

Information Technology (IT) Initiative Business Case Responses for BYs 2003 & 2004

Please type your responses in the white answer blocks provided and return the electronic copy of this document to Treva Lutes by April 26th. Please do not modify the shaded rows of the table. These rows contain special codes that we will use to populate a database automatically.

1.0 General Background

1.1 Initiative Name

Data Mart Integration

1.2 Initiative Description

FSA has several data marts in operation and development:

- The Chief Financial Office (CFO) data mart
- The Financial Partners (FP) data mart
- The Delinquent Loans (DL) data mart
- The Credit Management (CM) data mart.

With more data marts planned over FY02 and FY03 (e.g. NSLDS, FP Mart II & III), it is important to establish standards to enable data sharing and to streamline data mart development.

These standards were developed and presented to the Data Architecture team through the "Data Mart Integration Framework, 2001" effort. The Framework is maintained by the Architecture Working Group, and is actively used by new data mart developers (CMDM actually changed its database design to conform to Framework). Existing data marts may choose to utilize the Framework if there are compelling business reasons.

This initiative covers the integration of FSA's various data marts under a common infrastructure architecture and the linkage of those data marts to the planned NSLDS Data Warehouse which will operate as a common data repository for FSA.

It is important to note that the Higher Education Act of 1965 congressionally mandated the need for a national student data repository. NSLDS currently performs this function in conjunction with the existing data marts. This complementary relationship between NSLDS and the data marts is envisioned to continue between the NSLDS replacement system (NSLDS II) and the consolidated data mart. The strategy for the integration of the two efforts is currently underway to ensure that non-redundant, complementary business objectives are achieved.

1.3 Initiative Type

Business Process Support System
 Financial Management System X
 Non-Financial Management System X

Program Delivery System
 Financial Management System
 Non-Financial Management System

IT Infrastructure
 IT Services
 General Office Automation

1.4 Contact Information

	Name	Principal Office	Phone Number
Project Manager	Jim Greene	FSA	202-377-3560
Program Manager	Denise Hill	FSA	202-377-3030
Project Sponsor	Steve Haywald	FSA	202-377-3501
Contracting Officer	Janet Scott	FSA	202-377-3377
Contracting Officer's Representative	Carol Seifert	FSA	202-377-3506

2.0 Business Process

2.1 Business Process Support

<input type="checkbox"/> Grants <input type="checkbox"/> Evaluation <input type="checkbox"/> Research <input type="checkbox"/> Information <input type="checkbox"/> Dissemination <input type="checkbox"/> Enforcement <input type="checkbox"/> Resource <input type="checkbox"/> Management & Administration <input checked="" type="checkbox"/> Loans <input type="checkbox"/> Other: _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____	<p>This initiative will allow for a better/more concise information gathering and analytic ability to FSA Business Channels from the different marts.</p>
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2.2 Business Problem or Opportunity and Causing Conditions

Today's data marts, which were built as point solutions for immediate problems, are disconnected. Data marts consist of data dimensions, which enable grouping, categorization and aggregation of performance metrics in data marts.

Some of the dimensions are currently used in more than one data mart. These dimensions, while sharing some common elements, are structured differently, hence the need for standardization and integration.

Within the borrower dimension, for example, the DL mart captures the borrower's middle initial information. The CM mart does not currently capture borrower middle initial information, but does capture email information and zip + 4 descriptions which the DL mart does not. The CM mart and the DL mart both capture social security information for a borrower, but within the CM mart it is used as the unique identifier for a borrower record, and just as a regular attribute within the DL mart, which uses a borrower ID as the unique identifier for a borrower record.

2.3 Existing Systems

FSA has several data marts in operation and development:

- The Chief Financial Office (CFO) data mart
- The Financial Partners (FP) data mart
- The Delinquent Loans (DL) data mart
- The Credit Management (CM) data mart.

These marts are mainly operating in standalone/disconnected mode right now.

