

U. S. Department of Education

Enterprise Transition Strategy Plan

February 29, 2008

FINAL

Version 1.2



Revision History

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Table of Contents

REVISIO	ON HISTORY	1
1.0 INT	RODUCTION	6
1.1	Overall Plan	6
1.2	Background	8
1.3	Framework	8
1.3.1	Step 0 – Baseline and Target Architecture Development	9
1.3.2	Step 1 – Redundancy and Gap Analysis	10
1.3.3	Step 2 – Refine, Prioritize, Develop Segments	
1.3.4		
1.3.5	Step 4 – ED Transition Sequencing Plan	10
2.0 ED	BASELINE AND TARGET ARCHITECTURE OVERVIEW	12
2.1	Baseline Enterprise Architecture	12
2.2	Future State Vision	
	Lines of Business (LOB's)	
2.2.2	Primary IT Delivery Organizations	17
3.0 RE	DUNDANCY AND GAP ANALYSIS	18
3.1	Redundancy Analysis	18
3.1.1	Simplified ED Service Reference Model (SRM) Process	18
	Simplified ED SRM Components	
	Common Enterprise Services (CES)	
3.1.4	EA Areas of Redundancy Under Investigation	
3.2	Gap Analysis	23
	Performance Gap Analysis	
3.2.2	Required Business Capabilities	32
4.0 RE	FINE AND PRIORITIZE SEGMENTS	35
4.1	Core Mission Segments	35
4.2	IT Spend Analysis	36
5.0 DE	FINE PROGRAMS AND PROJECTS	39
5.1	Program Description	39
5.2	Project Description	40
5.3	ED Programs and Projects	40
5.3.1	ED Projects per Program and Completed Segment Architecture	40
5.3.2	ED Projects per Program and Segment Architecture	45



5.4	Dependencies between Transition Programs and Projects	47
5.4.1	Project Dependencies per Program and Completed Segment Architecture	10
542	Project Dependencies per Program & Segment Architecture	
5.5	ED Project – CES Linkage	
	Using ED's TSP: CES Investments	
	TRANSITION SEQUENCING PLAN	
6.1	Transition Strategy Plan Timeline Overview	
	ED Projects Life Cycle Start/End Dates per Completed Segment	
	2 ED Projects Life Cycle Start/End Dates per Segment	
	INVESTMENT MILESTONES	
7.1	Implementation Milestones	-
7.2	FSA Investment Milestones	
7.3	G5 Milestones	
7.4	Data Warehouse Milestones	
7.5	EDUCATE Milestones	
7.6	CPSS Milestones	
7.7	FMSS Milestones	86
7.8	ISS Milestones	89
7.9	TMS Milestones	91
7.10	E-Authentication Milestones	93
7.11	NCES Web Milestones	96
7.12	IPEDS Milestones	98
7.13	NAEP Milestones	100
7.14	ERIC Milestones	105
7.15	ID Access Control (EDSTAR) Milestones	109
7.16	EDEN Milestones	111
7.17	MSIX Milestones	
7.18	ED eGov Alignment Milestones	
7.18.	1 Federal Transition Framework (FTF)	120
8.0 MA	AJOR IT INVESTMENT RISK ASSESSMENT ANALYSIS	122
9.0 IP	V6 TRANSITION STRATEGY AND MILESTONES	128
9.1	IPv6 Milestone Update	133



Table of Figures

6
9
13
14
19
48
49
59
60
61
121
. 128
129
132
. 133

Table of Tables

TABLE 1: RESULTS OF THE OMB FY2007 ASSESSMENT	6
TABLE 2: FEA BRM MAPPING FOR LOANS LOB	15
TABLE 3: FEA BRM MAPPING FOR GRANTS LOB	15
TABLE 4: FEA BRM MAPPING FOR EVALUATION AND POLICY ANALYSIS LOB	15
TABLE 5: FEA BRM MAPPING FOR RESEARCH LOB	16
TABLE 6: FEA BRM MAPPING FOR INFORMATION DISSEMINATION LOB	16
TABLE 7: FEA BRM MAPPING FOR COMPLIANCE LOB	16
TABLE 8: FEA BRM MAPPING FOR ADMINISTRATION LOB	16
TABLE 9: ED'S IT PORTFOLIO ANALYSIS	18
TABLE 10: SIMPLIFIED ED SERVICE REFERENCE MODEL COMPONENTS	20
TABLE 11: COMMON ENTERPRISE SERVICES (CES)	21
TABLE 12: EA AREAS OF REDUNDANCY UNDER INVESTIGATION	22
TABLE 13: ED PROGRAM – FEDERAL STUDENT AID	23
TABLE 14: ED PROGRAM – OFFICE OF THE CHIEF FINANCIAL OFFICER (OCFO)	
TABLE 15: ED PROGRAM – OFFICE OF THE CHIEF INFORMATION OFFICER (OCIO)	26
TABLE 16: ED PROGRAM – INSTITUTE OF EDUCATION SCIENCES (IES)	28
TABLE 17: ED PROGRAM – OFFICE OF MANAGEMENT (OM)	30



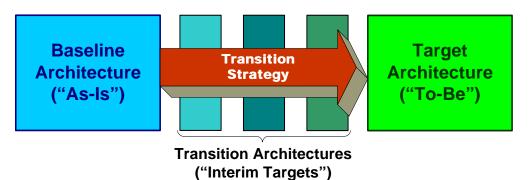
TABLE 18: ED PROGRAM – OFFICE OF PLANNING, EVALUATION, AND POLICY DEVELOPMENT (OPEDP)	. 30
TABLE 19: ED PROGRAM – OFFICE OF ELEMENTARY AND SECONDARY EDUCATION (OESE)	. 31
TABLE 20: BUSINESS CAPABILITIES REQUIREMENTS ED'S IRM STRATEGIC PLAN	
TABLE 21: NUMBER OF PROJECTS WITH SIMILAR CES COMPONENTS	
TABLE 22: SEGMENT TYPE WITH STATUS AND PROJECTED COMPLETION	. 37
TABLE 23: COMPLETED SEGMENTS BY PROJECT DESCRIPTIONS	. 41
TABLE 24: SEGMENT AND PROGRAM BY PROJECT DESCRIPTIONS	. 45
TABLE 25: SEGMENT AND PROGRAM BY COMPLETED PROJECT DEPENDENCIES	. 49
TABLE 26: SEGMENT AND PROGRAM BY PROJECT DEPENDENCIES	. 51
TABLE 27: COMMON ENTERPRISE SERVICE NEEDED BY PROGRAM OFFICE AND PROJECT	53
TABLE 28: PLANNED IMPLEMENTATION OF CES'S	. 57
TABLE 29: CES IMPLEMENTATION TIMELINE.	. 58
TABLE 30: COMPLETED ED SEGMENT ARCHITECTURE PROJECTS	
TABLE 31: DETAILED ED SEGMENT ARCHITECTURE PROJECTS	. 64
TABLE 32: G5 MILESTONES	. 68
TABLE 33: DATA WAREHOUSE MILESTONES	. 69
TABLE 34: EDUCATE MILESTONES	. 73
TABLE 35: CPSS MILESTONES	. 84
TABLE 36: FMSS MILESTONES	. 86
TABLE 37: ISS MILESTONES	. 89
TABLE 38: TMS MILESTONES	. 91
TABLE 39: E-Authentication Milestones	. 93
TABLE 40: NCES WEB MILESTONES.	. 96
TABLE 41: IPEDS MILESTONES	. 98
TABLE 42: NAEP MILESTONES 1	100
TABLE 43: ERIC MILESTONES 1	105
TABLE 44: ID ACCESS CONTROL (EDSTAR) MILESTONES	109
TABLE 45: EDEN MILESTONES 1	111
TABLE 46: MSIX MILESTONES 1	114
TABLE 47: ED EGOV ALIGNMENT MILESTONES 1	117
TABLE 48: ED IT INVESTMENT RISKS AND MITIGATION STRATEGIES	122
TABLE 49: IPv6 Features and Supported Business Capabilities Requirements in Each LOB	
TABLE 50: IPv6 TRANSITION PLAN MILESTONES	



1.0 INTRODUCTION

1.1 Overall Plan

The Department of Education's (ED's) Enterprise Architecture (EA) Transition Strategy Plan is a critical component of ED's EA practice. It describes the overall plan for the Department to achieve its target "To-Be" Future State Vision within 3-5 years. It clearly links proposed Department investments to the target architecture and is used to track investment performance through clearly defined milestones and associated performance metrics. Also, the Transition Strategy helps to define dependencies between transition activities (programs and projects) and helps to define the relative priority of these activities (for investment purposes). Figure 1 below graphically represents ED's EA Transition Strategy from Baseline to Target:





The Department's Transition Strategy has been updated to incorporate the Office of Management and Budget's (OMB's) Practice Guidance and to incorporate all OMB Q2 FY2007 assessment comments. As a result, this Transition Strategy Plan represents a practical roadmap for the Department to use for (1) funding decisions (2) milestone and performance tracking (3) monitor program/project dependencies (4) anticipate risks and facilitate mitigation strategies.

The Department's Enterprise Architecture and Transition Strategy Plan updates, as a result of the OMB FY2007 Assessment, are listed (Table 1) below:

Category	OMB FY2007 Assessment	OMB Comments	ED FY2008 Response
Completion	4	Needed for Level 5: Second segment sign-off required	 The Department has developed and obtained business owner authorization (in writing) for 4 segments: Loans Grants Management Line of Business Information Technology Infrastructure Knowledge and Data Services

Table 1: Results of the OMB FY2007 Assessment



Department of Education Enterprise Transition Strategy Plan, February 2008

Category	OMB FY2007 Assessment	OMB Comments	ED FY2008 Response
Transition Strategy Completion	4	Needed for Level 5: Performance milestones for initiatives in the Transition Strategy include quantified target values	 The Department of Education's Transition Strategy Plan includes implementation and associated performance milestones for all major and significant IT investments through FY2010. <u>Implementation milestones</u> are associated with an implementation date of the solution or a major enhancement <u>Performance milestones</u> – all quantifiable and measured by consecutive fiscal years, indicate the performance improvements resulting from each implementation milestone.
CPIC Integration	4	Needed for Level 5: Additional evidence is required to demonstrate that target EA is being actively utilized to drive investment selection, and that architecture is done before major investments are made and implemented. EA (transition strategy) should also be used to manage and monitor investments throughout implementation (i.e., not only used for investment selection).	 EA at the Department of Education is actively used to drive investment selection and to manage/monitor investments through implementation. In order to demonstrate this fact, the following evidence is enclosed as part of this submission: The EA Program Office's review and assessment scoring of each Departmental IT business case. These scores were used by the Planning and Investment Review Working Group (PIRWG) to make investment decisions. The EA Program Offices reviews every Statement of Work issued by the Department's Program Offices for architectural compliance. For SOW's to be approved and funded, they must be approved by EA. The EA Redundancy Analysis – which identified 18 common enabling services (CES's) that will be implemented for shared use across the Department. The EA Program Office has presented these investment opportunities to the PIRWG for consideration. (Presentations and Meeting Minutes are attached). As a result, the Enterprise Data Warehouse (EDW) was implemented and Document Management is next. Additionally, the referenced presentations and meeting minutes demonstrate that, in accordance with the Department's EA Governance Plan, the EA program office recommends IT investments for funding consideration. The EA Program Office developed the ITI Segment Architecture (a new investment at the Department) – defining its future vision and transition strategy plan. These architectural artifacts will be used to monitor and making investment decisions in regards to this investment.



