability. However, the ability to ubiquitously exchange data between the state and the LEAs is more challenging. The activities proposed in the Project, the use of Level 0 as a universal interface and the creation of the SMS Cert Center, will vastly improve the facile exchange of data.

- Enterprise-Wide Architecture: This is one of the strengths of the current system. A system of universal student IDs allows the tracking of data across time and location. An up-to-date Data Dictionary and set of current Business Rules is available to all on an active internet link. All Data Modeling is completed by the state's partner for this purpose, eScholar LLC, the recognized national leader in this area.

SECTION D: INSTITUTIONAL SUPPORT

There is broad institutional support for the continued operation of an SLDS in New York State. The existence of the current system itself is a measure of that support.

The Board of Regents and the Commissioner of Education consider an improved data system to be crucial to enhance policymaking at the State level and improve teaching and learning at the local level. For that reason, they are overseeing and monitoring the project closely, with detailed monthly updates. Beyond that, State Education Department managers at the highest levels are working on the project:

- Senior Deputy Commissioner, P-16: Provides overall policy direction and support for P-16 education policy and implementation in New York State, including associated data systems;

- Associate Commissioner: Responsibility for the system; the Associate Commissioner and her staff are engaged in system policy issues on a daily basis.

- CIO: Acts in an advisory capacity to the Associate Commissioner and is involved in systems issues at all times.

- Higher Education: Collaborates with team members working with the LDS in preparation for expansion to P-16. This Office will play a major leadership role in the proposed P-16 Planning Activities.

- Information Technology Services (ITS): Operates the current universal ID system, manages 3rd party contracts, and provides some basic level of reporting.

- Information and Reporting Services: Assumes primary responsibility for all data collection and reporting.

- Vocational and Educational Services for Individuals with Disabilities (VESID) : Responsible for collecting and reporting data related to the Special Education population. Staff from this office collaborates on a regular basis with LDS staff.

- Western New York Regional Information Center: This Center houses the State's official data repository, referred to as "Level 2". A schematic of its infrastructure in included in Appendix B.

- The Regional Information Centers: These twelve centers located across the state act as the primary agents for collecting, correcting, and staging LEA data before it is moved to the Level 2 repository. Each Center has extensive infrastructure dedicated to this purpose. In addition to the actual collection of data, these Centers are also the primary conduits for supporting school districts.

- Greater Southern Tier Regional Information Center: This RIC is the author of the Level 0 interface tool.

- Project Managers Group: This group, representing all of the Regional Information Centers, the "Big 5" School Districts, vendors, and NYSED meets monthly to resolve problems related to systems operation.

- Tech/Standards Group: This group meets monthly to resolve any technical issues related to the project. It includes technical staff from the Regional Information Centers and from NYSED.

- Data Core Group: This group of advisors from school districts, NYSED, BOCES and RICs meets quarterly to exchange information.

- Corporate Partners: In support of this project, NYSED has strong and positive partnerships with the following: The Grow Network, Cognos Corporation, eScholar LLC.

These existing groups will be leveraged by the new Project to assure its initial and continued success. While the role of the members of some of these groups will be restructured to focus on the new activities being proposed here, their very existence will assure long term sustainability of the Project.

SECTION E: PROJECT MANAGEMENT PLAN

The Office of the Associate Commissioner, under the auspices of the Senior Deputy Commissioner P-16, has overall responsibility for policies and activities related to the Longitudinal Data System. This places responsibility for Project Management at the highest level of the NYSED, thereby assuring support and sustainability.

The primary modality to provide oversight will be the creation of an Activities Oversight Group established under the leadership of a Project Manager. The Project Manager (PM) will have responsibility for all aspects of implementing the proposed Project and will report directly to the Associate Commissioner.

In addition to supervising all key staff of the Activities Oversight Group, the PM will personally manage the activities related to Objective 1.0. Primarily this will involve the PM in the creation of the regional network of Stakeholder Advisory Councils. The PM will assist in the logistics of managing these groups, help set agendas, establish communication protocols, and provide information to the groups regarding Project plans, activities, accomplishments, and problems.

The PM will be assisted by three area coordinators as follows:

- Data Quality Coordinator (DQC): This person will report to the PM and will have responsibility for implementing the activities related to Objective 2.0.

- Data Reporting Coordinator (DRC): This person will report to the PM and will have responsibility for implementing the activities related to Objective 3.0

- Product Development Coordinator (PDC): This person will report to the PM and will have responsibility for implementing the Planning activities related to Objective 4.0.

This Office will be created during "Year 0" of the project before funding becomes available through this proposal. This will allow the governance and supervisory structure for all grant activities to be fully grounded and in place prior to the beginning of actual grant activities.

Data Quality Activities:

The Data Quality activities include the creation of two Centers in support of Data Quality: the CIO Technical Assistance Center and the Student Management System Certification Center.

The State Education Department is not organized in a fashion that would position it for success in these areas. Consequently, the services proposed for these Centers will be acquired by the state through a competitive procurement process.

The Data Quality Coordinator will establish specifications for Requests for Proposals (RFPs) that will allow the outside entities to compete for housing the CIO Technical Assistance Center and the SMS Certification Center.

The RFP will require the applicants to provide appropriate levels of staff and infrastructure to support the defined activities. The RFP will also provide an evaluation model that will assess the existing level of activity and expertise in the respondents related to the desired outcome. Once the RFPs are evaluated and an award is made, the Data Quality Coordinator will supervise the successful outside party.

This work will emerge over a three year period of time. Much of the time in Year 1 will be dedicated to creating standards, writing the RFPs, evaluating the responses, and starting up the Centers. Year 2 will see the first full flow of services from these Centers, with a complete sustainable set of services delivered in Year 3. Thereafter, the state is committed to sustain the operation of the Centers through state funding.

The creation of the Universal Interface represents another area where outside expertise is needed. A third party will be acquired through a competitive procurement process to create this most important product.

It is anticipated that the specifications for the required reports and edits can be generated in Year 1. Year 1 should also see an initial deployment of edit checks in the existing system. The Universal Interface should be available for beta testing by year 2, with a full supported and sustainable implementation taking place in year 3.

Data Reporting Activities:

One of the three Data Reporting Activities, Activity 3.2 "Create the Statewide Instructional Data Reporting Center" will be implemented using the RFP modality mentioned above. The state has invested heavily in the creation of report writing expertise across the state. NYSED has executed a licensing agreement with the Cognos Corporation to extend its licensed products to all the public education entities in the state. NYSED has also provided training and support for staff engaged in reporting activities. The cost of this software and training absorbed by NYSED is in excess of $2 million.

Once the competitive procurement process is complete and an award is made, the Manager of the created Center will report directly to the Data Reporting Coordinator (DRC). This Reporting Center will function on the same timeline as the other Centers noted above. Most of Year 1 will be dedicated to the creation of an RFP process and the organization of the Center. Year 2 will see the onset of the first operation of the Center with Year 3 seeing a complete sustainable set of services.

The other two activities in this category will be managed in-house at NYSED.

The DRC will work with NYSED's Office of Information Technology Services (ITS) to create the Reporting Office as delineated in the narrative above and interface with offices throughout NYSED to identify reporting needs and create specifications for the variety of reports that will be needed. The DRC will also take responsibility for managing the contract of the current primary report source for New York State, the Grow Corporation. It will be necessary to create new specifications for the Grow contract and create new structures for managing that contract.

New Products Activities:

The Product Development Coordinator (PDC) will take responsibility for providing leadership in the two areas of planning described in this narrative. The PC will reach out to established groups in the state (Project Managers, RIC Directors, Big 5 Coordinators, Tech/Standards Group, NYSED) and others to form a planning group with the needed expertise to evaluate the issue of the Operational Data Store. The PDC will act as chair of this group and direct all the planning activities.

In addition to this standing planning group, the PDC will be authorized to access external expertise and resources as needed. A Data Warehouse Architect will be retained as a consultant to this ongoing process of planning and development.

The PDC will also lead the P-16 planning effort. This is likely to involve more than one group as the planning is truly "starting from scratch". Groups to review existing P-16 systems, groups to look at existing data systems in the state university system, groups to look at the feasibility of extending the current P-12 system, will probably all be necessary. The PDC will coordinate the activities of all these groups and take responsibility for preparing an integrated report for the review of the Executive Policy Group.

SECTION F: PROJECT PERSONNEL AND RESOURCES

The proposed Project personnel are aligned precisely with the Project Objectives all coordinated under the umbrella of the Activities Oversight Group. In addition to these specific positions that will directly support the project, there are numerous resources that will be applied to the Project from ancillary sources.

Note to reader: As described above, several of the activities of this proposal will be contracted to third parties. The staffing patterns below that are related to those contracted services are included here solely for the purpose of estimating the resources it will take for these project activities to be successful. They DO NOT represent positions that will be added to the staff of NYSED.

The primary Project staff and resources are:

Associate Commissioner: Overall responsibility for the Project.

Activities Oversight Group:

- Project Manager: Has daily responsibility for Project Activities; reports to Assoc. Commissioner; supervises Data Quality Coordinator, Data Reporting Coordinator, Product Development Coordinator.
- Data Quality Coordinator: Supervises the managers of the CIO Tech Assistance Center, the SMS Certification Center, and the Standing Committee creating error and reasonability data checks.
- Data Reporting Coordinator: Supervises the Manager of the Data Reporting Center, supports all data reporting activity as outlined above.
- Product Development Coordinator: Supervises all aspects of System Re-engineering and P-16 planning and product development.
- All positions in the Activities Oversight Group are full time positions.

CIO Technical Assistance Center: (A contracted service).