A data mart integration and standardization framework/strategy was developed in FY01. The framework is maintained by the Architecture Working Group, and is actively used by new data mart developers. Existing data marts may choose to utilize the Framework if there are compelling business reasons.

2.4 Solution Impact

(If this is an implemented initiative with no enhancements, then address item (3) only)

(1) (3) (4) By integrating data marts, information extracted from transaction systems will be stored most efficiently to support multiple uses, and eliminate the potential for different copies of the information to become inconsistent.

(2) This initiative needs to work closely with NSLDS Re-engineering in order to avoid carrying redundant data. NSLDS currently performs the student data repository function in conjunction with the existing data marts. This complementary relationship between NSLDS and the data marts is envisioned to continue between the NSLDS replacement system (NSLDS II) and the consolidated data mart. The strategy for the integration of the two efforts is currently underway to ensure that non-redundant, complementary business objectives are achieved.

(5) None

2.5 Business Process Reengineering

(Applies only to New Business Process Support and Program Delivery Systems)

By integrating all current and future data marts, FSA will benefit from 'shareable' and streamlined marts and get full value from its **current** mart investment by making data available to a broader FSA group, as well as get full value from its **future** mart investments by having easy access to information in all of its marts.

In addition, the consolidation of data marts will also facilitate the definition of standard business processes across the different business channel user communities. A single consolidated data mart would ensure that the business processes surrounding data management, report generation, and operational support remain consistent across the enterprise.

2.6 Mandatory Requirement

This integration effort will comply with Section 515 – Data Quality.

It is important to note that the Higher Education Act of 1965 congressionally mandated the need for a national student data repository. NSLDS currently performs this function in conjunction with the existing data marts. This complementary relationship between NSLDS and the data marts is envisioned to continue between the NSLDS replacement system (NSLDS II) and the consolidated data mart. The strategy for the integration of the two efforts is currently underway to ensure that non-redundant, complementary business objectives are achieved.

2.7 Consequence of Not Funding the Initiative

Data marts will continue to be isolated/non-integrated systems. Users of one data mart will not be able to access other marts "seamlessly," since the dimensions are not standardized. There will also be a data consistency problem, as data will not be stored the same way in all marts.

3.0 Strategic Alignment

3.1 OMB E-Government Initiative Alignment

- Consolidated Health Information
- Disaster Assistance and Crisis Response
- E-Authentication
- E-Grants
- E-Payroll/HR
- E-Training
- E-Travel
- E-Vital
- Electronic Records Management
- Eligibility Assistance Online
- Expanding Electronic Tax Products for Businesses
- EZ Tax Filing
- Federal Asset Sales
- Federal Enterprise Architecture
- Geospatial Information One Stop
- Integrated Acquisition Environment
- Integrated Human Resources/e-Clearance
- International Trade Process Streamlining
- One Stop Business Compliance Information
- Online Access for Loans
- Online Rulemaking Management
- Recreation One Stop

- Recruitment One Stop
- USA Services
- Wireless Public Safety Interoperable Communications – Project SAFECOM
- None of the Above

3.2 Mission Alignment

- Goal 1: Create a Culture of Achievement

- Objective 1.1 Link federal education funding to accountability for results.
- Objective 1.2 Increase flexibility and local control.
- Objective 1.3 Increase information and options for parents.
- Objective 1.4 Encourage the use of scientifically based methods within federal education programs.

- Goal 2: Improve Student Achievement

- Objective 2.1 Ensure that all students read at grade level by the third grade.
- Objective 2.2 Improve math and science for all students.
- Objective 2.3 Improve the performance of all high school students.
- Objective 2.4 Improve teacher and principal quality.

- Goal 3: Develop Safe Schools and Strong Character

- Objective 3.1 Ensure that our nation’s schools are safe and drug-free and that students are free of alcohol, tobacco, and other drugs.
- Objective 3.2 Promote strong character and citizenship among our nation’s youth.

- Goal 4: Transform Education into an Evidence-Based Field

- Objective 4.1 Raise the quality of research funded or conducted by the Department.
- Objective 4.2 Increase the relevance of our research in order to meet the needs of our customers.