Department of Education Enterprise Transition Strategy Plan, February 2008

Category	OMB FY2007 Assessment	OMB Comments	ED FY2008 Response	
			the Departmental Performance Architecture, which includes monitoring all performance metrics and reporting discrepancies to the Planning and Investment Review Working Group	
Results: Transition Strategy Performance	3	Needed for Level 4: Demonstrate that program/ project milestones were achieved on schedule (or other action was taken for missed milestones), and that target performance improvement was achieved.	The Department's Transition Strategy has been updated with specific, results-oriented <u>Implementation</u> and <u>Performance milestones</u> . Each performance milestone has a Planned Fiscal Year and Actual Completion Date – demonstrating that program/project milestones have been achieved. Any missed milestones are explicitly noted and subsequent fiscal year milestones describe the actions taken to achieve desired performance levels.	

1.2 Background

ED's EA is a key component of the Department's overall Information Technology (IT) Life Cycle Management (LCM) Framework. This Framework applies government and industry best practices in EA, IT investment management, systems engineering, and program management. Therefore, it provides the foundation for sound IT management practices, end-to-end governance of IT investments, and the alignment of IT investments with the goals and business mission of the Department.

1.3 Framework

The Framework is comprised of three phases – Architect, Invest, and Implement– which extend across the entire lifecycle of information technology. The diagram (Figure 2) below shows how the ED's EA Transition Strategy fits into ED's IT LCM Framework.



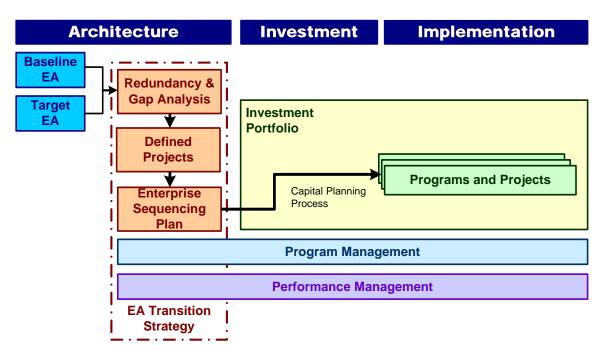


Figure 2: ED's IT LCM Framework

The steps comprising Framework are described below:

1.3.1 Step 0 – Baseline and Target Architecture Development

Step Number	Description	TSP Section
Step 0	Baseline and Target Architecture Development	Section 2.0

In order to create ED's Transition Strategy, both ED's Baseline EA and ED's Target EA were documented, modeled, and approved by the Department. The required detail and completeness of ED's baseline EA was to the level necessary for it to serve as the starting point for ED's EA Transition Strategy. ED's EA Transition Strategy addresses the 3-5 year timeframe for which the Department's target architecture is defined. As the Department's baseline and Target EAs are updated periodically, the ED's EA Transition Strategy is also updated.

To begin this process, the EA team reviewed the various Departmental level and Program Office level planning documents as input to the ED EA Baseline and Future State Vision in order to define the "As Is" and To Be" business and enabling IT environments. This effort included:

Identifying common Lines of Business across the Department.

Documenting the Line of Business strategic objectives.

Identifying critical success factors.

Documenting potential capability needs.

Deriving potential core-IT enabling capabilities.

Previewing the hypothesized visions with key LOB 'thought leaders'.



Analyzing common lines of business and services across the Department to define Education's segment architectures.

1.3.2 Step 1 – Redundancy and Gap Analysis

Step Number	Description	TSP Section
Step 1	Redundancy and Gap Analysis	Section 3.0

Once the Baseline and Target Enterprise Architectures were developed and validated through the Department's governance process, the ED EA Program Office performed an IT Redundancy analysis within the As Is environment and a Gap Analysis (per Program) between the As-Is and the To-Be Environments.

1.3.3 Step 2 – Refine, Prioritize, Develop Segments

Step Number	Description	TSP Section
Step 2	Refine and Prioritize Segments	Section 4.0

Upon completing and achieving Departmental approval of the Redundancy and Gap Analysis, the EA Program Office used the results of this Analysis to refine, prioritize, and begin development of ED's segments (initially defined in Step 0). These results were a critical factor in finalizing the Department's segments and determining the order of their development since they:

Facilitated the association of all ED Programs to its seven Lines of Business

Defined the Common Enabling Services (CES's) required by ED's Programs

Provided insight into which Programs had the greatest performance gaps

Identified business capability and service redundancy across ED Programs – allowing the EA Program to facilitate a collaborative approach to Transition Strategy Planning

1.3.4 Step 3 – Define Programs and Projects

Step Number	Description	TSP Section
Step 3	Define Programs and Projects	Section 5.0

As each Department's Segment Architecture was refined, the EA Program Office associated Programs with each Segment. Subsequently, with the development of each segment, the EA Program Office identified – or proposed to the Department's Planning and Investment Review Working Group (PIRWG) – specific IT investments to close the performance gaps (or eliminate redundancies) within each Segment.

1.3.5 Step 4 – ED Transition Sequencing Plan

Step Number	Description	TSP Section
Step 4	ED Transition Sequencing Plan	Section 6.0

Finally, in accordance with the prioritization of each segment and its associated, approved, IT investments, the EA Program Office developed the Department of Education Transition Sequencing Plan, incorporating:

- The Department's Life Cycle Management Framework
- Specific implementation milestones
- Results oriented and measurable performance milestones
- eGov Alignment and Performance Assessment Rating Tool (PART) objectives
- IT investment dependencies

This Plan is actively used by the Department to measure transition progress, IT investment performance, and to guide ED's path forward.



2.0 ED BASELINE AND TARGET ARCHITECTURE OVERVIEW

2.1 Baseline Enterprise Architecture

The Department of Education (ED) developed its Baseline Enterprise Architecture (EA) and Transition Strategy Plan (TSP) in November 2001 with participation across all ED Program Offices. The Baseline EA was defined in five layers or domains: Business, Data, Application, Technology, and Performance, which have since been used to guide a focused, results-oriented Departmental Business Transformation.

The Department is leveraging the knowledge gained through its Enterprise Architecture efforts and has begun to identify opportunities for intergovernmental collaboration to improve services to customers. The Federal Enterprise Architecture (FEA) and Federal Transition Framework (FTF) are used to help identify these opportunities. Additional opportunities are expected to surface as the Department continues to develop and integrate its disparate enterprise architecture activities. ED will continue to be able to characterize its enterprise architecture within the context of all FEA reference models once they are released.

In the past, as captured in the Department's Baseline Enterprise Architecture, ED pursued its mission and goals through a stove-piped, program-centric business model, as illustrated below in Figure 3.



EXECUTIVE OFFICES	"Higher o	Adult Education	on Portfolio"	"Kto 12 Education Portfolio"					"Policy, Communication & Management"			ment"
Ξ.	FSA	OPE	OVAE	OESE	OII	OSERS	OELA	OSDFS	IES	OPEPD	OIG	OCR
S	POLICY •Loans •Pell Grant LOANS	PROGRAM • Student aid policy • Post 2 nd education improvement • Foreign exchange programs	PROGRAM • Reform HS • Community colleges • Adult education	PROGRAM • K-12 edu. • SEA & LEA • NCLB	PROGRAM • K-12 innovations • Charter schools • NCLB (options) • Compliance	PROGRAM • Special edu. • Rehabilitation • Research	PROGRAM • English learners • NCLB Title III	PROGRAM • Safe schools • Drug free • Citizenship & character • ED HLS	PROGRAM • Research • Evaluation • Statistics	Budget Service Policy & Program Studies Strategic Accountability Education technology	• Inspector General	Compliance Programs Planning Complaints Resolution Technical Assistance
OFFICES	Awareness Application Delivery	DISC RETIONARY GRANT • Application • Award • Admin.	DISCRETIONARY GRANT • Application • Award • Admin.	DISCRETIONARY GRANT • Application • Award • Admin.	DISC RETIONARY GRANT • Application • Award • Admin.	DISCRETIONARY GRANT • Application • Award • Admin.	DISCRETIONARY GRANT • Application • Award • Admin.	DISCRETIONARY GRANT • Application • Award • Admin.	DISCRETIONARY GRANT • Application • Award • Admin.	policy (OET)		
PROGRAM OFFIC	Institution Participation Servicing -Repayment -Consolidation -Collection	- KOSKAN EVALUATION - Survey - Analysis - Results DISSEMINATE	FORMULA GRANT PROGRAM EVALUATION • Survey • Analysis • Results DISSEMINATE	PROGRAM EVALUATION • Survey • Analysis • Results DISSEMINATE	FORMULA GRANT PROGRAM EVALUATION • Survey • Analysis • Results DISSEMINATE	PROGRAM EVALUATION • Survey • Analysis • Results DISSEMINATE						
		INFORMATION	INFORMATION	INFORMATION	INFORMATION	INFORMATION	INFORMATION	INFORMATION	INFORMATION			
			-{			-			\sim			\sim
OFFICES												
SUPPORT	OCFO • Finance • Procurement • Travel • Loans Financial Administration • Grants Financial Administration											
ĕ	OM • Human Resources • Facilities Management											
ا چ	OCO Internal and External Communications											
Ľ	OTHER SUPPORT OFFICES: OGC [Legal], OLCA [Congressional Liaison], OPEPD [Budget Service, Strategic Accountability]											

Figure 3: Legacy ED Business Model

As illustrated in Figure 3: Legacy ED Business Model, the Office of the Under Secretary (OUS) oversees three offices including Federal Student Aid (FSA), the Office of Postsecondary Education (OPE), and the Office of Vocational and Adult Education (OVAE).

The Office of the Deputy Secretary (ODS) oversees five offices including the Office of Elementary and Secondary Education (OESE), the Office of Innovation and Improvement (OII), the Offices of Special Education and Rehabilitative Services (OSERS), the Office of English Language Acquisition (OELA), and the Office of Safe and Drug Free Schools (OSDFS).

The Office of the Secretary (OS) oversees four offices, the Institute of Education Sciences (IES), the Office of Planning, Evaluation, and Policy Development (OPEPD), the Office of the Inspector General (OIG), and the Office of Civil Rights (OCR).

2.2 Future State Vision

As a result of the Department-wide business focused analysis, the Enterprise Architecture Program Office developed the Department of Education's <u>Future State Vision</u>. The ED Future State Vision (Target Architecture) adopts a Line of Business (LOB) perspective to support departmental goals by delivering *common* capabilities across program and



principal offices. The Future State Vision defines the primary business capabilities for each LOB, which drive IT services and investments

Figure 4 below overlays the Lines of Business (LOB's) in which the department engages. This provides a visual representation of the relationships between the Lines of Business and the Department as a whole, which further decomposed into their constituent business processes.