- Manager: Responsible for all activities of the Center; reports to Data Quality Coordinator; estimated at .6FTE
- Programmer: Creates media for electronic statewide distribution; reports to Manager; estimated at . 5FTE
- Professional Developers: Creates all training activities for end-users; reports to Manager; estimated 2FTE.
- Clerical Support; estimated at 1 FTE.

SMS Certification Center: (A contracted service)

- Manager: responsible for all activities of the Center; reports to the Data Quality Manager: estimated at .6 FTE

- Technician: responsible for assessing compliance of SMS; reports to Manager; estimated at 1 FTE.
- Clerical support: estimated at 1 FTE.

Creation of the Universal Interface: (A contracted service)

- Manager: responsible for all aspects of the edit check project; reports to the Data Quality Manager; estimated at .6 FTE
- Programmers: responsible for writing all the code needed to create the desired edits; reports to Manager; estimated at 2 FTE.

Statewide Reporting Center: (A contracted service)

- Manager: responsible for all activities of the Center; reports to the Data Reporting Manager; estimated at .6FTE.
- Programmer: responsible for actual coding of all reports; reports to Manager; estimated at 2 FTE.
- IT Tech: responsible for establishing and implementing hardware/software/communications infrastructure; reports to Manager; estimated at .5 FTE
- Clerical support: estimated at 1FTE.

Creation of NYSED Reporting Office:

- Programmers: responsible for coding of all required reports; reports to existing Director of IT at NYSED. Estimated at 2 FTE.

Product Development Projects:

- The product development projects will be supervised by the Product Development Coordinator from the Project Management staff. All Planning Team members will be selected from among the many Institutional Support groups delineated in Section D above.

- The product development projects will focus on sophisticated systems technology addressing issues of re-engineering the current P-12 data warehouse, and creating the systems architecture for the new P-16 system. A Data Warehouse Architect will be retained to act in a consulting capacity to these groups.

2. Observations and Recommendations

The NYSED has begun a number of good/promising practices and these include:

- Leadership's concern for data quality (as evidenced by participation in this assessment) and commitment to make the changes necessary to begin to build a culture around data quality.
- The existence of comprehensive local-level data warehouses built from the same data model and maintained at the same release level for all districts that use it.
- Established standard formats for data extractions for the local student information systems (SIS) to follow.
- Consistency between the data models for the local (Level 1) and state-level data warehouses.
- Heavy interest in and sense of "ownership" of the Level 1 local data warehouse by the districts.
- A Level 0 data cleansing process.
- The planning for the capacity and resources to support the interim growth model.
- The establishment of the Data Core Group to identify and manage solutions to pressing and long-term issues.

However, these practices do require refinement to make them better and eventually best practices.

The following observations and recommendations from the CELT team are organized by the two key areas of interest, Data Movement and Reporting. The observations and recommendations are also placed into categories and they are as follows:

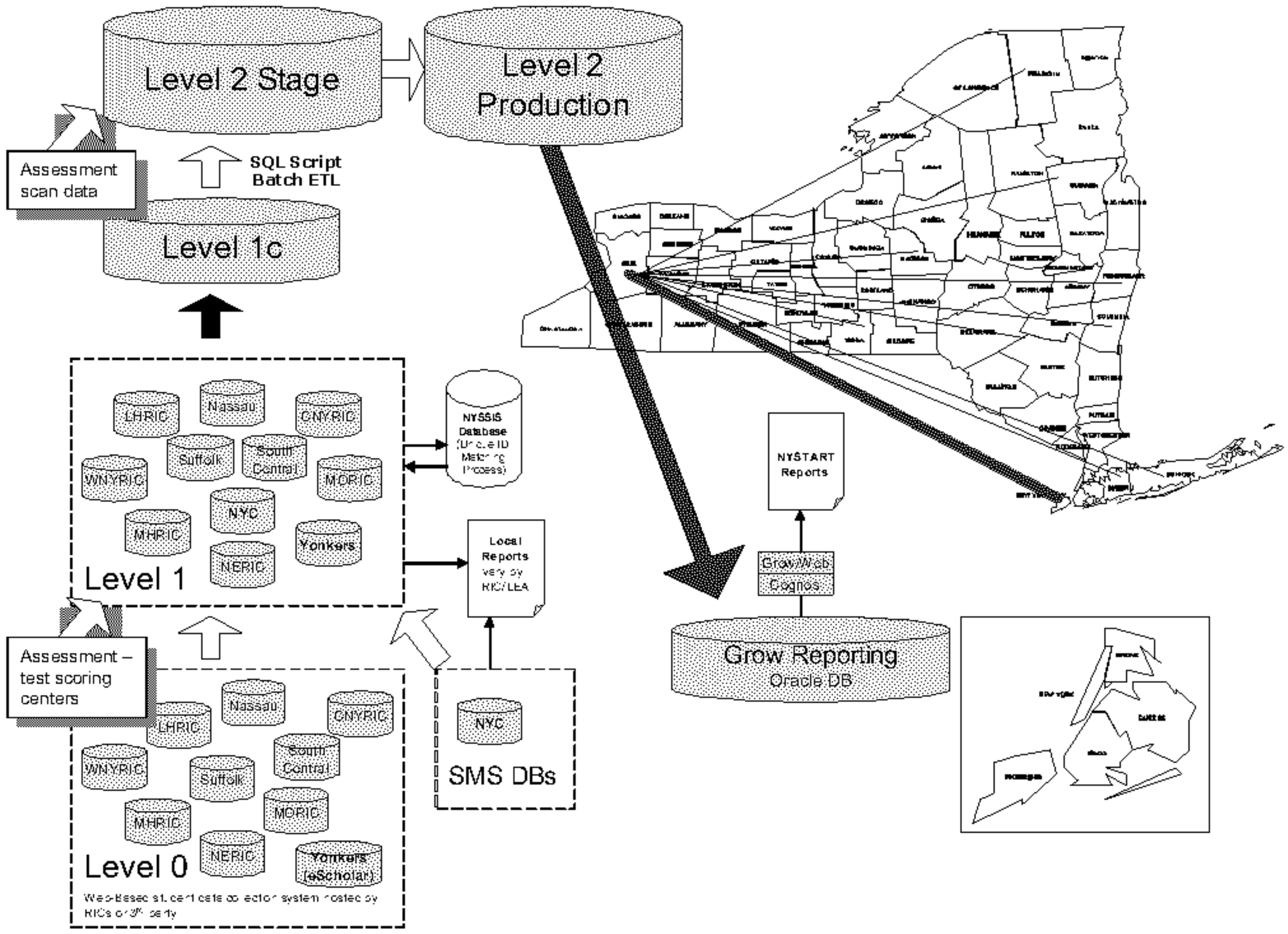
- Policy/Governance
- Architecture Design
- Project Management
- Database Design
- Business Rules

2.1 Data Movement - Observations

2.1.1 Current-State Architecture

The following diagram is a high-level representation of the flow of data as it moves through the current NYSED system from local districts to a state-level data warehouse and reporting systems:

PR/Award # R372A090056



The observations for the data movement area are broken out by Level 0, 1 and 2. The first set of observations is regarding those things that cut across all three (3) levels.

2.1.2 Observations that Affect All Levels (0, 1, and 2)

Category	Observation	Degree of Impact
Policy/ Governance	1. There is no single owner or architect at the NYSED for the current process, nor is there a single point of contact responsible for data and applications related to the movement of data from the schools to the NYSED.	High
Policy/ Governance	2. There is not an official IT Review Board (see Appendix A for definition of this group) comprised of executive leadership and other representative constituents (e.g., districts). This Board serves the role of reviewing and approving all NYSED IT projects and technical standards, enforcing IT standards and architectures, approving the IT budget, prioritizing IT work, and representing the functional and program area needs to IT.	High

Category	Observation	Degree of Impact
Policy/ Governance	3. RICs are in the middle between submission of data by the district and the receipt of data by the NYSED – in terms of services, infrastructure, and systems.	High
Policy/ Governance	4. RICs are powerful entities and not equally qualified to assist in the data movement process.	High
Policy/ Governance	5. There is no required certification for the Student Management System (SMS) vendors or RICs that are involved in the process.	High
Policy/ Governance	6. Districts do not take data submissions seriously until a problem arises. The NYSED does not have sufficient policies and practices that would make districts pay attention to the data in the initial release, such as "heads-up" flags for changes in critical performance indicators.	High
Policy/ Governance	7. School districts do not always correct data at the source Student Management System (SMS) level, therefore recreating the problem with the next data submission.	High
Policy/ Governance	8. There is no data governance/management process in place to establish data standards, cross-division collaboration for data sharing and management, and the elimination of "silos" of redundant data.	High
Policy/ Governance	9. There is no position with the full-time responsibility of data quality and for running a continuous data quality improvement process. Data quality is 90% culture and 10% technology. As such, a Data Quality Director (see Appendix A for position description) is a critical position to help the organization and its data stewards and technical staff understand the roles they play with regard to ensuring data quality, collaborating to address data issues, managing requests for data to ensure quality data releases, and sharing data across the department.	High
Project Management	10. The Data Warehouse project data-transmittal calendar and timelines are not clear and change frequently, causing serious confusion in the field.	High
Architecture Design	11. Districts are being asked to validate their data at three different levels with slightly different sets of business rules – although most of these business rules are being built into the Level 0 tool. The edit checks that result in errors send data back to the districts for correction, but these edit checks are not mandatory and are not consistently applied across the State.	High
Business Rules	12. Districts do not understand the use or purpose of the data submitted, nor do they fully understand the business rules for the movement and cleansing of data. This often results in districts sending the wrong information.	High