- Goal 5: Enhance the Quality of and Access to Postsecondary & Adult Education

- Objective 5.1 Reduce the gaps in college access and completion among student populations differing by race/ethnicity, socioeconomic status, and disability while increasing the educational attainment of all.
- Objective 5.2 Strengthen accountability of postsecondary institutions.
- Objective 5.3 Establish effective funding mechanisms for postsecondary education.
- Objective 5.4 Strengthen Historically Black Colleges and Universities, Hispanic Serving Institutions, and Tribal College and Universities.
- Objective 5.5 Enhance the literacy skills of American adults.

- Goal 6: Establish Management Excellence

- Objective 6.1 Develop and maintain financial integrity and management and internal controls.
- Objective 6.2 Improve the strategic management of the Department’s human capital.
- Objective 6.3 Manage information technology resources, using e-gov, to improve service for our customers and partners.
- Objective 6.4 Modernize the Student Financial Assistance programs and reduce their high-risk status.
- Objective 6.5 Achieve budget and performance integration to link funding decisions to results.
- Objective 6.6 Leverage the contributions of community-and faith-based organizations to increase the effectiveness of Department programs.
- Objective 6.7 By becoming a high performance, customer-focused organization, earn the President’s Quality Award.

None of the Above

3.3 Strategic Plan Strategies Supported

Objective 6.4:

- **Create an efficient delivery system:** Use new technologies and system integration for improving systems, minimizing noncompliance and default rates, and reducing the improper payment of student aid funds.
- **Improve program monitoring:** Strengthen financial management and internal controls so that relevant, timely information is available to manage day-to-day operations. Assure balance between school technical assistance and program monitoring.

3.4 Quality Indicators

- The number of marts integrated together through the effort.
- Maintenance cost reduction as teams will not be dealing with as much redundant/duplicate data (especially between CMDM and DLM)

4.0 Technology Initiative

4.1 Initiation Date

October 1, 2003

4.2 Initiative Deployment / Implementation Date

September 30, 2004

4.3 Initiative Phase

- Under Development
- Maintenance Only
- Maintenance with Enhancements

4.4 Initiative Scope

Currently all data marts and data warehouses are operating in a standalone mode right now. This initiative will integrate all existing and to be built data marts/data warehouses (NSLDS for instance) and take advantage of the EAI middleware currently being developed at FSA to exchange data between the different marts.

This initiative is very consistent with the legislative objective of the PBO to integrate data systems, as well as President's Management Agenda 3 and 4, which are:

- Improved financial performance;
- Expanded electronic Government.

As part of the "Assessment for Department of Education for 2002" the following goals were also identified:

- Eliminate fraud and error in Student Aid Programs;
- Reduce costs;
- Strengthen management.

This initiative's outcome will closely assist the Department in achieving these goals.

4.5 Assumptions, Constraints, and Dependencies

1. Assumptions:
 - NSLDS Data Warehouse will establish the basis for this integration.
 - Where possible, this initiative will work to align with OMB based e-Loan strategy.
2. Constraints: None identified at this time
3. Dependencies:
 - Timing of data mart development effort: this effort needs to also work closely with the NSLDS reengineering effort in order not to store any redundant data between the different marts and NSLDS.
 - EAI Middleware and ITA service and Support: Enterprise architecture is defined for the core technology framework.

4.6 Outstanding Issues

None

4.7 Benefits

This effort will enable access to a comprehensive view of data, and allow for analysis across a comprehensive set of data.

This effort will also reduce costs around the on-going maintenance and activities associated with consistency validation.

Users will be able to access a larger amount of data across different marts “seamlessly” as they will be able to access the common/standardized dimensions with the same look and feel. It will also allow users to gather more consistent data across the marts.

An integrated data analysis will enable FSA Business Channels to take preventive measures, and perform trend analysis.