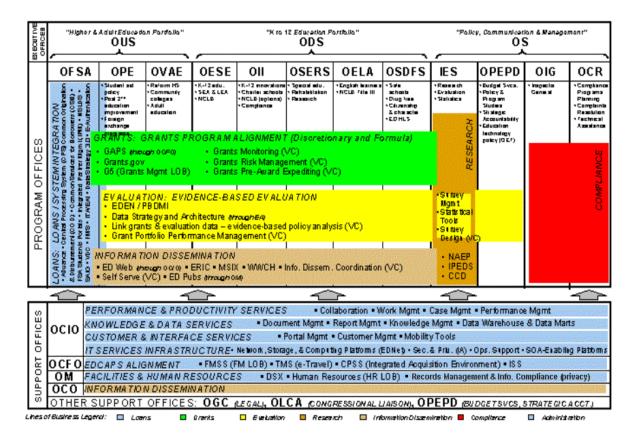


Figure 4: Legacy ED Business with Lines of Business Overlay

The Department's business processes and IT investments are developed to move the Department away from a stove-piped environment where capabilities are invested to meet single Program Office needs, to a cooperative environment in which common capabilities and services can be employed to meet similar Program Office needs.

2.2.1 Lines of Business (LOB's)

The Department's Enterprise Architecture future state business model is established around the seven cross-Program Office Lines of Business (LOB's). Where relevant, current and future IT investments are managed as a portfolio delivering enabling technical capabilities in support of each LOB's needs, which can span multiple Program Offices. For example, while OESE and OPE serve very different education segments (K-12, post-secondary education), the LOB mode of delivery remains the same, *i.e.*, through formula and discretionary grants. The grants mode of delivery of these two offices are



very similar in terms of process workflow and system support requirements. By focusing on Grants management capabilities across the Enterprise, the Department reduces the need to develop multiple sub-scale systems within each Program Office.

The LOB enterprise view of grants enables the Department to evaluate how the portfolio of multiple grants managed by multiple Program Offices collectively contributes to improving Education's performance. The Department's seven Lines of Business (Loans, Grants, Evaluation and Policy Analysis, Research, Information Dissemination, Compliance, and Administration) are detailed in the Business are detailed in the following tables below:

- Loans (Table 2)
- **Grants** (Table 3)
- Evaluation and Policy Analysis (Table 4)
- **Research** (Table 5)
- Information Dissemination (Table 6)
- **Compliance** (Table 7)
- Administration (Table 8)

Table 2: FEA BRM Mapping for Loans LOB

LOB Vision	LOB Description	FEA BRM Mapping
Deliver the right aid, to the right people, at the right time.	Management and delivery of federally funded or federally guaranteed financial assistance for post-secondary education. Management of financial student aid is provided through the Office of Financial Student Assistance.	 Business Area: Mode of Delivery LOB: Federal Financial Assistance, Credit and Insurance Subfunctions: Direct Transfers to Individuals, Loan Guarantees, Direct Loans

Table 3: FEA BRM Mapping for Grants LOB

LOB Vision	LOB Description	FEA BRM Mapping
Research and Development, Advising and Consulting,	Review, award, and disbursement of formula and discretionary grants through the various Program Offices.	Business Area: Mode of Delivery LOB: Federal Financial Assistance, Transfers to States and Local Governments
Knowledge Dissemination.		Subfunctions: Federal Grants, Formula Grants, Project Competitive Grants, Earmarked Grants

Table 4: FEA BRM Mapping for Evaluation and Policy Analysis LOB

LOB Vision	LOB Description	FEA BRM Mapping
Conduct evidence- based evaluation that informs program and policy decisions while reducing the data collection	Assessment of ED's programs and related policies for meeting national education objectives. Evaluation focuses on assessing the impacts and outcomes of the education reform and/or improvement strategies that each program and its	Business Area: Mode of Delivery LOB: Knowledge Creation and Management Subfunctions: Research and Development, Advising and



LOB Vision	LOB Description	FEA BRM Mapping
burden for customers.	related grants support.	Consulting, Knowledge Dissemination

Table 5: FEA BRM Mapping for Research LOB

LOB Vision	LOB Description	FEA BRM Mapping
Provide greater awareness of and timely access to evidence-based research.	Education research and statistical analysis on the condition of education in the U.S. IES performs the majority of education research for the Department. The National Center for Education Statistics (NCES) collects, analyzes and reports statistics on the condition of education in the U.S.	Business Area: Mode of Delivery LOB: Knowledge Creation and Management Subfunctions: Research and Development, Advising and Consulting, Knowledge Dissemination

Table 6: FEA BRM Mapping for Information Dissemination LOB

LOB Vision	LOB Description	FEA BRM Mapping
Provide ready access of relevant department education information to outside constituencies.	Distribution of education information products through multiple channels and formats. Two main types of information dissemination are performed: (1) dissemination of program evaluations and reports and (2) dissemination of information to the education community and the general public.	Business Area: Mode of Delivery LOB: Knowledge Creation and Management Subfunctions: Knowledge Dissemination

Table 7: FEA BRM Mapping for Compliance LOB

LOB Vision	LOB Description	FEA BRM Mapping
Ensure consistent high quality and efficient compliance services that meet customer needs	Assurance that policies mandated by ED and by Federal law are being carried out. ED ascertains that policies mandated by ED and by Federal law are being carried out as intended by ED staff, grantees, contractors, and other stakeholders.	Business Area: Mode of Delivery LOB: Regulatory Compliance and Enforcement Subfunctions: Inspections and Auditing, Standard Setting / Report Guideline Development

Table 8: FEA BRM Mapping for Administration LOB

LOB Vision	LOB Description	FEA BRM Mapping
Promote and deliver enterprise-wide support to ED program offices.	Enterprise-wide support services. These include the following sub- functions: Procurement, General Legal Services, Facilities and Travel Management, Human Resources Management, Financial Management, Information Resources Management, and Planning and Administration.	Business Area: Management of Government Resources LOB: Administrative Management Subfunctions: Facilities, Fleet, and Equipment Management; Help Desk Services; Security Management; Travel; Workplace Policy Development and Management



2.2.2 Primary IT Delivery Organizations

Within the Department, the primary IT delivery organizations are FSA, IES, OCFO, and OCIO:

- FSA delivers the Loans related mission applications, support applications (FMS), as well as the FSA technical infrastructure (VDC).
- IES delivers the Research related mission applications operated from ED and vendor facilities.
- OFCO provides mission and support applications through EDCAPS (a suite of financial management applications), including FMSS, CPSS, G5 (Grants related mission application), and Travel.
- OCIO is responsible for the Department's infrastructure service.

In addition, several Program Offices deliver mission applications, *e.g.*, OPEPD contracts EDEN development (the Department's primary Evaluation mission application) and, OPE and OESE contract for various grants-related applications support. Finally, the Department also uses IT-related services provided by external government centers of excellences (*e.g.*, human resource management systems) as encouraged by the e-Gov Program.



3.0 REDUNDANCY AND GAP ANALYSIS

3.1 Redundancy Analysis

ED performed its redundancy and gap analysis to identify opportunities for consolidation or reuse in ED's baseline architecture and to identify "gaps" between ED's baseline and target architectures. Identified opportunities and gaps were then addressed by programs and projects laid out in ED's enterprise sequencing plan (Section 6.0).

ED performed its redundancy analysis as part of a broader IT portfolio analysis. The findings (Table 9) of this analysis are available in <u>ED's IT Portfolio Analysis</u> presentation.

	What We Did		What It Means
Step 2.	Began with the February 23, 2005 eCPIC list. Focused on the non-FSA investments.		• Analysis reveals that ED invests in a number of projects that independently use Center of Excellence capabilities, which could potentially be consolidated or shared.
Step 3.	Created a "simplified" ED Service Reference Model (SRM) to codify IT component service functionalities.		 This analysis identifies areas worth further investigation.
Step 4.	Evaluated and coded each investment with all the relevant SRM components.		• Any decision to re-architect a project to use shared component modules should be based on thorough analysis:
Step 5.	Based on an EA template that maps the SRM codes to the 18 Centers of Excellence (CoE), we coded each investment with all relevant CoE		 Assessment of functionality employed to determine whether alternative components /products might be used instead
Sten 6	employed. Performed MS Excel pivot table		 Feasibility of consolidation or sharing Cost of transition vs. potential bapafits
otep 0.	analysis to identified CoE categories used by multiple projects, as well as potentially sharable CoEs across non- FSA and FSA investments.	determine whether they could make use common or shared service components,	• All new investments should be evaluated to determine whether they could make use of common or shared service components, when
Step 7.	Reviewed regularly. Last updated October 2007.		available for general use, thereby avoiding proliferation of duplicate capabilities.

Table 9: ED's IT Portfolio Analysis

3.1.1 Simplified ED Service Reference Model (SRM) Process

The figures on the following pages are taken from ED's IT Portfolio Analysis and describe the results of the Department's comprehensive redundancy analysis:

The following illustration (Figure 5) presents Education's process for developing the "Simplified" ED Service Reference Model (SRM) Components.



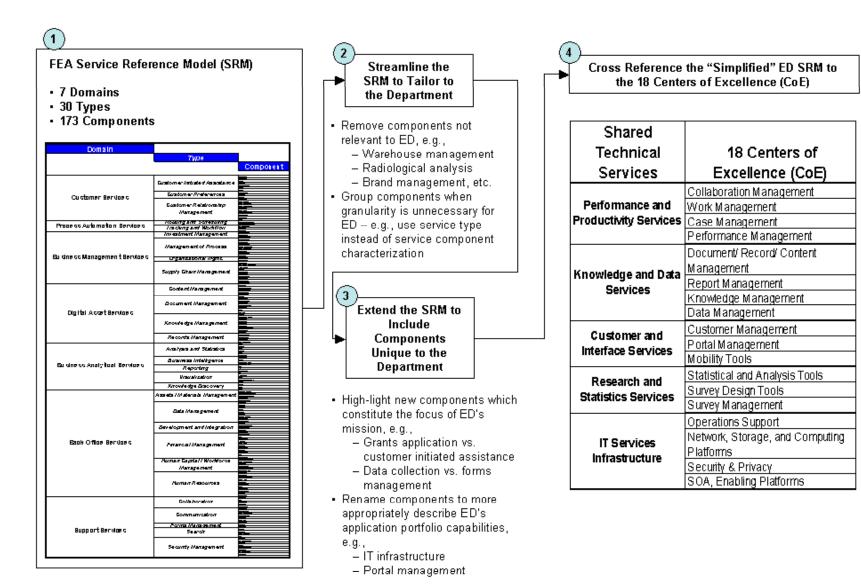


Figure 5: Simplified ED Service Reference Model Process



3.1.2 Simplified ED SRM Components

The resulting, simplified ED SRM consists of 43 common components tailored to the Department and its business functions.

SRM Domains	Simplified ED SRM Component Types	SRM Domains	Simplified ED SRM Component Types
Customer Services	1. Customer Management	Business Analytical	20. Analysis and Statistics
Customer Services	2. Portal Management	Services	21. Report Management
	3. Data Collection		Data Warehouse
	4. Grants Application Management		Performance Management
	Work Management	Back Office Services	22. Assets Management
Process Automation	5. Correspondence Management		23. Facilities Management
Services	6. Case Management		24. Mail Management
Services	7. Work Management		25. Data Management
Business Management	8. Performance Management		26. Data Mart
Services	9. Portfolio Management		27. Data Warehouse
Services	10. Strategic Planning and Management		28. IT Integration
	11. Grants Monitoring		29. IT Development
	12. IT Change Management		30. HR Management
	13. Program / Project Management		31. Travel
	14. Contracts & Procurement		32. Financial Budgeting
	IT Development		33. Financial Management
Digital Asset Services	15. Content Management		34. Grants Financial Management
Digital Hisser Bervices	16. Document Management	Support Services	35. Collaboration
	17. Grants Document Management		36. Telephony
	18. Knowledge Management		37. Web Cast
	19. Records Management		38. Grants Review Management
	Data Collection		39. Legal Management
			40. Web Information Search
Note: Components in Red.	denote new service components exected		41. IT Security
specifically for ED's	denote new service components created		42. Physical Security
specifically for ED	s use.		43. IT Infrastructure
			Data Collection

Table 10: Simplified ED Service Reference Model Components

The Department's EA Redundancy Analysis identified 18 potential Common Enterprise Services (CES) that are needed at Education. CES's are shared service/business function needs that are common to multiple investments/Lines of Business across the Department – and that can be implemented at an Enterprise-level as opposed to a stove-piped manner.