2.1.3 Observations for Level 0

Category	Observation	Degree of Impact
Policy/ Governance	1. There is no defined process and annual schedule for collecting, communicating, and verifying additional data element extracts required by the NYSED.	High
Policy/ Governance	2. Not all RICs and LEAs use the Level-0 edit checking tool. Some RICs try to replicate the edit check rules in their own software that they provide to extract data directly from the SMS they host (on behalf of the districts).	High
Policy/ Governance	3. While there are standard formats for data extractions for the local SMS to follow, there is no process or procedure for the certification of SMS vendors to correctly create these extracts.	Medium
Policy/ Governance	4. The data movement process does not require the unique state student ID when transmitting data to the RIC/SEA from the LEA SMS.	Medium
Policy/ Governance	5. Many school districts do not store the unique State ID on their local SMS.	Medium
Policy/ Governance	6. There are no criteria for data administrator positions at the local district level.	Medium
Policy/ Governance	7. The NYSED has no established/recommended or even minimum specifications for districts to use in selecting SMS vendors.	Medium
Project Management	8. The roles and responsibilities for the vendors (GrowNet, eScholar, Level 2-WNYRIC) and the NYSED in supporting these projects are not clearly defined.	High
Project Management	9. There is no joint NYSED/RIC/vendor technology committee which oversees and establishes standards. Vendors are allowed to determine design standards and technical architecture. This is creating an unmanageable environment for the data movement and reporting processes. The data model for reporting is one example, where the design of the data model (and the lack of data modeling expertise at Level 2 (WNYRIC) and NYSED) is causing undue pressure on Level 2 (WNYRIC) to process data in a very inefficient manner. This, in turn, is delaying updates to the data warehouse and slowing down the reporting. Another example is the reporting technology, which was selected by a vendor without input from the NYSED and will eventually make it difficult to maintain.	High
Project Management	10. In addition to a lack of guidance to vendors on technology standards, there are limited instructions on how the vendors and support organizations are to "play" together in the same sandbox. For example, there is no development, test, and production environment with rules for how they are used by the vendors.	High
Project Management	11. There is no alternative or backup plan in case the nySTART vendor fails and no internal capacity to maintain and support this project.	Medium

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Category	Observation	Degree of Impact
Project Management	12. There is no distinction between the GROWnet and Data Warehouse projects. The Data Warehouse should serve multiple uses with nySTART being one of them. However, the GROWnet project has not been established as a separate project, which has led to some less than optimal architectural decisions in the Data Warehouse.	Medium
Architecture Design	13. There is no permanent operational data store. Data goes into the data warehouse without an interim stop in a relational database that allows more transactional processing of data. This creates/cascades into other design issues below. In a complete data warehouse design, data should first be staged and corrected in an operational data store before being frozen in the data warehouse.	High
Architecture Design	14. The data warehouse project is being used to transmit data not related to the data warehouse. An example, the forwarding and storing of raw assessment scan-sheet results to the SEA and to the assessment vendor.	Low
Database Design	15. The database design does not support the business rules for graduation rates. There are specific issues with multi-year data needed to longitudinally track cohorts.	Medium

2.1.4 Observations for Level 1

Category	Observation	Degree of Impact
Policy/ Governance	1. Reports that are written for Level 1 could be shared across districts and data warehouses; however, these are neither consistently provided as shared resources nor tested/implemented across Level 1 systems.	Low
Architecture Design	2. The requirement of common due dates for all districts for the movement of data to the State's Level-1c "container" creates a bottleneck, which slows down processing.	High
Architecture Design	3. During the movement of data from Level-0 to Level-1, errors identified are sent back to school districts to correct and the districts are required to resubmit ALL the data for the entire school year through Level-0 to Level-1. The data warehouse collects all student enrollment records, so each transmission of data contains not only the current enrollment of the student, but all prior enrollment activity (admissions, transfers, discharges) within the school year. In urban school districts with a lot of movement this rule creates a much larger data set for transmission and processing.	High

Category	Observation	Degree of Impact
Architecture Design	4. Level-1 systems are currently deployed using 3 different database management systems (Oracle, SQL Server and DB2). This is not an issue that we recommend correcting at this point, but represents an area where consistent standards and technical architecture designs would have created more consistency, lower costs, and easier support.	Low
Architecture Design	5. The data from Level-1 to Level-1c is processed weekly, even if the district has not submitted new data, so the same data may be reprocessed.	Low
Database Design	6. Data is overwritten in the Level-1 warehouse with each monthly transmittal. An entire set of district data may be retransmitted to correct or update a single record.	High
Database Design	7. All district data managed by RICs are being re-staged and transmitted to Level-2 even if only one district's data has changed. This causes significant delays in the transmittal.	High
Database Design	8. The errors in Level-1 are reported back to the school district the next day (overnight processing) rather than an online, real-time edit providing immediate feedback.	Low
Business Rules	9. Invalid location (facility) codes cause significant delays in Level-1 to Level-1c data movement. The location codes are shared, but not up-to-date, so records get rejected. The facility codes (locations) are not standardized across the data warehouse. Synchronizing the facility codes will remove these rejects.	High

2.1.5 Observations for Level 2

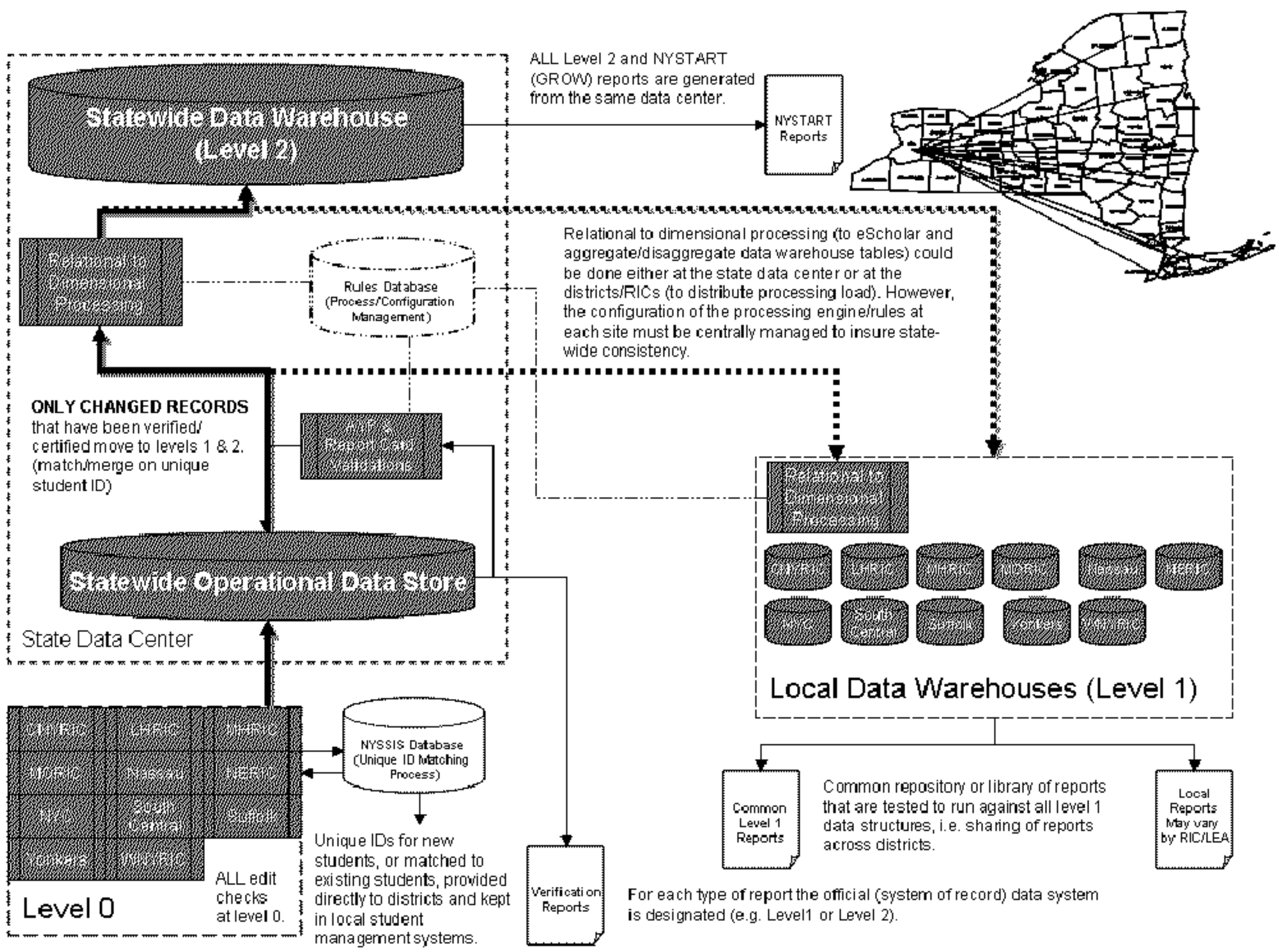
Category	Observation	Degree of Impact
Policy/ Governance	1. Data in Level-2 represents a different version of the "truth" than Level-1 data, because of slightly different business rules and differences in the timing of the data. These two sets of data will always be slightly different and reports should be designed to draw from the "official" and recognized version of the truth – e.g., either Level-1 or 2 but not both.	High
Architecture Design	2. Level-2 data is often overwritten with revised Level-1 data; the previously certified data sets are not maintained, meaning that there is no "official" system of record for historical student-level data at the state level.	High
Architecture Design	3. Level-2 data is reloaded frequently, especially during the process of verification of assessment and Adequate Yearly Progress (AYP) results. The Level-2 data warehouse is being used more as a transactional system to validate data than as a warehouse of the established valid data. This is largely due to the absence of an operation data store at the state level.	High

Category	Observation	Degree of Impact
Database Design	4. The data tables for some of the extensions to Level-2 do not appear to be optimally designed using data warehouse techniques.	High

2.2 Data Movement - Recommendations

2.2.1 Future-State Architecture

The diagram below is a high-level depiction of the recommended future-state architecture for data movement. The recommendations that follow the diagram (specifically those recommendations in the Architecture Design category) further describe this future-state architecture.