4.8 Crosscutting Initiative

- Entire Department
- Office for Civil Rights
- Office of Educational Research and Improvement
- Office of Elementary and Secondary Education
- Office of English Language Acquisition
- Office of Postsecondary Education
- Office of Special Educational and Rehabilitation Services
- Federal Student Aid
- Office of Vocational and Adult Education
- Office of the Chief Financial Officer
- Office of the Chief Information Officer
- Office of the General Counsel
- Office of Inspector General
- Office of Intergovernmental and Interagency Affairs
- Office of Legislation and Congressional Affairs
- Office of Management
- Office of Public Affairs
- Entities outside of the Department

4.9 Audit Finding

None.

4.10 Alternatives Analysis

(This Applies Only To Initiatives Under Development or Being Implemented.)

Alternatives	Description	Total Life Cycle Costs	Benefits	Drawbacks
Alternative 1 (Selected Alternative)	Data Mart Integration	\$2.5 Million	See section 4.7	None
Alternative 2	Do nothing	\$0	None	Stovepipe data marts, requiring point-to-point, costly interface with other systems.
Alternative 3				
Alternative 4				

Select alternative 1 – Data Mart Integration.

5.0 Enterprise Architecture

5.1 Use of COTS/GOTS

Percentage of COTS/GOTS Components:

- 0 - 25%
- 26 - 50%
- 51 - 75%
- 76 - 100%
- Not Applicable

5.2 Consistency with Product Support Plan

(Please refer to Appendix A to identify supported products and indicate non-supported products below)

This is a new initiative. This information will be determined once the initiative is started.

5.3 Section 508 Compliance

(Accessibility)

(1) Yes. All existing data marts have been tested for Section 508 and have been determined as compliant. All future data mart/data warehouse will be reviewed and assessed for Section 508 compliance by the Assistive Technology team.

(2) N/A

(3) N/A

5.4 Government Paperwork Elimination Act (GPEA)
(Business Process Support and Program Delivery Systems only)

- (1) N/A
- (2) N/A
- (3) N/A

5.5 Information Management
(Business Process Support and Program Delivery Systems only)

- (1) Data marts are populated with information collected from several type of respondents on different time tables. All these respondents are however internal to FSA.
- (2) N/A
 - (3) N/A

5.6 Privacy

- 1. Yes – CMDM contains Privacy Act data.
- 2. DLSS, which is the owner of the original information has a privacy notice.

5.7 Security
(This question applies if the initiative meets the definition of major application or general support system as defined in OMB Circular A-130.)

Part 1 – a. (Please enter a date in the form of MM/DD/YYYY or N/C)

N/C

Part 1 – b. (Please enter a date in the form of MM/DD/YYYY or N/A)

N/A

Part 1 – c.

This initiative is scheduled for planning in FY04. Security definitions are as yet undefined. Approximately \$150K has been budgeted for NIST compliance via the Security Plan and Certification and Accreditation process.

Part 2 – a. (Please enter a date in the form of MM/DD/YYYY or N/C)

N/C

Part 2 – b. (Please enter a date in the form of MM/DD/YYYY or N/A)

N/A

Part 2 – c.

This initiative is scheduled for planning in FY04. Security definitions are as yet undefined.

Part 3 – a. (Please enter a date in the form of MM/DD/YYYY or N/C)

N/C

Part 3 – b. (Please enter a date in the form of MM/DD/YYYY or N/A)

N/A

Part 3 – c.

This initiative is scheduled for planning in FY04. Security definitions are as yet undefined.

Part 4 – a. (Please enter a date in the form of MM/DD/YYYY or N/C)

N/C

Part 4 – b. (Please enter a date in the form of MM/DD/YYYY or N/A)

N/A

Part 4 – c.

This initiative is scheduled for planning in FY04. Security definitions are as yet undefined.

Part 5 – a. (Please enter a date in the form of MM/DD/YYYY or N/C)

N/C

Part 5 – b. (Please enter a date in the form of MM/DD/YYYY or N/A)

N/A

Part 5 – c.

This initiative is scheduled for planning in FY04. Security definitions are as yet undefined.