3.1.3 Common Enterprise Services (CES)

The 18 Common Enterprise Services (CES's) identified are listed in the table (Table 11) below:

Table 11: Common Enterprise Services (CES)

CES	Description	
Collaboration Management	Allow people to work together more efficiently by enabling greater information sharing.	
Work Management	Allow the monitoring of activities within a business process.	
Case Management	Manage the life cycle of a particular claim or investigation (include creating, routing, tracking, assignment and closing of a case and case handler collaboration).	
Performance Management	Measure the effectiveness of an organization and/or its assets.	
Document/ Record/ Content Management	Control the capture and maintenance of an organizations documents and files.	
Report Management	Support the organization of data into useful information.	
Knowledge Management	Support the identification, gathering and transformation of documents, reports and other sources into meaningful information.	
Data Management	Usage, processing and general administration of unstructured information.	
Customer Management	Support the retention and delivery of a service or product to an organization's clients.	
Portal Management	Allow customers to proactively seek assistance and service from an organization, personalize a user interface, and support the search of specific data from a data source.	
Mobility Tools	Tools that enable mobile computing.	
Statistical and Analysis Tools	Support the examination of business issues, problems and their solutions.	
Survey Design Tools	Tools enabling the collection of information from customers.	
Survey Management	Collect useful information from customers.	
Operations Support	Information Technology hardware, software and technical support for ongoing operations and maintenance.	
Network, Storage, and Computing Platforms	Hardware and software for networking and storage.	
Security & Privacy	Tools that support Confidentiality, Integrity and Availability.	
SOA, Enabling Platforms	Service Oriented Architecture (Interoperable Standards).	
Other	Services needed by your investment that can be considered as an Enterprise-wide service candidate.	



3.1.4 EA Areas of Redundancy Under Investigation

The Enterprise Architecture Office will further investigate and refine the redundancy areas listed below:

Table 12: EA Areas of Redundancy Under Investigation

Areas of Redundancy	Further Investigation
IT Infrastructure	• In principle, the IT infrastructure investments (IT hardware / software and associated maintenance contract(s) should be managed at the enterprise level through the IT Infrastructure LOB and VDC.
	• Analysis shows that multiple other POCs are engaged in procurement of IT equipment.
	• Opportunities exist to explore the feasibility of consolidating the procurement and management of IT infrastructure to improve asset control and purchase / support agreement terms.
Knowledge Worker Infrastructure	• Multiple programs have launched different collaboration, workflow, and knowledge / document management environments to improve their task management and information sharing.
	• This has led to a proliferation of different, frequently not interoperable, products deployed.
	• Opportunities exist to define the Technology Standards and Technology Roadmaps to encourage the reuse of standard technologies and the sharing of best practices.
Grants Management	• Multiple POCs have created different program-specific peer review modules and grant monitoring modules to supplement the Department's GAPS system.
	• As GAPS is reengineered, the pre-award and post-award capabilities can be incorporated to enhance ED's offering as the government-wide services provider for the Grants Management Line of Business.
Data Collection / Data Mart / Data Warehouse	• In addition to IES and PBDMI, multiple POCs own database systems that manage the data collection for research and evaluation purposes.
	• Moving towards the Target EA Vision of creating an enterprise data warehouse will help remove the need for the current islands of independent data collection.
Web Services / Portal	• Different programs have created a variety of web sites for information dissemination and on-line transactions.
Management	• Opportunities exist to better integrate these interfaces to achieve a more consistent "brand image" or "single sign on" for ED as well as to leverage different on-line capabilities (e.g., search, self-serve, etc.).



3.2 Gap Analysis

3.2.1 Performance Gap Analysis

In coordination with the Departmental Redundancy Analysis, the EA Program Office performs a comprehensive Performance Gap Assessment (per ED Program) between the Baseline and Target Enterprise Architectures. The ED Performance Gap Analysis cited specific mission-focused issues that needed to be addressed in order for the Department to achieve its <u>Future State Vision</u>. The results of the Performance Gap Analysis are summarized in the table below for each Program area:

- Federal Student Aid (Table 13)
- Office of the Chief Financial Officer (OCFO) (Table 14)
- Office of the Chief Information Officer (OCIO) (Table 15)
- Institute of Education Sciences (IES) (Table 16)
- Office of Management (OM) (Table 17)
- Office of Planning, Evaluation, and Policy Development (OPEDP) (Table 18)
- Office of Elementary and Secondary Education (OESE) (Table 19)

Table 13: ED Program – Federal Student Aid

Business Area	Baseline View	Performance Gap	Target View
Loans	 At the start of FSA's Business Transformation effort: ED's National Student Loan Data System (NSDLS) nor the other systems were designed for efficient access to reliable student financial aid information. Many systems were incompatible and lacked data standards and common identifiers. There was absence of enterprise 	 Inconsistent data integrity/quality System Interoperability Lack of data sharing and exchange Stand-alone/stove-piped systems Multiple points of access to FSA data Multiple views of customer 	 Use of industry-accepted means of integrating existing data on student loans and grants. Implementation of a common method that institutions can use to submit student financial aid for Pell Grant and Direct Loan programs. A comprehensive human capital strategy. Increased accountability for the integration of Federal Student Aid data through an Information Service Infrastructure Use of financial information to measure and predict the efficiency of common origination disbursement activities. Elimination of paper-based (replaced with electronic



Department of Education Enterprise Transition Strategy Plan, February 2008

Business Area	Baseline View	Performance Gap	Target View
	 architecture. ED continued to acquire independent systems to support specific student financial aid programs that could not easily share information. Mounting cost of developing and maintaining stand-alone systems. 	accounts	 recordkeeping capability compliant with applicable statutes and regulations) delivery processes and stakeholder communications. Creation a consolidated system of record for every institutional trading partner. Implement a single portal that provides streamlined access to FSA information and services to customers, partners, and employees. NOTE: Click <u>HERE</u> to view associated IT investment.

Table 14: ED Program – Office of the Chief Financial Officer (OCFO)

Business Area	Baseline View	Performance Gap	Target View
Grants Management	 GAPS controls payments for the Department's programs, including payments for grants and direct loans and other program-related obligations. GAPS is fully integrated with Financial Management System Software (FMSS) and serves as a subsidiary to the general ledger for program-related obligations, payments, and expenditures. Integrated Support Services (ISS) supports GAPS infrastructure, contract oversight and internal application testing as part of the EDCAPS environment. 	 Disparate systems supporting the end-to-end business process of grant. GAPS does not provide grants performance monitoring after grant is awarded. Out of date with current technology trends. 	 Maintain and strengthen financial integrity and management and internal controls. Full integrations with the Financial Management System Software (FMSS) and will serve as a subsidiary to the general ledger for program-related obligations, payments, and expenditures. Facilitate improvements within the grant management lifecycle through the use of "enabling" technologies such as workflow management, document management, automatic alerts, notifications and e-signature (compatible with and embedded in an electronic recordkeeping capability compliant with applicable statutes and regulations). NOTE: Click <u>HERE</u> to view associated IT investment.



Business Area	Baseline View	Performance Gap	Target View
Contracts / Acquisition Management	Disparate and decentralized systems for entering, retrieving and viewing Contract/ Acquisition related data.	 Duplication of efforts and redundant processes. Inefficient contracting management controls. Hardcopy file storage. 	 Central repository to enter, retrieve and view Acquisition/contract related data. Greater ability to respond to internal and external information requests. Faster access and dissemination of contract documents. Improved contracting management controls. Decreased need for hardcopy files storage (with an electronic recordkeeping capability). Improved accuracy and timeliness of payments. Increased user satisfaction, etc. NOTE: Click <u>HERE</u> to view associated IT investment.
Financial Management	 Decentralized systems for entering, retrieving and viewing grant and payment related data. System inefficiencies. Poor financial management capability. 	 Duplication of efforts and redundant processes. Duplicate data entry efforts. Limited oversight tracking of internal and external for all systems. 	 Centralized system support for function to enter, retrieve and view grant and payment related data. Greater ability to respond to internal and external information requests. Faster access and dissemination of contract documents. Decreased need for hardcopy files storage (with an electronic recordkeeping capability). Improved financial system reporting capabilities. Increased internal controls by minimizing data input points. Improved contracting management controls and project task specific support (<i>i.e.</i>, configuration management, testing, and training support. NOTE: Click <u>HERE</u> to view associated IT investment.
Data Management	 Disparate and decentralized systems for entering, retrieving and viewing Contract/ Funding related data. Inefficient manual processes that are subject to error. 	 Duplication of efforts and redundant processes. Inefficient financial management controls. Insufficient response times to internal and external financial information inquiries. 	 Central repository to enter, retrieve and view financial/contract related data. Greater ability to respond to internal and external information requests. Improved financial management controls. Improved accuracy and timeliness of financial information. Reduced number of manual processes. Increased user satisfaction. NOTE: Click <u>HERE</u> to view associated IT investment.



Business Area	Baseline View	Performance Gap	Target View
Travel Management	 Legacy System supported the electronic processing of travel documents. Legacy System allowed ED travelers the ability to create and electronically route travel documents. Legacy System provided that Electronic document files are electronically integrated to the Department's financial system to create obligation or expenditure transactions through to the payment process. Integrated Support Services (ISS) are supported by TMS for infrastructure and internal application testing as part of the EDCAPS environment. 	• Gelco Travel Manager was ED's Legacy System. The Legacy System was not in compliance with the eGov mandate thus had to be replaced with an eTS system.	 Travel management system that fully complies with the PMA eGovernment Initiative. Provide a web-based end-to-end integrated solution to ED travelers. Multi-tiered, web-based application utilizing commercial on-line booking engine (GetThere) and COTS software to complete the end-to-end eTS solution. More efficient and effective document processing. Allow split disbursement capability. More timely transmissions and improved accuracy of automated data. Allow for an integrated On-line booking engine (OBE). Increased user satisfaction. NOTE: Click <u>HERE</u> to view associated IT investment.

Table 15: ED Program – Office of the Chief Information Officer (OCIO)

Business Area	Baseline View	Performance Gap	Target View
IT Infrastructure Management	IT infrastructure services at the Department of Education are supported through a multi- faceted contract (EDNet) that is not effective with other business partners.	 Inefficient ED infrastructure services to internal and external stakeholders. Lack of optimized Performance in ED's infrastructure operations. Use of disparate platforms 	 Contractor Owned-Contractor Operated (COCO) Managed IT infrastructure service model that will: 1) Source a contractor owned and contractor operated Managed Services IT Infrastructure that is Performance Based, and Firm Fixed Priced. 2) Improve ED's services to students and customers. 3) Enable ED to become a more effective business partner.