2.2.2 Recommendations

Category	Recommendations	Priority
Policy/ Governance	1. Establish NYSED ownership and oversight of the data movement process to improve overall design, vendor performance, as well as the consistency of RIC services to districts (see recommended organization model in Section 3 below).	High
Policy/ Governance	2. Begin developing in-house expertise (within the NYSED) to understand the data and business rules for the Report Card and school and district reporting. This includes both program-area and IT knowledge, skills, and resources. Develop a plan with GROWnet to begin this knowledge transfer.	High
Policy/ Governance	3. Implement a Project Management Oversight process at the NYSED for managing large projects (such as the move to an interim growth model and nySTART).	High
Policy/ Governance	4. Retain a Data Warehouse Architect to help direct the evolution of the data movement process and tools, especially the standards and technical architecture (e.g., capacity, performance, scalability, and security of processing, storage, software/platform, and network).	High
Policy/ Governance	5. Establish configuration management processes governed by NYSED to systemically address version control, testing, issues/resolutions tracking, change order prioritization and processing, documentation revisions, and release management.	High
Policy/ Governance	6. Certify RICs to provide Level 0 data movement services, Level 1 data warehouse hosting services, and data cleansing/editing services.	High
Policy/ Governance	7. Clearly define the roles of Level 2 (WNYRIC), Grow, and eScholar in relationship to the NYSED for the nySTART and Data Warehouse projects (see recommended organization model below).	High
Policy/ Governance	8. Establish policies and guidelines that only permit data corrections to be made at the source – in the district systems.	High
Policy/ Governance	9. Establish Level 0 data transfer record layout standards, specifications, test cases and a certification process for data transfers from the district SMS to Level 0. Use these to certify SMS vendor software.	High
Policy/ Governance	10. Provide reasonability checks on all data submitted to Level 2. This includes historical comparisons, trends in growth, loss, or other errors. Provide feedback and reports back to the districts. Use the data steward positions to do this role at a frequency necessary to ensure data quality, integrity, and completeness.	High
Policy/ Governance	11. Establish a data collection calendar. Also, establish a process and calendar for adding data elements to the collection process. Timelines should be set early in the annual cycle (e.g., establish a date in November for identifying and communicating to districts and vendors all new data elements to be collected in the next school year). Clearly communicate these timelines to all school districts, vendors, BOCES, and RICs. Adhere to the schedule for all data collections from the NYSED.	High

Category	Recommendations	Priority
Policy/ Governance	12. Users need to get timely and clear communications on the final business rules to be used to generate datasets for each school year. These rules need to be provided early in the year and need to be frozen once the year begins. These business rules should identify the subsets of data, the level of detail, the fields to be collected and reported, and the use of the data.	High
Policy/ Governance	13. Over time, build capacity internally (within the NYSED) to support the data warehouse, the Level 0 tool and the generation of the reports.	Medium
Policy/ Governance	14. Establish a set of must-have functional requirements for district-level SMS and require that all districts use this in the selection of the SMS. Require that all SMS vendor selections be approved by the NYSED and include a data transfer certification.	Medium
Policy/Govern ance	15. Require all school districts to store and transmit the unique state student ID on all data submissions.	Medium
Policy/ Governance	16. District staff should have continuous access to the Level-2 Data Warehouse (with governors to limit CPU usage, number of records processed, etc.) to allow them to verify their data in an ongoing manner, but, most importantly, prior to publication.	Medium
Policy/ Governance	17. Establish a training program and require certification for LEAs for the data submission process.	Medium
Policy/ Governance	18. Provide a dashboard of key performance indicators for superintendents, so they are connected with their data in the Level 2 data warehouse. Let them compare their district to other school districts to create additional interest in the data. Also, provide a comparison of data from previous years, so there is a context to their current year figures.	Low
Project Management	19. Acquire a project manager for the nySTART (Grow) project as soon as possible - separate from the data warehouse project (this recommendation has already been addressed).	High
Project Management	20. Limit expansion of the GROWnet contract. Reassess the contract and limit their role to their areas of expertise.	High
Project Management	21. Establish a project manager and a team for the move to the interim growth model.	High
Project Management	22. For large projects in the future (e.g. interim growth model), we recommend doing a pilot and/or proof of concept before implementing it statewide.	High
Project Management	23. Do not expand the scope of the nySTART project until it has been stabilized and meets expectations.	High
Project Management	24. Implement a Project Management Oversight process for the data movement and reporting efforts/projects going forward. Develop a project plan for all current and future recommendations and projects, to include clearly defined deliverables, schedules, estimated costs, responsible person(s), risks, assumptions, benchmarks, and evaluation criteria.	High

Category	Recommendations	Priority
Project Management	25. Establish a vendor management process to ensure contractual deliverables are being met (see recommended organization model below).	High
Architecture Design and Policy/Governance	26. A common and consistent method of edit checks (e.g., use of the Level 0 editing tool) needs to be mandated for all school districts, BOCES, and RICs across the State for all data coming into the Data Warehouse. All data edits and business rules for all data warehouse levels should be built into the Level 0 tool and all validated data should be stored in an operational data store (ODS). The reporting of errors at Level-0 should be online and real-time. This will provide immediate feedback to the school districts and allow them to correct errors in a timelier manner.	High
Architecture Design and Policy/ Governance	27. Reduce the complexity and the burden on the districts for the data movement from LEA to SEA but also make the district fully responsible for the data until the handoff to the NYSED. Do this by moving all of the data edits to Level 0 and implementing an Operational Data Store (ODS), from which Level 1 and 2 draw their data in parallel instead of a sequential process (Level 0 to Level 1 then Level 2). Establish ownership of the data at the district level until handoff to the NYSED at Level 2.	High
Architecture Design	28. Data transmittal for corrections of errors should not require the resending of the entire dataset, but corrected records or a limited subset should be sufficient. The application of updates can be managed with matching pre-processes, to reduce the burden on the school districts. The pre-processing function can identify changed records and apply those to the data warehouse, thus limiting the processing and limiting the updates to the database, which, in turn, will reduce the time required to process all the records. The recommended operational data store at Level 0 can be used to facilitate this process.	High
Architecture Design	29. Create/design a backup plan for the support of the GROWnet reports/project, including developing a plan for the NYSED to bring this in-house. Specifically, use the operational data store as a transactional system to verify assessment data and AYP results instead of the GROWNET reports. Refresh the GROWNET and Level 2 tables less frequently and do not allow districts to over-write this data. Use Level 2 as the historical system of record for longitudinal data analysis at the state level.	High
Architecture Design	30. The GROWnet project and the Data Warehouse should be separated into two distinct projects (see recommended organization model below). GROWnet can use the data warehouse to report, but should not change the data model without working with the data warehouse team. This will enable the data warehouse to serve multiple purposes without being customized for GROWnet's use alone.	High
Architecture Design	31. Establish, monitor, and manage technology standards that are used by the vendors and service providers (see recommended organization model below). The use of non-standard solutions by vendors (e.g., Java reports versus a BI reporting tool) can be avoided with the right standards and technical architecture.	High

Category	Recommendations	Priority
Architecture Design	32. Use industry standard BI tools to develop reports from the eScholar data structures wherever possible.	High
Architecture Design and Policy/ Governance	33. Push the unique student ID back out to the district SMS and require that all student data submissions to the NYSED include the state issued unique student ID.	Medium
Architecture Design	34. Transmittal of data using the data warehouse processes and pipes should be limited to valid (certified) data only. Use of this infrastructure to transmit non data warehouse data (such as raw assessment data) is an overhead and may cause delays in the transmittal of other data. Data processed at Level 2 should be limited to certified data warehouse (dimensional) data.	Low
Database Design	35. Conduct a detailed assessment of the design of the technical architecture and data models for the GROWnet reports to determine what is causing the poor response. From the CELT reviews thus far, this assessment should focus on the hosting of the data warehouse and reporting servers in one location. It should also include a review of the data model as designed by GROWnet to ensure the reporting tables are using optimal data warehouse designs.	High
Database Design	36. Redesign the Data Warehouse architecture and policies to support an "official" system of record for historical student-level data at the state level. The policies and system should both maintain all historically certified data and accommodate new requirements/models (e.g., mandated changes to how student cohorts are counted).	Medium
Database Design	37. Level-2 has both Staging and Reporting environments, where the databases are nearly identical. Processing time may be improved with a procedure that updates the production environment with changes, rather than rebuilding the entire database for each production cycle. This change, however, can only occur after an operational data store has been implemented.	Low
Business Rules	38. Establish documentation and communication policies and procedures for the NYSED and level 2 (WNYRIC) to use to communicate to the districts the purpose of all data requests, as well as the accompanying business rules. Develop a communications plan and annual schedule. These communications should ensure that LEAs understand what data is being requested and how it will be used. Use the data stewards and the recommended organization model below to help establish this process.	High
Business Rules	39. The edit checking processes at all levels of the data flow need to be reduced or eliminated. An example, the invalid location (facility codes) check. If everyone uses the same location codes within the various levels of the data warehouse, this error would come up less often and earlier in the data flow.	High