Part 6 – a. (Please enter a date in the form of MM/DD/YYYY or N/C)

N/C

Part 6 – b. (Please enter a date in the form of MM/DD/YYYY or N/A)

N/A

Part 6 – c.

This initiative is scheduled for planning in FY04. Security definitions are as yet undefined.

6.0 Risk and Project Management

6.1 Risk Management

Risk Category	Risk Description	Risk Probability	Risk Impact	Management Strategy
Strategic	TBD	TBD	TBD	TBD
Organizational/Change Management	TBD	TBD	TBD	TBD
Project Resources (Financial, Personnel, etc.)	N/A	N/A	N/A	N/A
Project Management	N/A	N/A	N/A	N/A
Business	N/A	N/A	N/A	N/A

Data/Information	Dynamic requirements – as users discover all the possibilities/function alities the system is capable of, they may want to incorporate the additional functionalities	High	Low	<ul style="list-style-type: none"> As COTS packages will be used to deliver the functionality, they are required to be flexible to requirements as such. We will define robust requirements, covering as many of such scenarios as possible.
Application	N/A	N/A	N/A	N/A
Technology/Infrastructure	N/A	N/A	N/A	N/A
Security	External unauthorized access for FSA data marts	Low	High	Implement solid FSA core security architecture and Single Sign On.
Privacy	N/A	N/A	N/A	N/A

6.2 Operational Performance Measures

- The number of marts integrated together through the effort.
- Reduced maintenance cost, as teams will not be dealing with as much redundant/duplicate data (especially between CMDM and DLM)

6.3 General Acquisition Strategy

(1) Single Contract

(2) We will use a mix of Fixed Price and Times and Materials – Fixed Price for contract with FSA, and T&M for subcontractors.

(3) No financial incentive or other performance based contract will be used.

(4) Period of Performance Same as GSA Contract (9/7/99 – 9/30/02, with two 5 year options)

(5) General contract information are as follows:

Ordering Agency: US Department of Education (ED), Federal Student Aid 830 1st Street NE, Washington, DC 20004

Project: Modernization Partner

Contract Type: Blanket Purchase Agreement (BPA) under GSA Schedule 70 Contract (GS-35F-4692G) implemented using Task Orders (FP, FP Share in Savings IF, and T&M)

BPA #: ED-99-DO-0002

(6) N/A

(7) N/A

(8) N/A

(9) N/A

(10) N/A

APPENDIX A

Hardware

Personal Computers

Primary Support

X Compaq Professional Pentium II (266 MHz or faster), minimum 64 MB of RAM, 3.0 GB of Hard Drive available for OCIO configuration

X Professional Dell Pentium II (266 MHz or faster), minimum 64 MB of RAM, 3.0 GB of Hard Drive available for OCIO configuration

Secondary Support

___As defined in OCIO non-standard workstation policy

Laptops

Primary Support

___Dell Pentium II (266 MHz or faster), minimum 64 MB of RAM, 3.0 GB of Hard Drive available for OCIO configuration

___Toshiba Pentium II (266 MHz or faster), minimum 64 MB of RAM, 3.0 GB of Hard Drive available for OCIO configuration

Secondary Support

___As defined in OCIO non-standard workstation policy

Printers

Primary Support

X HP LaserJet 5 and newer

Secondary Support

___HP LaserJet 4

Monitors

Primary Support

X 17-inch or larger, capable of 1024x768 resolution

Personal Digital Assistants (PDA)

Primary Support

___Blackberry RIM 957

___Blackberry RIM 950

Secondary Support

___IntelliSync

___Microsoft ActiveSync 3.1 or newer

Software

Client Operating Systems

Primary Support

X Windows 2000 Professional Service Pack (SP)2

Secondary Support

___As defined in OCIO non-standard workstation policy

Office Suites

Primary Support

X Office 2000 Service Release (SR) 1A with Word 2000, Excel 2000, PowerPoint 2000, Access 2000