Business Area	Baseline View	Performance Gap	Target View
		and technologies to support business functions/ applications.	 4) Reduce operational risk of ED's operations. 5) Improve the performance of ED's operations and the ability to measure that performance and establish accountability. 6) Resolve audit findings. 7) Provide common technology platform for business applications such as HSPD-12, IPv6 and others. NOTE: Click <u>HERE</u> to view associated IT investment.
Knowledge and Data Management	Linking information from supplying systems and performing analysis is too difficult since the information from supplying systems is in isolation.	 Disparate sources of data Improper payments Inefficient Grant Management processes 	 Provides a single, centralized source of data. Provided as a common enabling service that may be leveraged for central reporting for existing and future systems. Making grants data more readily available for analysis and decision-making. Eliminate improper payments and reduce funds transferred to Treasury. NOTE: Click <u>HERE</u> to view associated IT investment.
Security and Identity Management	 Inflexible security architecture – not allowing external stakeholders to access Federal data easily and efficiently. Limited security controls. Minimal interoperability for secure access with other systems. Redundant authentication processes. Lack of alignment with the Federal E-Authentication Initiative. 	 Inconsistent multiple points of authentication. Duplication of efforts and redundant processes. Lack of interoperability/ alignment with the Federal E-Authentication direction. 	 Adoption of the GSA E-Authentication Initiative – a crosscutting initiative of the e-Government (eGov) component of the President's Management Agenda (PMA). As part of the e-Authentication Federation and as a Relying Party (RP), the Department may bring into the Federation any internet-based system that has end users outside the agency's firewall and requires identity verification of those end users. Once an agency's system has been E-Authentication (e-Auth) enabled, it will be able to grant access to end users who have an identity credential from one or more of the Federation's Credential Service Providers (CSPs). Alignment with the GSA-led E-Authentication Initiative will result in: Greater flexibility based on a Distributed architecture that will allow citizens and businesses to use non-government issued credentials Stringent security controls to prevent unauthorized or validated access Greater ability to conduct secure, easy-to-use and consistent



Business Area	Baseline View	Performance Gap	Target View
			method of authenticating identity
			 Improved access ensures interoperability with other ED programs
			 Improve access to conduct federated authentication for electronic user identity credentials from external credential service providers.
			NOTE: Click <u>HERE</u> to view associated IT investment.

 Table 16: ED Program – Institute of Education Sciences (IES)

Business Area	Baseline View	Performance Gap	Target View
Portal Management	 The NCES Web Portal (deployed since 2004) is used to disseminate comprehensive statistics on the condition and progress of education, at the preschool, elementary, secondary, postsecondary, and adult levels in the United States. This includes the Common Core of Data (CCD) program, which annually collects fiscal and non-fiscal data about all public schools, public school districts and state education agencies in the United States. The current view includes: Manual statistical and data collection activities. Delayed response times to internal and external information requests and distribution of data. Occasional data quality issues. Lack of integration between 	 Duplication of efforts and redundant processes for data collection. Inefficient electronic distribution of information. Manual processing and analysis of statistical data. Inefficient data publication processing (resulting in data quality and timeliness issues). 	 NCES Web Portal Enhancements to address current performance gaps and resulting in: Faster distribution of information through electronic self-service tools, resulting in: Greater ability to respond to internal and external information requests. Improved customer service (Improved access to public information and services as a result of improved navigation, search techniques, and publishing workflow, data dissemination and collection, customer service, and online communities). Reduced manual operations (Administrative savings due to electronic distribution of information and self-service table generator tools) resulting in improved accuracy and timeliness of survey data. Seamless integration of student aid and statistical information resulting in improved efficiency. NOTE: Click <u>HERE</u> to view associated IT investment.



Department of Education Enterprise Transition Strategy Plan, February 2008

Business Area	Baseline View	Performance Gap	Target View
	student aid and statistical information.		
Data Management	Paper-based mail survey, which was keyed into a database and error resolution, was done by analysts.	Excessive time to get the data publicly available after it is reported.	 A web-based data collection system to help decrease data entry time, as well as having built-in edits to cut out the use of analysts for error resolution. NOTE: Click <u>HERE</u> to view associated IT investment.
Documentation Management	 Centralized systems exist for management of documentation and controls over secure data for data exchange. Disparate and decentralized systems still exist for assessment of project data and management of contract staff. Separate customer management systems used to track and manage customer information and activities. 	 Inefficient contracting management controls. Separate systems provide different views of project status and project activities. No single view of project status for senior managers. No integrated customer relationship management. No single repository for communications and notifications of events and major decisions. 	 Central library of NAEP program documentation accessible for program and contractor staff. Improved contracting management controls with data visualization and dashboarding. Better management of web-based applications for integration of contractor activities and to report results to the American Public. Improved management of communications with the American Public. Improved communications and notifications amongst contractors and NCES. Improve the need for a secure environment for Alliance and NCES personnel to exchange information regarding the assessment efforts. NOTE: Click <u>HERE</u> to view associated IT investment.
Research Management	 The ERIC library system provides all publications of the Department of Education and core education literature for educators, researchers, and the general user. The ERIC system is also widely distributed by commercial databases. Long delays in bringing information online. 	 Consistency across the ERIC record. Limited to published electronic resources. Paper Based system, no electronic full text. 6 to 9 months to release new content. Multiple web sites with various designs and 	 To provide a comprehensive, easy-to-use, searchable, Internet-based bibliographic and full-text database of education research and information for educators, researchers, and the general public. To use the Internet to enable citizens to access information and transact business. Improved access to more education information as full-text articles or digital resources or links to publishers so that individuals can purchase those materials if they choose. Improved access to education materials dealing with legislation (<i>e.g.</i>, e-Gov initiative).



Department of Education Enterprise Transition Strategy Plan, February 2008

Busine Area	Baseline View	Performance Gap	Target View
	 Reliance on abstracts and absence of full-text access. Multiple web sites with different designs, and functionality. 	functionality.	 New content available within 30 days of acquisition. Single web site with improved functionality. NOTE: Click <u>HERE</u> to view associated IT investment.

Table 17: ED Program – Office of Management (OM)

Business Area	Baseline View	Performance Gap	Target View
Facilities and Access Management	EDSTAR is the system at ED that provides access control and positive identity verification (PIV I) as required by HSPD-12 for access to ED facilities (EDSTAR incorporates the HSPD-12 requirements from FY 2006 through FY 2011).	Prior to FY 2004 there was no common identification in existence for Employees and Contractors.	 Improve the strategic management of the Department's human capital to secure ED people, facilities and assets. Implement the PIV I (positive identification and access control to facilities) of HSPD-12 complaint hardware and, security ID badge screening stations. NOTE: Click <u>HERE</u> to view associated IT investment.

Table 18: ED Program – Office of Planning, Evaluation, and Policy Development (OPEDP)

Business Area	Baseline View	Performance Gap	Target View
Data and Report Management	Disparate and decentralized systems for entering, retrieving and viewing K-12/ Secondary Education related data.	 Duplication of efforts and redundant processes. Untimely, inconsistent K-12 data across program (Data silos create data inconsistencies across programs). Inefficient paper-based data collection. 	 Central repositories to collect, retrieve, and view standardized K-12 data (Directory (contact/descriptive information), Membership (student/staff), Education Units (state, local, school), Programs, and Civil Rights data. Simplify K-12 data collection process, reducing redundancy of effort and eliminating paper-based collections Data reporting and analysis more efficient and effective by providing a central source for K-12 education performance data such as No Child Left Behind status. Provide education information that is "fit for use." Disseminate K-12 information to external users, including states,



Business Area	Baseline View	Performance Gap	Target View
			researchers, parents, and other stakeholders.
			• Decreased need for hardcopy files storage.
			• More timely data facilitates formula grant payments for certain programs, timely reporting, and data publication
			• Reduction in OMB data collection requests and approvals.
			• Enhancement of employee's work, moving it from a paper form-based process to a focus on business intelligence
			Compliance with the Paperwork Reduction Act.
			• Support the integration and harnessing of the Department's information assets to build business intelligence.
			NOTE: Click <u>HERE</u> to view associated IT investment.

Table 19: ED Program – Office of Elementary and Secondary Education (OESE)

Business Area	Baseline View	Performance Gap	Target View
Migrant Information Management	 Exchange of student records was manual. State reporting on migratory student information was burdensome and manual. Process of counting the number of migratory children in each state was inefficient and manual – thereby resulting in data quality issues. 	 Lack of an efficient method to assist States in designing and supporting programs that help migrant students overcome the unique challenges associated with a migratory life in order to succeed in school and to successfully transition to postsecondary education or employment. Paper-based and time- consuming Data Collection and analysis. Data quality and reliability. 	 A system that enables users to obtain and use valid information to facilitate the grant administration, policy development, and evaluation of the Migrant Education Program (MEP). Automated exchange of migrant student information among all States. The solution will leverage data stored in other Departmental resources (EDEN) in order to ease reporting burden on States. Automated facilitation of: Reporting of most migrant data elements needed for CSPR Part I & II. Analysis of schools enrolling migrant children. Efficient collection (at a minimum) of educational and health-related data on migrant students to facilitate: Timely enrollment of migrant students. Proper grade/course placement. Accrual of course credits. NOTE: Click <u>HERE</u> to view associated IT investment.



3.2.2 Required Business Capabilities

Additionally, ED performed a business capabilities gap analysis to identify required functionality that is needed to achieve the Department's Future State Vision, per Line of Business. The full results of this analysis are represented as required business capabilities in ED's Information Resource Management <u>IRM Strategic Plan</u>; the business capabilities requirements (Table 20) are shown below.

LOB	Business Capabilities Requirements	Description	
Grants	Grants Management – Application	Find and apply for grants (online)Collaboration for more efficient application review	
	Grants Management – Management	Financial management – continued control of financial integrity of grants	
	Grants Management – Monitoring	 Grantee performance tracking, reporting, and document management Integrated grants administration and performance 	
Evaluation	Data Warehouse of Education Measures (aligned with Programs)	 Ability to define proper measures aligned to Program and mission Strategic Goals Ability to collaborate across programs to define / reuse performance information 	
	Reduce Data Collection Burden – Standardization, Reuse, Security & Privacy	 Common data standards and definition to enable sharing, aggregation, and analysis Secure data collection Collaboration for improved support of survey participants 	
	Grants-Evaluation Alignment (evidence-based policies and programs)	 Causal relationships between the programs initiatives and the education results Ability to conduct multi-dimensional data analysis and reporting Integrated grants administration and performance systems to enable impact assessment 	
Information Dissemination	Department-wide content, audience, and channel planning and coordination	 Customer segmentation – dissemination needs and channel preferences Cross-POC coordination, scheduling, and content creation Consistency in web content development and presentation Traffic monitoring to understand customer patterns and needs Consistent data definition to promote data exchange 	

Table 20: Business Capabilities Requirements ED's IRM Strategic Plan



LOB	Business Capabilities Requirements	Description
	Customer Self-Serve – analysis, reporting, and search	 Structured on-line analytical capabilities Tailored reporting Improved search capabilities Improved web page design and navigation Multi-channel information request receipts and distribution methods
Loans	Front-End Integration	 Improve aid awareness, application, account management and delivery Single point of access to FSA data Single view of customer account
	Back-End Integration	 Improve aid program integrity System modernization and integration Improve aid servicing
	Data Mining and Analysis	 Facilitate trending, forecasting, and credit risk management Optimize performance by separating operational and analytical environments
Research	Rigorous Research and Statistical analysis (continue)	 Common data standards and definitions to enable sharing, aggregation, and analysis Analytical tools to support multi-dimensional data analysis and reporting Collaboration for improved support of survey participants
	Acquisition and Dissemination of Educational Research Information	 Knowledge management Provide centralized access to published educational research "What Works Clearinghouse" Linkage of research findings to program objectives and key education issues (applying of research)
	Leverage Research in Evaluation and Program Agenda	 Define research agenda aligned to Program and mission Strategic Goals Cross-utilize research findings and statistical information in program evaluation to further inform program effectiveness