2.3 Data Reporting - Observations

Category	Observation	Degree of Impact
Policy/ Governance	1. The NYSED needs a process to verify data and reports, especially those related to AYP and the State Report Card. This process needs to be easy on the districts and provide quick-turnaround for showing corrected data. It needs to include a method to inform the districts of their data characteristics before the data is issued, without showing the whole set of state data.	High
Policy/ Governance	2. Districts do not know nor understand the business rules for the data in the State Report Card and AYP calculations.	High
Policy/ Governance	3. The NYSED is required by the state legislature to implement an "interim growth model." The current systems and level of internal knowledge of the data and business rules do not support the accomplishment of this effort.	High
Policy/ Governance	4. The districts currently experience poor response time for NYSTART, especially during the critical time of verifying and revising the data for the AYP and Report Card. The GROWnet data tables and reports are being continuously updated during this process to reflect data corrections as submitted by the district. The GROWnet data warehouse tables are being used during this time to serve the purpose of a transactional system, a purpose for which data warehouses are ill suited.	High
Policy/ Governance	5. COGNOS, as a reporting tool, is being thrust upon GROWnet to implement. GROWnet currently does not have the technical skills to properly design and implement the tool.	High
Policy/ Governance	6. NYSTART has a very bad reputation in the field. The general perception is that it is inaccurate, very slow, unreliable, delayed, and flawed in its design. The data transformation process appears very complex, due in part to the NYSED accountability rules which drive the data warehouse business rules and design.	High
Project Management	7. NYSTART lacks project management from the NYSED perspective and therefore there are no clear timelines, roles, or responsibilities (see recommended organization model below).	High
Architecture Design	8. The design of the data movement process from Level 0 to the GROWnet tables is not suited to provide the quick turnaround needed for the data review process by the districts. The current design requires the resending of all records when only correcting a few student records. This results in batch processes for populating reporting tables running too long, contributing to slow response time to end-users.	High
Architecture Design	9. Vendors are allowed to revise the recognized standard design for the data warehouse tables (e.g., eScholar tables) without proper review and approval by the NYSED. Proper data modeling expertise is lacking to review and support the nySTART project.	High

Category	Observation	Degree of Impact
Architecture Design	10. GROWnet has built a number of its reports using Java. This was done to improve response time, but the decision lacked the proper review and approval of a standards and technical architecture review committee.	High
Architecture Design	11. There appears to be a lack of an effective method for prioritizing vendor resources and work efforts within a project. For example, GROWnet is re-coding the guided analysis functions in Java (a lower-priority effort), while the users desperately want the verification reports improved in terms of accuracy and timeliness (a very high-priority request).	High
Architecture Design	12. The security of the data structures for the reporting tables has not been reviewed and approved by the NYSED data security staff. Rather, the vendors are allowed to revise these structures without proper review and approval. For example, GROWnet has modified the COGNOS security structures, which might create security concerns regarding the data.	Medium

2.4 Data Reporting - Recommendations

Category	Recommendation	Priority
Policy/ Governance	1. COGNOS has offered to pilot the GROWnet reports for $40k – this option should be pursued with a carefully selected and clearly specified set of reports.	High
Policy/ Governance	2. Require that GROWnet develop reports using standard BI tools and restrict the use of program code for this purpose (see recommended organization model below).	High
Policy/ Governance	3. Require that GROWnet developers understand and become certified in the eScholar data model before developing any reports.	High
Policy/ Governance	4. Build the capacity of the departments (including IT) necessary to bring in-house the business rule and data knowledge and technical skills to build and support report generation for the State and the districts.	High
Policy/ Governance	5. Pursue the use of established report templates, canned queries made available on the NYSED Web site, professional development for data stewards in the use of querying tools, and a process for requesting and prioritizing data requests to help reduce demand for Information Technology Services custom-developed reports.	High
Policy/ Governance	6. Implement a Technology Review Board to tie the allocation of IT resources and resource planning to the NYSED strategic plans and initiatives. Resource needs that align with and support the strategic initiatives should be funded along with, and as an integral component of, the initiatives. To this end, elevation of IT priority issues to the IT Review Board is significant. Also consider the use of an executive-level project management oversight committee (PMOC) process to help set priorities for the NYSED's strategies and major initiatives.	High

Category	Recommendation	Priority
Policy/ Governance	7. Prioritize the Verification Reports as an enhancement item to provide users their top request (improved performance on the verification reports).	High
Policy/ Governance	8. Over time, establish the NYSED support services in such a way as not be reliant on external vendors (e.g., GROWnet) to design and implement the standards and technical architectures (e.g., COGNOS) established for the State. Provide support, review, and approval for such designs and implementations from the NYSED. Facilitate coordination between dependent projects/vendors. (See recommendation for systemic configuration management under Data Movement Recommendations.)	High
Policy/ Governance	9. Establish NYSED ownership of business rules/logic for reports. Maintain details of all business rules/logic currently maintained by GROWnet and encoding of rules for reports maintained on GROWnet servers at NYSED.	High
Policy/ Governance	10. All data modeling modifications should be reviewed and approved by an experienced (NYSED) Data Warehouse Architect / Data Modeler before being implemented.	High
Database Design	11. Generate verification reports from an operational data store rather than the data warehouse. Ensure that business rules used at the ODS level and verification reports are not overridden by rules used in Data Warehouse level processing and report generation.	High

Project Narrative

Other Narrative

Attachment 1:
Title: Pages: Uploaded File: **1237-projSpreadSheet_timeline_resumes_ver3.pdf**

Three Year Project Summary

			yr 1	yr 2	yr 3
Personnel	Programmers		$113,118	$117,643	$122,348
	PM		$87,196	$90,684	$94,311
	DQC		$74,667	$77,654	$80,760
	DRC		$74,667	$77,654	$80,760
	PDC		$74,667	$77,654	$80,760
	Clerk		$26,667	$27,734	$28,843
			$450,982	**$469,023**	**$487,782**
Fringe		42.67%	$192,434	$200,132	$208,137
Travel	Oversight Office		$10,000	$10,000	$10,000
	Report Ctr		$5,000	$5,000	$5,000
			$15,000	**$15,000**	**$15,000**
Equipment	Oversight Office		$8,000	$0	$0
	Report Ctr		$16,000	$0	$0
			$24,000	**$0**	**$0**
Supplies	Oversight Office		$10,000		
	Oversight Office		$15,000	$15,000	$15,000
	Report Ctr		$5,000	$5,000	$5,000
			$30,000	**$20,000**	**$20,000**
Contractual	TAC		$458,000	$461,800	$479,272
	Cert Center		$215,000	$218,840	$226,994
	Univ. Interface		$336,000	$340,320	$353,133
	Report Center		$491,000	$464,080	$481,843
	Data Architect		$120,000	$120,000	$120,000
			$1,620,000	**$1,605,040**	**$1,661,242**
Construction					
Other					
	Planning Support		$50,000	$50,000	$50,000
	Stakeholder Suppor		$50,000	$50,000	$50,000
	Report Misc		$5,000	$5,000	$5,000
			$105,000	**$105,000**	**$105,000**
Total Direct Cost			$2,437,416	$2,414,195	$2,497,161
Indirect Cost	.352 of Personal Service Only		$158,746	$165,096	$171,699
Total Costs			$2,596,162	$2,579,291	$2,668,860

Three Year Total	$7,844,313

DATA REPORTING ACTIVITIES - FOUNDATION ACTIVITIES
STATEWIDE DATA REPORTING CENTER (A contrcted service)

IMPORTANT NOTE TO READERS: ***detailed sub-budgets for contracted services are DRAFTS for the purpose of determining a reasonable and customary cost for attaining such a service.***

The positions inluded are used for these estimating purposes. THESE ARE NOT POSITIONS TO BE ADDED TO THE STAFF OF THE NYSED.

BUD CATEGORY		AMOUNT	FTE/QUA	TOT Year 1	Year 2	Year 3	
STAFF							
	Manager	$100,000	0.6	$60,000	$62,400	$64,896	
	Programmer	$80,000	2	$160,000	$166,400	$173,056	
	IT Tech/DBA	$90,000	0.5	$45,000	$46,800	$48,672	
	Clerical	$40,000	1	$40,000	$41,600	$43,264	
EQUIP							
	File Servers	$8,000	3	$24,000			
	Communications	$20,000	1	$20,000			
Supplies	Asstd	$5,000	1	$5,000	$5,000	$5,000	
Travel		$5,000	1	$5,000	$5,000	$5,000	
Misc		$10,000	1	$10,000	$10,000	$10,000	
Benefits	statewide avg estimate 40%			$122,000	$126,880	$131,955	
Total				$491,000	$464,080	$481,843	
Three Year Total							$1,436,923

Create Internal Reporting Center

				Year 1	Year 2	Year 3
Staff	Programmer - SG23	$63,822	1	$63,822	$66,375	$69,030
	Programmer - SG18	$49,296	1	$49,296	$51,268	$53,319

Equip	File Servers	$8,000	2	$16,000	$0	$0	
Supplies		$5,000	1	$5,000	$5,000	$5,000	
Travel		$5,000	1	$5,000	$5,000	$5,000	
Misc		$5,000	1	$5,000	$5,000	$5,000	
Benefits	at42.67%			$48,267	$50,198	$52,206	
Sub-Total				$192,385	$182,841	$189,555	
Indirect cost of .352 for Personnel Costs only				$39,818	$41,410	$43,067	
Total				$232,203	$224,251	$232,621	
Three Year Total							$689,075

Total Three Year Data Reporting Activities

$683,385	$646,921	$671,398	$2,125,998

Data Quality Activities - Foundation Activities
CIO Technical Assistance Center (A contracted service)

IMPORTANT NOTE TO READERS: ***detailed sub-budgets for contracted services are DRAFTS for the purpose of determining a reasonable and customary cost for attaining such a service.***

The positions inluded are used for these estimating purposes. THESE ARE NOT POSITIONS TO BE ADDED TO THE STAFF OF THE NYSED.