Anti-Virus Software

Primary Support

X Norton AntiVirus 2000 Corporate Edition 7.5

Communications

Primary Support

___ Citrix ICA

Secondary Support

___ Citrix Winframe

Terminal Emulation Software

Primary Support

___ Attachmate 6.5

Database Clients

Primary Support

___ Oracle 8.1.7 Client

X Oracle 11.x Client (or FY04 Department approved standard)

X Microstrategy 7i

X Informatica – PowerCenter 5.1

Electronic Mail Software

Primary Support

X Outlook 2000

Internet Browsers

Primary Support

X Internet Explorer 5.5 SP1 (128-bit encryption)

Secondary Support

___ Netscape 4.x

Helper Plug-Ins

Primary Support

___ Adobe Acrobat Reader 5.0 and newer

___ RealPlayer 8.0 Intranet

Project Management Software

Primary Support

___ Microsoft Project 2000

___ TeamMate 2000

Web/Desktop Publishing Software

Secondary Support

___ Adobe Illustrator 7.0

___ Adobe PageMaker 6.5 and newer

___ Adobe Photoshop 5.0

___ Interwoven LaunchPad

___ Macromedia Dreamweaver 2.0 and newer

___ Macromedia Fireworks 2.0 and newer

___ Macromedia FreeHand 7.0

___ Macromedia HomeSite 4.0

___ NetViz 4.0

___ Publisher 2000

Groupware

Secondary Support

___ Lotus Notes Client (all versions)

Assistive Technology Software

Primary Support

- ___ Aladdin Genie CCTV
- ___ Dragon Systems NaturallySpeaking 4.0 and newer
- ___ Freedom Scientific JAWS for Windows 3.7
- ___ Gus Word Prediction
- ___ IBM Homepage Reader 2.5 and newer
- ___ NexCom 300 TTY modem, which requires an ISA slot
- ___ NexTalk/NTS, NXI Communications NTS 3.41 and newer
- ___ ZoomText Xtra Level 2 7.04 and newer

Secondary Support

- ___ NXI Communications NexTalk for Windows
- ___ WinTalk modem

Principal Office-Specialized Applications

Primary Support

- ___ ARCHIBUS/FM-10
- ___ CARS
- ___ CCM Plus
- ___ CMIS
- ___ DACS
- ___ EDCAPS
- ___ EDICS
- ___ Folio Builder 4.2
- ___ Folio Views 4.2
- ___ HEATWEB 3.11
- ___ IAS
- ___ Method/1 GuideVersion 11
- ___ Monarch Professional 5.02
- ___ Ombusman Case Tracking System 2.0
- ___ Peer Review System
- ___ TRAINS

Secondary Support

- ___ CMTS
- ___ DLOS
- ___ Folio Views 3.11
- ___ GAPS
- ___ GPAS
- ___ IEFARS
- ___ OCR Electronic Library
- ___ OSERS Quick
- ___ PC Travel Drop Box
- ___ PEPS
- ___ PFIE
- ___ Response Phone System
- ___ SACONS
- ___ Total Access Agent

Network Operating Systems and Enterprise Software

Primary Support

- ___ Cisco IOS 12.1(5) (Router)
- ___ Cisco IOS 6.1(2) and newer (Switch)
- ___ Microsoft Exchange 5.5 SP4
- ___ Microsoft SMS 2.0 SP3
- ___ Microsoft NT Server 4.0 SP6a
- ___ Microsoft Windows 2000 Server SP2

- ___ Netscape Compass Server 3.0 (SPARC)
 - ___ Netscape Enterprise Server 3.51 (SPARC)
 - ___ Oracle 8.1.7
 - ___ Raptor Firewall with PowerVPN Version 6.5
 - ___ Solaris 2.6 (SPARC)
 - ___ SQL Server 7.0 SP5
 - ___ SQL Server 2000 SP1
 - ___ Terminal Server 4.0 SP6a
- Secondary Support*
- ___ All versions of Linux
 - ___ All versions of Lotus Notes
 - ___ Microsoft Internet Information Server 4.0 and newer
 - ___ SQL Server 6.5