LOB	Business Capabilities Requirements	Description
Compliance	Risk-Based Methodologies	 Leverage financial and performance data Apply risk-based processes, analytical methodologies, and tools into education compliance Reporting and analytical tools to monitor compliance trends
	Proactive Compliance	 Support proactive and preventive activities with appropriate workflow and case management tools Monitor compliance trends and areas of historical non-compliance
	Leverage mobile tools for field investigators	• Apply mobile tools and case-worker tools to field audits, inspections and investigation
Administration	Provide common knowledge worker productivity tools	• Provide a reliable infrastructure environment and common knowledge worker productivity tools (e.g., analytics, collaboration, case/risk management, web access, workflow management)
	Financial integration across administration and programmatic areas	• Achieve budget and performance integration to link program funding decisions to results
	Leverage government-wide e-Gov and LOB initiatives	 Standardize and adopt government-wide financial, procurement, and travel management. Position ED to become a provider of grants servicing capabilities through the Grants Management LOB



4.0 **REFINE AND PRIORITIZE SEGMENTS**

As a result of the Performance and Business Capability Gap Analyses, ED refined, prioritized and began development of its Segment Architectures. The refinement and prioritization of the Department's Segment Architectures was based on the:

- Size of each program's performance gaps;
- Common business needs based on required business capabilities;
- Business impact;
- IT investment expenditures per program;
- Number of redundant services.

4.1 Core Mission Segments

Each ED Line of Business is included in the Enterprise Architecture as a Core Mission Segment. However, the Department has also segmented its Business and Enterprise Services areas as defined by OMB's EA Practice Guidance:

- Core Mission Area Unique service areas defining the mission or purpose of the agency. Core mission areas are defined by the agency Business Model (BM).
- Business Service Common or shared business services supporting the core mission areas. Business services are defined by the agency BM and include the foundational mechanisms and back office services used to achieve the purpose of the agency (e.g., inspections and auditing, program monitoring, human resource management, and financial management).
- Enterprise Services (or Common shared IT Services) supporting core mission areas and business services. Enterprise services are defined by the agency Service Model (SM) and include the applications and service components used to achieve the purpose of the agency (e.g., knowledge management, records management, mapping/GIS, business intelligence, and reporting).

The table below lists the number of redundant ED IT projects with similar components, categorized by the Common Enabling Services (defined in Step 3 during the Redundancy and Gap Analysis).

Enterprise Services	Common Enabling Services	Number of Projects with Similar Components
Performance and	Collaboration Management	16
Productivity Services	Work Management	7
	Case Management	10
	Performance Management	18

Table 21: Number of Projects with Similar CES Components



Enterprise Services	Common Enabling Services	Number of Projects with Similar Components
Knowledge and	Document/ Record /Content Management	51
Data Services	Report Management	58
	Knowledge Management	58
	Data Management	90
Customer and	Customer Management	19
Interface Services	Portal Management	32
	Mobility Tools	4
Research and	Statistical and Analysis Tools	44
Statistics Services	Survey Design Tools	1
Services	Survey Management	15
IT Infrastructure	Operations Support	63
	Network, Storage, and Computing Platforms	8
	Security & Privacy	8
	SOA, Enabling Platforms	8

The common enabling services that had the greatest number of associated similar projects were:

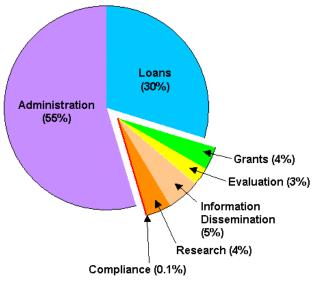
- 1. Knowledge and Data Management
- 2. Document / Record / Content Management
- 3. IT Infrastructure/ Operations Support
- 4. Report Management
- 5. Portal Management

4.2 IT Spend Analysis

In order to incorporate IT expenditure considerations into the Segment prioritization process, the EA Program Office also developed a comprehensive Spend Analysis per Line of Business and Program Office. Based on the information gathered as part of this Analysis, the EA Program Office was able to determine where primary Lines of Business and Program Offices spending was, the mission priorities of ED's organizational components, and where Segment Architecture development would be able to incur the greatest cost savings and performance improvement.

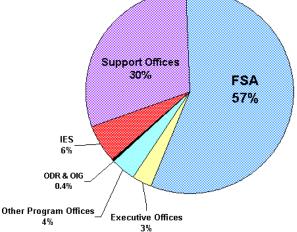
The results of the IT Spend Analysis are illustrated in the graphics below. Additional details can be found in the Department's IT Investment Portfolio Analysis.





The pie chart to the left indicates that the majority of the Department's IT expenditures are spent on the:

- Loans Line of Business (FSA), and,
- Administration Line of Business (primarily OCIO, OCFO, and OM).



The pie chart to the right breaks down average IT expenditures by ED Program Office. This chart demonstrates that IT investments are made primarily by:

- FSA (Loans)
- Support Offices including OCIO, OCFO, OM, and OPEPD. OPEPD provides Budget Service for the Department of Education.

As a result of the Redundancy and Gap Analysis and the Department of Education IT Spend Analysis, the EA Program Office prioritized the Department's segments for completion according to the timeline described in the following table.

Segment Type	Segment Name	Status
Core Mission	Loans	Complete/ Authorized in Writing
	Grants	Complete/Authorized in Writing
	Evaluation and Policy Analysis	Completed Q1, FY2009
	Compliance	Completed Q1, FY2010
	Research	Completed Q1, FY2011
	Information Dissemination	Completed Q1, FY2012

Table 22. Segment	Type with	Status and	Projected	Completion
Table 22: Segment	i ype with	Status and	Projected	Completion



Segment Type	Segment Name	Status
Business Services	Budget Formulation and Execution	Completed Q4, FY2008
	Financial Management	Completed Q1, FY2010
	Human Resources Management	Completed Q1, FY2011
	IT Management	Completed Q1, FY2012
	Operations Management	Competed Q1, FY2012
Enterprise Services	Knowledge and Data Services	Complete/ Authorized in Writing
	IT Infrastructure Services	Complete/ Authorized in Writing
	Identity Management	Completed Q2, FY2009
	Performance and Productivity Services	Competed Q1, FY2010
	Customer and Interface Services	Completed Q1, FY2011
	Research and Statistics Services	Completed Q1, FY2012



5.0 DEFINE PROGRAMS AND PROJECTS

The projects and programs in ED's EA Transition Strategy were driven by the Department's Enterprise Architecture and correspond to specific ED Segment Architecture. These projects and programs feed directly into ED's IT investment management process. Each project is assigned to a program. Where a project has been launched, a project manager who is responsible for budget and execution of the project was assigned. For the purposes of ED's EA Transition Strategy, a project is addressed as rollup to a program to show accurate dependencies between programs in ED's sequencing plan.

5.1 Program Description

As defined in PART guidance from OMB, a program is an activity or set of activities intended to help achieve a particular outcome for the public. When making budget or other decisions, the Executive Branch and the Congress may recognize a program for mandated funding allocations. According to OMB's EA Assessment Framework, the nature of programs varies dramatically across the Federal government.

Within ED's Enterprise Architecture, the term "program" is used in several different ways as follows:

- 1. Most of ED's workforce equates the term program with education-focused initiatives and activities listed on ED's website at the following link: <u>http://www.ed.gov/programs/find/title/index.html?src=sm</u>.
- 2. Most of ED's workforce also uses the term program as a modifier in order to identify Program Offices, which are major organizational components of the Department that directly provide education programs as defined in (1) above. Program Offices are a subset of the Principal Offices shown on ED's website at the following link: <u>http://www.ed.gov/about/offices/or/index.html?src=ln</u>.
- 3. Within ED's EA Transition Strategy, the term program is used to identify EA Transition Programs, which are a set of related activities and/or projects that transition part of ED's EA from its current state to its target state.

At the Department of Education, this definition is further refined into Business and Technology Transition Programs:

- EA Business Transition Programs transition part of ED's Enterprise Business Architecture from its current state to its target state. ED's EA Business Transition Programs either sustain or cause changes in ED's business process components by leveraging enabling information technology. As such, these Programs are dependent on ED's EA Technology Transition Programs. ED's EA Business Transition Programs do not correspond directly to ED's IT investments, but are instead dependent on ED's IT investments.
- **EA Technology Transition Programs** transition part of ED's Enterprise Information Technology (IT) Architecture from its current state to its target state. ED's EA Technology Transition Programs either sustain or cause changes in



ED's information technology components, which are leveraged into ED's business processes via ED's EA Business Transition Programs. As such, ED's EA Business Transition Programs are dependent on ED's EA Technology Transition Programs.

5.2 **Project Description**

According to OMB's EA Assessment Framework, a project is a discrete, planned effort to achieve a specific goal or result within a brief timeframe. A program manager is accountable for each project as it moves through the investment process and implementation. Interactions between projects should be used to show accurate dependencies between programs; the sequencing plan is not intended to replace ongoing project management or to track agency budgets down to the project level.

Within ED's EA Transition Strategy, the term project is used to identify EA Transition Projects, which are discrete activities that transition part of ED's EA from its current state to its target state.

ED's EA Transition projects are broken down into the following categorizations:

- EA Business Transition Projects transition part of ED's Enterprise Business Architecture from its current state to its target state as part of EA Business Transition Programs. ED's EA Business Transition Projects cause changes in ED's business process components by leveraging individual information technology components into the business process. As such, ED's EA Business Transition Projects are dependent on ED's EA Technology Transition Programs. These Transition Projects are not part of ED's EA Technology Programs and as such are not part of ED's IT investments, but are instead dependent on ED's IT investments.
- EA Technology Transition Projects transition part of ED's Enterprise Information Technology (IT) Architecture from its current state to its target state as part of EA Technology Transition Programs. ED's EA Technology Transition Projects cause changes in ED's information technology components, which are leveraged into ED's business processes via ED's EA Business Transition Programs. As such, these Programs are dependent on ED's EA Technology Transition Projects. ED's EA Technology Transition Projects are part of EA Technology Transition Programs that correspond directly to ED's IT investments.

5.3 ED Programs and Projects

5.3.1 ED Projects per Program and Completed Segment Architecture

Table 23: Completed Segments by Project Descriptions below represents ED's Projects and Programs by completed segment architecture.