BUD CATEGORY		AMOUNT	FTE/QUANT	TOT Year 1	Year 2	Year 3	
STAFF							
	Manager	$100,000	0.6	$60,000	$62,400	$64,896	
	Programmer	$80,000	0.5	$40,000	$41,600	$43,264	
	Prof. Developers	$80,000	2	$160,000	$166,400	$173,056	
	Clerical	$40,000	1	$40,000	$41,600	$43,264	
EQUIP							
	Computers	$2,000	4	$8,000	0		
Supplies	Asstd	$5,000	1	$5,000	$5,000	$5,000	
Travel		$10,000	1	$10,000	$10,000	$10,000	
Misc	Conf Support	$15,000	1	$15,000	$10,000	$10,000	
Benefits	statewide avg estimate 40%			$120,000	$124,800	$129,792	
Total				$458,000	$461,800	$479,272	
Three Year Total							$1,399,072

Student Management System CERT CENTER (A contracted service)

	Year 1	Year 2	Year 3

Staff	Manager	$100,000	0.6	$60,000	$62,400	$64,896	
	SMS Tech	$80,000	1	$80,000	$83,200	$86,528	
Equip	Computers	$2,000	2	$4,000	$0	$0	
Supplies		$5,000	1	$5,000	$5,000	$5,000	
Travel		$5,000	1	$5,000	$5,000	$5,000	
Misc		$5,000	1	$5,000	$5,000	$5,000	
Benefits	statewide avg estimate 40%			$56,000	$58,240	$60,570	
Total				$215,000	$218,840	$226,994	
Three Year Total							$660,834

Creating Univeral Interface (A contracted service)

				Year 1	Year 2	Year 3
Staff	Manager	$100,000	0.6	$60,000	$62,400	$64,896
	Programmers	$80,000	2	$160,000	$166,400	$173,056
Equip	File Server	$8,000	1	$8,000	$0	$0
Software	Asstd	$5,000	1	$5,000	$5,000	$5,000
Supplies		$5,000	1	$5,000	$5,000	$5,000
Travel		$5,000	1	$5,000	$5,000	$5,000
Misc	Support for T/S	$5,000	1	$5,000	$5,000	$5,000
Benefits	statewide avg estimate 40%			$88,000	$91,520	$95,181
Total				$336,000	$340,320	$353,133

Three Year Total				$1,029,453
Sub-Total Three Year Data Quality Activities				
	$1,009,000	$1,020,960	$1,059,398	$3,089,358

Project Wide Expansion Activities

Activities Oversight Office

BUD CATEGORY		AMOUNT	FTE	TOT	Year 1	Year 2	Year 3	TOTAL
STAFF								
	Project Manager	$87,196	1		$87,196	$90,684	$94,311	
	Data Quality Coord	$74,667	1		$74,667	$77,654	$80,760	
	Data Reporting Coord	$74,667	1		$74,667	$77,654	$80,760	
	Planning Coord	$74,667	1		$74,667	$77,654	$80,760	
	Clerical	$26,667	1		$26,667	$27,734	$28,843	
EQUIP								
	Computers	$2,000	4		$8,000	0		
	Software	$10,000	1		$10,000			
Supplies	Asstd	$15,000	1		$15,000	$15,000	$15,000	
Travel		$10,000	1		$10,000	$10,000	$10,000	
Contract Service	Data Warehouse Architect	$120,000	1		$120,000	$120,000	$120,000	
Misc	Planning Support	$50,000	1		$50,000	$50,000	$50,000	
	Stakeholder Support	$50,000	1		$50,000	$50,000	$50,000	
Benefits	at 42.67%				$144,167	$149,933	$155,931	
Total					$745,031	$746,312	$766,364	
Indirect Cost @ .352 of Personnel Costs					$118,928	$123,685	$128,633	
Grand Total					$863,959	$869,997	$894,997	$2,628,953

Section 7. Timeline

Year 0 – This designates the time prior to the onset of actual grant funded Project activities. During that period of time NYSED will begin reorganizing around the grant objectives to establish a platform for success once the grant activities begin.

October 2008:

- Members of the Executive Policy group will be established on an interim basis. The CIO of the NYSED will chair the group until a permanent group is put in place. The initial Executive Policy Group will consist of: the Project Manager, the chairs of the current standing sub-committees, the Coordinator of the Statewide Data Repository, a representative from the Big 5 School Districts, and two representatives of the Regional Information Centers. Once the statewide Stakeholder Group is established, the chair of this group will join the Executive Policy Group.

November 2008:

- Executive Policy Group meets and establishes internal operational guidelines.
- The creation of the Stakeholder Regional Advisory Councils is announced.

December 2008:

- Executive Policy Group becomes fully functional and takes responsibility for all decisions related to the operation of the current LDS and is in place to make all decisions regarding the operation of the Project Activities supported by this Grant.
- The Activities Oversight Group is organized on an interim basis and staffed by reassigning responsibilities to existing staff members. The current P-16 Project Coordinator will be reassigned to act as Project Manager until funding through this grant becomes available to install a permanent Project Manager. The Data Quality Coordinator, Data Reporting Coordinator, and Product Development Coordinator will be assigned from with the Division of Information and Reporting Services.
- Regional activities begin to organize the Stakeholder Regional Advisory Councils.

January-February 2009:

- Executive Policy Group begins functioning on a routine basis.
- Activities Oversight Group becomes operational.
- Regional Stakeholder Groups begin organizing.

March 2009:

- The Statewide Stakeholders Advisory Council is formed by delegates from the Regional Advisory Councils.
- The chair of the group becomes a member of the Executive Policy Group.

Year 1: April 2009 – March 2010 – The First funded Project Year.

April 2009 May 2009

- RFPs are developed to establish the CIO Tech Assistance Center, the Student Management System Cerification Center, and the Statewide Reporting Center.
- A sub-committee of the Technical/Standards Group is created and assigned the task of creating the universal set of edit checks.
- The process of re-writing the specifications for the nyStart reporting site is begun.
- Internal reporting team is identified/hired.
- Hardware/software/communications infrastructure needed for internal reporting is designed.
- The Systems Re-engineering and the P-16 Planning Groups are established.
- The process of replacing the interim Activities Oversight Group with a permanent one is begun.

June 2009:

- RFPs are released .
- Tech/Standards sub-committee begins its review of existing data edits.
- Internal Reporting group undergoes intensive training.
- Acquisition of hardware/software for internal reporting begins.
- Negotiations for a new nyStart contract are begun.
- The two standing Planning Groups become operational.

July August 2009:

- Respondents to the RFP process develop their proposals.
- Tech/Standards Subcommittee begins development work.
- Planning Groups continue with a 6 month timeline to deliver an interim report.

September 2009

- RFPs are submitted by field to SED and reviewed.
- Hardware/Software is installed for internal report team.

October 2009:

- Responses to RFPs are awarded.
- New nyStart contract established.
- Internal Report Team becomes operational.

November 2009 January 2010

- The CIO Tech Center, the SMS Certification Center and the Statewide Report Center begin internal organization activities including the hiring of project staff.

Feb.- March 2010:

- Activities Oversight Group is staffed on a permanent basis.
- The three Centers become operational and begin delivering initial services.
- The two Planning Groups deliver interim Reports.

Year 2:

April 2010 June 2010:

- New edits created by the Tech/Standards group are implemented and training takes place through the CIO Tech Center for startup of the new school year.
- The SMS Certification Center establishes communications with the SMS vendor community and begins process of certification.
- The Statewide Reporting Center continues startup activities.
- Interim Planning Reports are provided to the Executive Policy Group.

July 2010-August 2010:

- In New York State, the 2010-2011 school year begins.
- CIO Tech Assistance Center is fully operational and begins regular services across the state. These services will now continue to be developed, improved, and modified for changing needs across the entire remainder of the Project.
- The Statewide Reporting Center continues startup activities: creating infrastructure and establishing report specifications.
- The SMS Certification Center establishes procedures for certification in final form and allows vendors one full year to become certified. From this point forward this Center is engaged on a full time ongoing basis in this process.
- The Executive Policy Group reviews the Interim Reports of the two Planning Groups.

September 2010 December 2010:

- Executive Policy Group provides feedback to Planning Groups; Planning Groups continue activities for a release of a final report by January 2011.
- The Statewide Reporting Center releases its first reports. From this point forward this Center is engaged full time on an ongoing basis in activities related to statewide reporting.

January 2011:

- Final Reports of Planning Groups submitted to the Executive Policy Group.

February 2011:

- Executive Policy Group reviews Final Reports of Planning Groups.
- By now all other project activities have been established and continue to operate on an ongoing basis under the direct supervision of the Activities Oversight Group with oversight being provided by the Executive Policy Group.

March 2011:

- Planning Groups begin Pilot Projects.

Year 3: April 2011 – March 2012:

By this time all Project Activities have been established and continue to operate on a routine basis. However, there are some key milestones that will be reached in year 3 as follows:

April 2011- Jan. 2012:

- Pilot projects in system re-engineering and P-16 system expansion take place.
- Internal budget planning begins to assure that the products created with these Grant funds will be sustained over time.

July 2011:

- SMS vendors begin first full year in which Certification will be required.

January 2012:

- Pilot Projects are completed.
- Full analyses of these pilots are delivered to the Executive Policy Group for review.