Table 23: Completed Segments by Project Descriptions

Project	Description
Program: FSA	
Enterprise Information System	The Enterprise Information System (EIS) is the cornerstone for the modernization of Federal Student Aids service delivery systems. The EIS has morphed from a strategy and visioning initiative into a systems development project. The development work under this initiative has been moved to the ADvance initiative with the exception of the Information Services. The EIS (Information Services) will assist in ensuring a secure, efficient and effective system infrastructure by enabling the integration of Federal Student Aid data through the Information Service infrastructure.
Common Origination and Disbursement (COD)	The COD investment provides a common platform and record for schools to originate and disburse Title IV funds, as well as a common process that addresses both the overlapping and individual needs of the Grants and Direct Loan programs. COD supports the FSA's Financial Management System & the PMA for Financial Performance by the use of financial information to measure, operate and predict the effectiveness and efficiency of COD activities in delivering Direct Loans and Grants to its' customers. COD's system of controls includes areas as accounting, funds control, payments collections & receivables.
National Student Loan Data System (NSLDS)	NSLDS was mandated by Congress in the Higher Education Act and implemented in 1994. NSLDS aims to collect, store and make available detailed data about TITLE IV aid dispersed and the aid recipients. It aims to simplify and streamline aid delivery processes used by schools, lenders and guarantors throughout the country, replacing paper driven techniques with efficient electronic communications.
ADvance – Aid Delivery (Advance Operations)	 ADvance–Aid Delivery is the starting point for students and parents in the financial aid process. Application Processing and Eligibility Determination is the operations part of ADvance—Aid Delivery, which incorporates the functions of application processing and eligibility currently provided through the Central Processing System (CPS). The application functions include Free Application for Federal Student Aid (FAFSA) processing, both paper and web-based; data matching with the Social Security Administration, Veterans Administration, Selective Service, Department of Justice and Department of Homeland Security for eligibility determinations; initiation of PIN numbers for electronic signatures; eligibility notifications to applicants, both paper and web-based; electronic notifications of applicant eligibility to schools and state agencies; customer support for schools and other endusers of FAFSA data and services; and provision of software products and web functionality for use by schools in interfacing with application, origination and disbursement systems, both web and pc-based. The following describes the functions involved: Central Processing System Federal Student Aid Loan Ombudsman Center Editorial Services Image and Data Capture EDExpress Ancillary Services Participation Management
ADvance Person	FAA Access The ADvance—Person Data Management Program is a key next step in realizing Federal
Data	Student Aid's modernization and integration efforts. This initiative defined the Federal Student



Project	Description
Management (PDM)	Aid Target State Vision (TSV) for the delivery of Federal Student Aid and the sequencing of the TSV. Previously, ADvance's scope included the development of integrated solutions for the entire front end of the student aid life cycle. The ADvance program has focused its effort around the essential first step in the student aid life cycle and its impact to business functions and needs across phases of the student aid life cycle, namely the creation, maintenance, access, storage and viewing of "person" information. The ADvance will implement key components within the Federal Student Aid Target State Vision. These key components are: the Person Record Management System, PIN Re-engineering, Integrated Student View, and the Operational data Store.
	• Person Record Management Service (PRMS): The PRMS is a centralized system of record for Person data for all Federal Student Aid Application systems.
	• PIN Re-engineering: Re-engineer the PIN database to make it an enterprise asset that is aligned with our security architecture.
	• Integrated Student View (ISV): Integrated Student View will create an enterprise service utilizing the enterprise Portal asset and infrastructure to allow for current, consistent, comprehensive and accurate views of student data. Delivering this functionality will leverage recent advancements and implementations of the enabling infrastructure facilitating an enterprise service oriented architecture (SOA).
	• Operational Data Store: The Operational Data Store (ODS) will be used to store, manage, and access operational data to support Integrated Student View and to facilitate convenient, reliable, and efficient usage of enterprise operational data.
Student Aid Internet Gateway (SAIG)	SAIG is a store and forward mailbox application used by FSA's customers (post-secondary schools, lenders, guaranty agencies, state agencies, and other electronic trading partners) for sending and receiving Privacy Act data to the Title IV application systems. This information can be used by Federal Student Aid to determine whether the Title IV customer submitted their data prior to the application deadline. The information makes the institution accountable for any funding received as a result of processed data via SAIG. The SAIG Portal provides telecommunications support and facilitates data transmission between FSA's customers and the various Title IV Application Systems.
Federal Student Aid Financial Management	Utilizing Oracle Federal Financials, FMS is the single point of financial information by institution, integrating transactions both from the FSA feeder systems as well as from the Grants Administration and Payment System (GAPS).
System (FSA FMS)	FMS consolidates and manages all FSA program transactions from FSA's feeder systems (e.g., FFEL, Direct Loan, Pell, LEAP/SLEAP, and Campus-based transactions). The feeders interface functional transactions to FMS where they are translated to the appropriate accounting. It facilitates reconciliation and internal program management and reporting, and large volumes of payment processing. FMS tracks and manages the payment processing for direct loan originations and consolidations by GAPS and processes refunds to borrowers for overpaid loans. Through highly customized extensions, tightly integrated with the Oracle sub-ledgers, FMS processes large volumes of payments to the lender and guarantee agency communities. It receives electronic invoices and advice of fees payable to Education, performs complex custom validations and reasonability checks to minimize erroneous payments, and processes the transactions through Oracle sub-ledgers to generate Treasury payment files and accounting transactions. The accounting transactions are, in turn, summarized and sent to the FMSS core financial management system for external financial reporting.
Common Services for Borrowers (CSB)	Essentially compromised of core legacy systems as individual components – modified to improve upon the previous operating efficiencies of totally separate systems. The solution, known as Common Services for Borrowers-Legacy (CSB-Legacy), includes the following 4 components: Direct Loan Servicing System (DLSS), Debt Management and Collections System (DMCS), Direct Loan Consolidation System (DLCS), and Conditional Disability Discharge



Project	Description
	 Tracking System (CDDTS). The CSB-Legacy solution will focus on system operations and maintenance and will be operated in a steady state environment. Further, it will involve consolidation of multiple, diverse call centers and operations facilities into fewer, more efficient facilities; and redundant functions will be eliminated to the extent possible. CSB contributes to the fulfillment of service to individuals focused on building easy one-stop shopping creating single points of easy entry to access high quality of governmental services.
Integrated Partner Management (IPM)	Integrated Partner Management (IPM) will become the system of record for every institutional trading partner, regardless of the type of its interaction with Federal Student Aid. The IPM initiative, through process reengineering and process automation, will provide, in one solution, improved eligibility, enrollment, and oversight processes used to manage partner entities (<i>i.e.</i> , schools, school services, lender services, guarantee agencies, private collection agencies, state agencies, federal agencies, accrediting agencies, auditors, and owners) as they administer Title IV financial aid for students.
Integrated Technical Architecture / Enterprise Application Integration (ITA/EAI)	ITA and EAI/Enterprise Service Bus (ESB) provide an enterprise technical architecture that permits Federal Student Aid (FSA) to manage the development /execution of FSA applications in support of the business strategy. Using ITA and EAI technology, FSA successfully migrated numerous legacy systems and applications to a common platform and common standards. The ESB is an integration architecture that leverages EAI technologies and implements industry Web services standards. The ESB will provide foundational services for Service-oriented Architectures (SOAs). The ESB will support communication between systems and will support the use of shared services.
Virtual Data Center (VDC)	The VDC serves as the host facility for Federal Student Aid's (FSA) federally mandated systems and the Title IV Delivery Systems that process student financial aid applications (grants, loans, and work-study), providing schools and lenders with eligibility determinations, and support payments from, and repayment to lenders. The facility provides electronic access to these applications over the World Wide Web, providing benefits to the end user including; reduction in application errors, immediate end user confirmation of FAFSA filing requirements completion, and immediate preliminary summary of expected parental financial support.
Federal Student Aid Enterprise Web Portal Strategy (Portals)	The Federal Student Aid Enterprise Portal will provide streamlined access to the organization's information and services for customers, partners and employees. Federal Student Aid currently maintains 73 plus websites requiring web users to "shop" for data and services. Much time and energy is wasted in accessing systems and manually assembling data into integrated views. The Enterprise Portal will simplify the web presence and align it with business goals such as increasing financial aid awareness, building long term online relationships with students and partners, and achieving proactive service delivery (<i>i.e.</i> , pushing data and content to users based on their profile attributes).
	The portal will improve the online experience of customers, partners and employees; enhance business productivity by delivering online services and data from multiple systems to satisfy their specific needs; and support improved communications and teamwork. The portal will also provide business applications with an infrastructure that supports the development and deployment of the portal capabilities across the enterprise and reduces the technology burden on small and large projects.
	The Federal Student Aid Enterprise Portal will support internal portal views (employees) and external portal views (students, financial partners, schools) that will evolve over time to meet enterprise needs.
Segment/Progr	ram: Grants – OCFO
G5	The G5 investment has been selected and approved by the Office of Management and



Project	Description
	 Budget (OMB) as one of three Centers of Excellence/Shared service providers for the Grants Management Line of Business (GMLoB). This investment provides for the replacement of the ED's legacy grant management system - the Grant Administration and Payment System (GAPS) and supports the Line of Business consolidation initiative. The shared service model enables ED to provide services to client agencies that will migrate to the ED's end-to end grant management system. G5 will control payments for the ED's programs, including payments for grants and direct loans and other program-related obligations. G5 will be fully integrated with Financial Management System Software (FMSS) and will serve as a subsidiary to the general ledger for program-related obligations, payments, and expenditures. G5 will interface with FMSS at the summary level for funds control and general ledger postings.
Segment/Progr	cam: Knowledge and Data Services – OCIO
Data Warehouse	The "EDFacts" data warehouse (EDW) capability enables customers to link information from the supplying systems to perform analysis that would otherwise be too difficult to perform from the supplying system information in isolation. The data warehouse provides a common enabling service that may be leveraged for providing central reporting for existing and future systems.
Segment/Progr	am: ITI – OCIO
EDUCATE	The Education Department Utility for Communications, Applications, and Technical Environment (EDUCATE), formerly known as EDNet, is part of the ED's approach to moving towards a managed services environment in order to optimize the infrastructure, save taxpayer dollars and improve services for both internal and external stakeholders. Previously, IT infrastructure services at ED were supported through a multi-faceted contract (EDNet) that consists of a fixed price portion and specific vehicles involving both fixed priced projects and time and material activities. The Department has transitioned to a Contractor Owned-Contractor Operated (COCO) Managed IT infrastructure service model.
	The COCO Managed IT Infrastructure service model will provide the following Operational Services:
	 Security & Privacy Operations (SP) Desktop Services (DS) Helpdesk Support (HS) Systems/Data Center Operations (SD) E-Mail (EM) Network Services / Telecommunications / Multimedia Services (NS) Disaster Recovery (DR)
	 Special Services (SS) Printer Services (PS)



5.3.2 ED Projects per Program and Segment Architecture

Table 24: Segment and Program by Project Descriptions provides the planned segment architecture:

Project	Description			
Segment/Progra	Segment/Program: Financial Management – OCFO			
CPSS	CPSS provides users with a central repository to enter retrieve and view Acquisition/contract related data.			
FMSS	The Financial Management Support System (FMSS) is the Department of Education's core financial management system. It provides department-wide general ledger, budget execution, payment, receivable, funds control and financial reporting capabilities. The FMSS provides security for application user access, data validation, transaction validation, and funding controls. It also provides a strong system of internal controls through separation of duties, cross-validation edits of accounting segments and a series of account relationship tests that ensure the integrity of the Department's financial data. Regulatory financial reports are produced by the FMSS, including the department's financial statements.			
ISS	Integrated Support Services (ISS) integrates disparate systems (for grants, contracts, purchase orders, travel, and accounting) into a single integrated financial management solution for the Department- EDCAPS. ISS is not a system but a bundle of services that support all the EDCAPS systems (CPSS, GAPS, FMSS, TMS). ISS services will help ensure that the EDCAPS systems continue to work together as an integrated financial management system as they evolve and improve.			
TMS	The Travel Management System (TMS) provides a web-based end-to-end integrated solution to ED travelers. The solution enables travel documentation to be completed and processed in an electronic format thus providing a more efficient document flow. The solution also supports EFT payments through split disbursement capability. This eGov 100% deployed travel system supports the electronic processing of travel documents to support the Department's travel management system. This system allows ED travelers the ability to create and electronically route travel documents. After completion of electronic documents, files are electronically			
	integrated to the Department's financial system to create obligation or expenditure transactions through to the payment process.			
Segment/Progra	m: Identity Management – OCIO			
E- Authentication	E-Authentication (the Department has established a federation agreement with the General Services Agency for this initiative) minimizes the burden on businesses, public and government users when obtaining services on-line by providing a secure user authentication infrastructure for web-based transactions, eliminating the need for separate processes for the verification of identity and electronic signatures. This initiative enables the E-Authentication functionality to perform federated authentication in which the Department's systems can begin to use electronic user identity credentials from external credential service providers (<i>i.e.</i> , schools, financial institutions, etc.).			