March 2012:

- The three years of Project Activities as funded through this grant come to an end.
- The products of this process are all in place:
    - A revised operational Governance Structure
    - A CIO Technical Assistance Center
    - A SMS Certification Center
    - A Statewide Reporting Center

- An established Internal Reporting Center to report on and analyze data for Federal Reporting and Policy needs.
- A revised nyStart reporting process.
- Operational pilot projects in the critical areas of systems re-engineering and P-16 expansion.

Project Years + 1:

April 2012 and following:

- NYSED supports the ongoing operation of all Project products.
- Pilot Projects are transitioned to fully operational projects across entire state.

DAVID WALSH

(b)(6)

EMPLOYMENT HISTORY

Chief Information Officer
New York State Education Department
August 2000-Present

Project Director
New York State Senate Office Automation Project
June 1989-August 2000

Manager of Analysis and Operations
New York State Senate Office Automation Project
August 1984 - June 1989

Research Analyst
New York State Senate Research Service (SRS)
1980-1984

Deputy County Clerk
Chenango County, Norwich, NY
1976-1979

HIGHLIGHTS and ACCOMPLISHMENTS, EDUCATION DEPARTMENT

- Responsible for the application of information technology and automation tools to the program needs of the Department, covering 3200 employees located throughout the State.

- Promulgated Department **Strategic Objectives for Technology**, tied to Regents goals; and created a set of Information Technology Principles to govern the use of technology within the Department.

- Instituted a technology governance structure to set policy and implement technology investment. Created a prioritized set of technology initiatives, approved by the Commissioner, October 2005.

- Created Departmental Project Management Office to implement project management methodologies across all projects that have a major technology component. Directed development of internal online project portfolio tracking system.

- Instituted a Department Security Policy, and formalized the position of Information Security Officer (ISO).

- Department liaison, Regents Technology Policy and Practices Council, a 28-member Council comprised of technology experts from across the State, responsible for advising the Regents on technology issues within the University of the State of New York (USNY). Council presented recommendations to the Board in September 2007.

HIGHLIGHTS and ACCOMPLISHMENTS, STATE SENATE

DATA ADMINISTRATION AND SUPPORT

- Responsible for **computer and networking services** connecting over 1500 users in Albany and 80 remote locations statewide. Directed project to rewire and network entire Senate complex for data, voice, and video.

- Created a **problem resolution process for computer support** that includes a HelpLine as point of first support, with more technical support as a follow-up.

- Member of team that **migrated Senate's payroll/personnel system** from Ingress/DEC to Oracle/RS6000 platform, and combined two separate computer operations.

- Member of team that wrote legislation creating **State Office for Technology**, 1997.

LEGISLATIVE PROCESS AND ADMINISTRATION

- Part of team that **analyzed the legislative process** and automated the preparation of bills and memos. Led team that migrated legislative information to a web-based system for both internal and public use.

- Analyzed **in-house correspondence process** for Majority Leader; moved correspondence to another unit, and sold duplicative unit to the Governor's office.

- Led a team that **analyzed production and automation needs** at Senate Research to replace mid-range computer system. Helped create image storage/retrieval process for newsclip operation at Senate Research.

- Led Senate team that created Senate home page on the Internet.

MAIL AND PRODUCTION

- **Developed targeted mail system** used by State Senate. Created method of annotating constituent name/address files; designed and implemented on-line mail production system. Brought Senate mail processing from outside contractor to in-house process, saving considerable dollars and providing more efficient processing and faster turn-around for Senate mail.

- **Wrote mail policy** for the Senate. Developed internal mail control procedures, including internal audit reports for mail accounting and tracking.

EDUCATION

B.A., History/Political Science, Lycoming College, Williamsport, PA

Nonresponsive

Peter J. Rooney
(b)(6)
(b)(6) **(w) 631-241-4799**
inc.net

EDUCATION:

NYU, Doctoral Candidate; completed all course work.

Hofstra University, 1978, CAS Ed. Admin.

St. John's University, 1972, MA, Mathematics

Marist College, 1967, B.A., Mathematics

PROFESSIONAL EXPERIENCE:

July 2008- Present: New York State Education Department – P-16 Project Coordinator

Responsible for coordinating activities related to the operation of the state's P-12 Longitudinal Data System; also responsible for planning the expansion to a P-16 system.

2000-2008: Educational Consultant

Clients Include:

Amityville UFSD: Interim Assistant Superintendent:

Responisble for district technology, management systems, data, and assessments.

New York State Regional Information Centers:

Managed statewide project for development of data warehouses. Activities included organizing development activities, negotiating vendor contracts, presentations to outside groups, managing relationships with partner agencies, developing strategies for use of data in improving instruction, and other related activities.

Capital Region BOCES:

Conducted a comprehensive organizational analysis of the Northeast Regional Information Center

Adjunct Professor - New York University – From 2000- 2005 taught courses in the School of Education in:

Management Information Systems
Leadership and Decision Making

1990-2000: Executive Director, Division of Instructional Support Services
Western Suffolk BOCES, 507 Deer Park Rd., Dix Hills, N.Y. 11746.

Responsibilities include: Administration and supervision of one of the three Divisions of the Western Suffolk BOCES. The Division includes programs in: ESL, Outdoor Environmental Education, Gifted & Talented, Drugs Education, Aids Education, Nutrition Education, School Library Systems, Effective Schools Program, Staff Development, Curriculum Development, Micrographics, Planning, Pre-K, and Instructional Technologies. Additionally, the Director acts as a consultant to Boards, Superintendents, and Assistant Superintendents in a variety of areas related to instruction, curriculum, and management.

1985-1990: Director, Center For Learning Technologies, Suffolk BOCES III, Dix Hills, New York. (Renamed Western Suffolk BOCES in 1994)

Responsibilities included: Development of instructional technology services for the 72 school districts of Suffolk County. Developed and supervised all aspects of instructional technology planning and implementation including: Models Schools Planning Strategy; Wide area and Local area networks; Acquisition, installation, and support of various computer systems; Curriculum integration of technology services in classrooms, on-line information services, and other innovative implementations of technologies in the teaching/learning environment.

1983-1985: Director of Student Services, North Babylon UFSD, North Babylon, New York.

Duties included: Supervision of : Special Education program, instructional and administrative computer systems, and district wide attendance program.

1982-83: Senior Planner, Suffolk BOCES III, Dix Hills, N.Y. 11746

Duties included: Long range demographic and facilities planning for school districts in Suffolk County and throughout New York State, Grant research and writing, coordination of district staff development programs, liaison to NYSED for a variety of State initiatives in instruction and curriculum.

1979-82: Director of Research and Planning, Rockville Centre UFSD, Rockville Centre, New York
1972-79: Teacher of Mathematics, Rockville Centre UFSD, Rockville Centre, New York

1967-72: Teacher of Mathematics, St. Pius X High School, Uniondale, New York

Certifications:

NYS School District Administrator, Permanent
NYS School Administrator and Supervisor, Permanent
NYS Mathematics, 7-12, Permanent

Related Professional Experience:

- Former Chair: District Superintendents' Data Advisory Committee
- Former Chair of the Western Suffolk BOCES Assistant Superintendents' Council
- Frequent guest speaker and keynote speaker on Technology in Education and Education Reform
- Adjunct professor - Dowling College (1992-1994)
- Adjunct professor: NYU (2000-2005)

- Former member of the WLIW ITV Service Committee
- Former Policy Board member of Suffolk's Edge Teacher Center
- Former Board member - Eastern Suffolk School Library System

- **References Available Upon Request**

KENNETH J. MASON

(b)(6)

EDUCATION:

Siena College
Major: Accounting
Concentration: Computer Science
Degree: B.B.A., May 1983

Hudson Valley Community College
Major: Business Administration
Degree: A.S., May 1981

WORK EXPERIENCE:

July 1983 - Present: New York State Education Department, Albany, New York. Chief of Data Processing Technical Services, Manager of Data Processing Technical Services (Data Communications), Data Communications Specialist II, Data Communications Specialist I, Senior Computer Programmer/Analyst, Computer Programmer.

As Chief of Data Processing Technical Services, I am responsible for management of all aspects of technology infrastructure and technical support within the Information Technology Services division at the New York State Education Department. This includes the oversight of 7 managers and approximately 50 staff in the Network, Database, Server, E-Mail, Internet Technical Services, and Automation Support units.

Responsibilities also include serving as technology coordinator for the New York State Testing and Accountability Reporting Tool (nySTART). In this role I coordinate technical activities being performed by vendors supporting the nySTART system with an emphasis on the use of best practices, problem resolution, and escalation of critical path issues to senior management.

CORE SKILLS:

- Administrative skills including budgeting, development and execution of work plans, procurement of hardware and services, and supervision of staff.
- Mentoring.
- Technical project management.
- Managing relationships with vendors and other New York State Agencies.
- Mainframe and open systems tiered architecture.
- Network architecture.
- Information security.

Budget Narrative

Budget Narrative

Attachment 1:
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8. Budget Narrative:

Foundation Activities

Section 1: Data Quality Activities

The Proposal calls for three substantial Data Quality activities:

A. The creation of a CIO Technical Assistance Center
B. The creation of a Student Management Systems Certification Center
C. The creation of the Universal Interface

A. ***The CIO Technical Assistance Center***. (This is contracted service; staff levels are included here solely as a means of estimating an appropriate budget)

This activity will be awarded to a 3rd party through a competitive procurement process.

Staff:

Center Manager:

The Center will be led by a Center Manager who is responsible for all activities created by the Center. This position is estimated at .6 fte with an annualized cost of $100,000[1] and a net cost of $60,000 in year one. This position is maintained in years 2 and 3 of the Project with raises for each year estimated at 4%.

Professional Developers:

The main activity of this Center is to create and distribute Professional Development activities and Training materials for CIOs across the entire state. New York State has over 700 school districts with over 3.2 million students.

For this volume of work the Center will be staffed with 2 Professional Developers. These positions will account for 2 full ftes estimated at $80,000 annually with 4% raises estimated over the two additional years of the project.

Programmer:

[1] This salary and all other salaries referenced in this narrative for contracted services reflects the usual and customary salaries associated with the described positions reflecting an average incorporating regional differences in various labor markets.

Many of the Professional Development activities of the Center will be in computer based electronic format. This will require the support of a programmer.

This position is estimated at .5 fte with an annualized cost of $80,000 for a net cost of $40,000. Again 4% raises were estimated for the two additional years of the project.

Clerical Support:

The volume of Professional Development material produced by this Center will require the support of one full time clerical position.

This cost is estimated at $40,000 for year 1 with 4% increases in subsequent years.

Equipment, Supplies, Miscellaneous Costs:

A total of $13,000 has been allocated for equipment and supplies to support the development and dissemination of training materials.

The Center will predominantly use a "train-the-trainer" model to disseminate Professional Development activities. This will require travel to other training centers across the state. An allocation of $10,000 has been made to support this travel.

The Center will conduct statewide conferences related to Professional Development and training. An allocation of $15,000 in year 1 and $10,000 in subsequent years has been made for this purpose.

Benefits:

All employee fringe benefits will include applicable rates charged by the contractor but have been calculated using NYSED's base fringe rate.

Indirect Costs

No indirect costs are computed for contracted services.

B. ***The Student Management System Certification Center*** (This is contracted service; staff levels are included here solely as a means of estimating an appropriate budget)

This activity will be awarded through a competitive procurement process.

Staff:

Center Manager:

The Center will be led by a Center Manager who is responsible for all activities created by the Center. This position is estimated at .6 fte with an annualized cost of $100,000 and a net cost of $60,000 in year one. This position is maintained in years 2 and 3 of the Project with raises for each year estimated at 4%.

Student Management System Technician:

The Center will be responsible for setting technical standards and conducting tests of Student Management Systems, Special Education Systems, and School Lunch Systems. This will require the support of technician dedicated to this purpose.

The cost of this is allocated as 1 fte at a year one cost of $80,000 with increases of 4% per year in each subsequent year.

Equipment, Supplies, and Misc.

Items needed in these categories to support the operation of the Center are estimated at a total of $14,000.

Travel to certain statewide meetings will be required. An allocation of $5000 to support this travel has been included.

Benefits:

All employee fringe benefits will include applicable rates charged by the contractor but have been calculated using NYSED's base fringe rate.

Indirect Costs

No indirect costs are computed for contracted services.

C. ***The Creation of the Universal Interface*** (This is contracted service; staff levels are included here solely as a means of estimating an appropriate budget)

This activity will be awarded through a competitive procurement process.

Staff:

Manager:

The Activity will be led by a Manager who is responsible for all activities related to the creation of these system edits.. This position is estimated at .6 fte with an annualized cost of $100,000 and a net cost of $60,000 in year one. This position is maintained in years 2 and 3 of the Project with raises for each year estimated at 4%.

Programmers:

The primary function of this activity is to create computer programs that check the data transmitted from the LEA's Student Management Systems for errors against the business rules established by the state. This will require a substantial and ongoing programming effort.

This requires an allocation of 2fte at an initial cost of $80,000 per position with salary increases of 4% in subsequent years.

Equipment, Supplies, Misc.

The needed hardware and software in provide the needed environment is estimated at $13,000 in year 1 with maintenance fees of $5000 in subsequent years.

Some travel will be required to state meetings. $5000 per annum has been allocated for this purpose.

Benefits:

All employee fringe benefits will include applicable rates charged by the contractor but have been calculated using NYSED's base fringe rate.

Indirect Costs

No indirect costs are computed for contracted services.

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Section 2: Data Reporting Activities

This proposal calls for three primary Data Reporting Activities:

A. The creation of a Statewide Reporting Center
B. The building of internal capacity at NYSED to support Federal reporting and policy analysis.
C. The re-structuring of the nyStart contract for service.

The third activity listed the re-structuring of the contract is NOT a budgeted item. That activity will take place in the Activity Oversight Group and does not require a separate allocation.

A. ***The Creation of the Statewide Data Reporting Center*** (This is contracted service; staff levels are included here solely as a means of estimating an appropriate budget)

This activity will be awarded to one of the Regional Information Centers through an RFP process.

Center Manager:

The Center will be led by a Center Manager who is responsible for all activities created by the Center. This position is estimated at .6 fte with an annualized cost of $100,000 and a net cost of $60,000 in year one. This position is maintained in years 2 and 3 of the Project with raises for each year estimated at 4%.

Programmers:

The primary function of this activity is to create computer programs that will allow school districts to use data to analyze curriculum and improve instructional outcomes. This will require a substantial and ongoing programming effort.

This requires an allocation of 2fte at an initial cost of $80,000 per position with salary increases of 4% in subsequent years.

IT Tech/Database Administrator:

The reports created by this Center must be transmitted electronically to every district in the State of New York. This will require the support of an IT Tech.

This position is estimated at .5 fte with an year 1 allocation of $90,000 for a net cost of $45,000 with 4% increase in each subsequent year.

Clerical Support:

The Center will engage in ongoing communications with school districts and Regional Information Centers. This will require the support of one full time clerical position.

This is estimated at a year 1 cost of $40,000 with annual increases of 4% in subsequent years.

Equipment, Supplies, Misc.

The hardware, software, and communications equipment needed to implement this process is estimated at $28,000 in year 1 with a $10,000 per year miscellaneous allocation to provide for maintenance and growth.

Travel to state meetings will be required. A $5000 allocation has been created for this purpose.

Benefits:

All employee fringe benefits will include applicable rates charged by the contractor but have been calculated using NYSED's base fringe rate.

Indirect Costs

No indirect costs are computed for contracted services.

B. Building The NYSED Reporting Center

Staff:

Programmers.

Two programmers will be added to the staff of the NYSED Office of IT for this purpose.

These positions are estimated to be at an SG-23 and SG-18 grade level with estimated starting salaries of $63,822 and $49,296, respectively; 4% salary increases have been included for each of the subsequent project years.

Equipment, Supplies, Misc.

Support for the activities of these new staff member is estimated at $41,000 in year one with an annual allocation of $15,000 in subsequent years for maintenance and support.

Benefits:

All employee benefits have been estimated at 42.67% of salary.

Indirect Costs[2]

The allowable indirect cost rate of .352 or personal services has been applied. All Direct Costs are summarized in the attached spreadsheets.

Expansion Activities

The Expansion Activities in this proposal include the creation of the Activities Oversight Group and the creation of the Planning Groups. The Planning activities will take place within the Oversight structure. The budget allocation for the planning activity is included in this section of the budget.

[2] This budget assumes an unrestricted rate of 35.20% applied to the NYSED personal service category.

A. Activities Oversight Group

This group has overall responsibility for the day-in, day-out, supervision and operation of the proposed project.

Staff:

Project Manager:

The Project Manager has responsibility for all aspects of the project and reports directly to the Executive Policy Group.

This key position is estimated to be an SG-29 grade and budgeted at 1 fte with a year one cost of $87,196 with annual raises estimated at 4%.

Data Quality Coordinator:

The DQC reports to the Project Manager and supervises all aspects of the CIO Technical Assistance Center, the Student Management Certification Center, and the Tech/Standards editing project.

This position is estimated as a SG-26 grade and is budgeted at $74,667 in year 1 with annual increases of 4%.

Data Reporting Coordinator:

The DRC reports to the Project Manager and supervises all aspects of the Statewide Reporting Center, manages the nyStart contract, and is the Project's primary interface with the Office of IT for supporting internal reporting processes including Federal reporting and policy analysis.

This position is estimated as a SG-26 grade and is budgeted at $74,667 in year 1 with annual increases of 4%.

Product Development Coordinator:

The PDC reports to the Project Manager and is responsible for supervising both Planning Projects proposed in this document.

This position is estimated as a SG-26 grade and is budgeted at $74,667 in year 1 with annual increases of 4%.

The PDC will be managing the development of two highly sophisticated data warehouse systems. He/she will be responsible for the oversight of the planning for an Operational Data Store in the P-12 system, and the Data Warehouse structure for the P-16 system. As such, a Data Warehouse Architect will be retained to assist in this effort. A professional service of this natured is estimated at $120,000 per year.

Clerical Support:

Estimated as an SG-6 grade at 1fte with a year one budget of $26,667 and annual increases at 4%.

Equipment, Supplies, Misc.

Initial equipment and supplies is estimated at $43,000 with an ongoing annual allocation of $15,000 to provide maintenance and support.

The two product development groups will require substantial support from the office of the Project Manager providing every aspect of logistical details including: supplies, travel, meeting space, research, etc. An allocation of $50,000 per group per year has been allocated for this purpose.

Additionally, since these groups will be in product development for sophisticated data warehousing solutions, a Data Warehouse Architect will be retained as a consultant to these groups. $120,000 annually is budgeted for this highly technical professional service.

Benefits:

All employee benefits have been estimated at 42.67% of salary.

Indirect Costs[3]

The allowable indirect cost rate of .352 of personal services has been applied. All Direct Costs are summarized in the attached spreadsheets.

[3] This budget assumes an unrestricted rate of 35.20% applied to the NYSED personal service catagory.