Table 24: Segment and Program	by Project Descriptions
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Project	Description
NCES Web Support	The National Center for Education Statistics (NCES) Web Support project capitalizes on Internet opportunities to expand public access to NCES information and survey data, improve the speed and efficiency of service delivery, and facilitate communication between government and State education officials, as well as citizens. The project supports and continually updates the main NCES website, which is the first statistical or information contact with ED for many researchers and practitioners. The NCES website provides the following services: (a) presents NCES's key survey and publication releases, (b) broadens NCES's reach to more citizens and educators, (c) offers intuitive navigation to constantly updated survey and statistical content, (d) provides accurate and up-to-date information; and, (e) provides a unified entry point for all customers seeking national education statistics.
IPEDS	The Integrated Postsecondary Education Data System (IPEDS) uses the Internet to enable citizens to penetrate the Federal bureaucracy to access information, via the College Opportunities On-Line system displaying prices and student aid information for parents and students. IPEDS is the core IES/NCES data collection and dissemination project to describe postsecondary education institutions in the U.S. IPEDS is required by the Higher Education Act, as amended. IPEDS uses web-based collection and dissemination software, served by NCES at http://surveys.nces.ed.gov and http://nces.ed.gov/ipeds.
NAEP	The National Center for Education Statistics (NCES) is the sponsoring entity for the National Assessment of Educational Progress (NAEP) program, a nationwide assessment effort involving multiple contractors responsible for performing the assessment and executing the vision of the assessment from NCES and the National Assessment Governing Board (NAGB). This Program supports the improvement of students by providing timely assessment data online for parents, teachers, policymakers, and educators involved in establishing curriculum and achievement policies. The NAEP program also provides objective, invaluable research data on the progress of students in core studies, including reading/language arts. NAEP Network is a set of applications available to NCES, State NAEP coordinators, and NAEP assessment contractors to receive updated information and guidance regarding the current year's assessments and to collaborate with NAEP personnel.
ERIC	The mission of ERIC is to provide a comprehensive, easy-to-use, searchable, Internet-based bibliographic and full-text database of education research and information for educators, researchers, and the general public. It is the only system within the Federal Government that provides this service. The ERIC library includes all publications of ED, and many of these publications are helpful to parents as they seek information on increasing students achievement, higher education, rural and urban schools, school counseling and guidance information, and other ERIC topics. The ERIC library is also widely distributed by commercial databases, and the estimated collective total of ERIC search in 2006 was 62 million through all distribution channels.
Segment/Progra	m: Human Resources Management – OM
ID Access Control (EDSTAR)	The goal of ID ACCESS Control System (EDSTAR) is to provide protection of Government owned and leased facilities, protection of employees and contractors and provide controlled access to the ED's critical infrastructure. This project consolidates multiple access and Identification cards and increases ease of access



Project	Description		
	for employees and contractors and tenant Government agencies housed in Departmental spaces. ESTAR increases efficiency of Federal Clearance process and Personal Identification Standards for HSPD-12.		
Segment/Progr	am: Evaluation and Policy Analysis – OPEPD		
EDEN (EDFacts)	 The Education Data Exchange Network (EDEN) is a centralized, Internet-based system of elementary and secondary education data (K-12) from 52 State education agencies. This data is available for state, local education agency, and school levels and includes demographics, program participation, implementation, and outcomes. EDEN data is used for planning, policy, and management at the federal, state, and local levels. EDEN supports the Elementary and Secondary Education Act, as amended by the No Child Left Behind Act of 2001 (P.L. 107-110). The EDEN system has three components. 1. EDEN Submission System that collects the bulk of the K-12 data. 2. Survey/online collection capability that collects data that isn't "EDEN-able." Generally this data is extended text or one-time data. 3. EDFacts reporting capability. EDFacts provides ad hoc and standard reports for program offices, States, and for the EDEN project management office to manage the EDEN program. 		
Segment/Progr	Segment/Program: Information Dissemination – OESE		
MSIX	The Office of Elementary and Secondary Education (OESE) Office of Migrant Education (OME) is responsible for administering the Migrant Education Program (MEP). OME is mandated in the No Child Left Behind Act, Section 1308(b) to assist the States in developing effective methods for the electronic transfer of student records and in determining the number of migratory children in each State. OME established the Migrant Student Information Exchange (MSIX) project to accomplish this mandate.		

5.4 Dependencies between Transition Programs and Projects

ED's EA Transition Strategy maps the dependencies between programs and projects so the effects of budget decisions or slipping schedules can be quickly assessed for impacts on performance milestones and plans to achieve its Target EA vision.

ED's EA Business Transition Projects, as defined above reflect the dependencies between ED's EA Business Transition Programs and ED's EA Technology Transition Programs. For this reason, ED's EA Business Transition Projects appear in the Sequencing Plans of both the Business and the Information Technology Segment Areas. ED's EA Business Transition Projects are listed in later in this document.

ED's EA Technology Transition Projects, as defined above, subdivide EA Technology Transition Programs into phases that correspond to the Department's Lifecycle Management (LCM) process. Projects for each phase are dependent upon the completion of projects for earlier phases.

Dependencies between the Department's (non-FSA) projects are illustrated in the following figure (Figure 6). The colored boxes indicate IT investments that are



dependent upon other IT investments AND have investments dependent upon them (a many-to-many relationship).

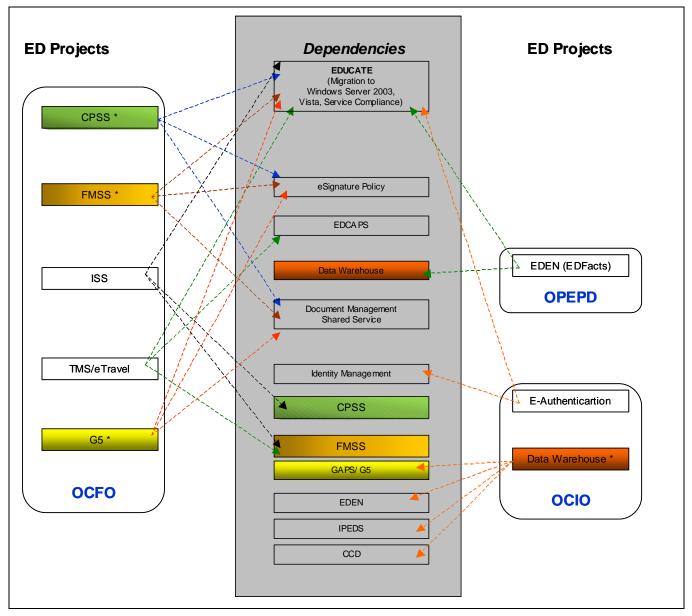


Figure 6: ED Non-FSA Projects with Dependencies

Dependencies between FSA projects are illustrated in the following figure (Figure 7: ED FSA Projects with Dependencies). The colored boxes indicate IT investments that are dependent upon other IT investments AND have investments dependent upon them (a many-to-many relationship). Further information on the specified investments or dependencies can be found in the Loans Segment Architecture.



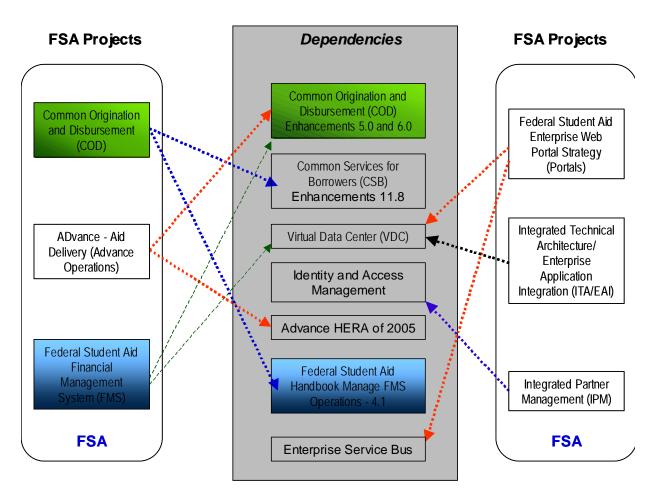


Figure 7: ED FSA Projects with Dependencies

Dependencies between all Department of Education Programs and IT investments are detailed in the following sections.

5.4.1 Project Dependencies per Program and Completed Segment Architecture

The following dependencies (Table 25) are associated with completed Department of Education Segment Architectures, which have been approved in writing by their respective business owners.

Project	Dependency				
Segment/Program: - Loa	ns / FSA				
Enterprise Information System	No known dependencies				
Common Origination and Disbursement (COD)	 Federal Student Aid Handbook Manage FMS Operations – 4.1 Common Services for Borrowers FMS Enhancements – 11.8 				
National Student Loan Data System (NSLDS)	No known dependencies				

Table 25: Segment and Program by Completed Project Dependencies



Project	Dependency
ADvance – Aid Delivery (Advance Operations)	 Common and Origination and Disbursement (COD) Enhancements 6.0 Advance HERA of 2005 Common Origination and Disbursement Enhancements (COD) 5.0
Advance Person Data Mgmt (Advance PDM)	No known dependencies
Student Aid Internet Gateway (SAIG)	No known dependencies
Federal Student Aid Financial Management System	 Virtual Data Center (VDC) Transition Common Origination and Disbursement (COD) Enhancements 6.0 Advance
Common Services for Borrowers (CSB)	No known dependencies
Integrated Partner Management (IPM)	 Portal Strategy and Prototype SEC Standards Enterprise Architecture Security Architecture Identity and Access Management Data Strategy (IF/SAHM or Enterprise Information System)
Integrated Technical Architecture/ Enterprise Application Integration (ITA/EAI)	Virtual Data Center (VDC) Transition
Virtual Data Center (VDC)	No known dependencies
Federal Student Aid Enterprise Web Portal Strategy (Portals)	Virtual Data Center (VDC) TransitionEnterprise Service Bus
G5 (GRANTS)	 Migration to Vista (provided by EDUCATE) This IT investment depends on the implementation of a Departmental Document Management Shared Service Education needs to approve a eSignature Policy and standard by Q3 2009
Segment/Program: Gran	t – OCFO
G5 (GRANTS)	 Migration to Vista (provided by EDUCATE) This IT investment depends on the implementation of a Departmental Document Management Shared Service Education needs to approve a eSignature Policy and standard by Q3 2009
Segment/Program: Know	rledge and Data Services – OCIO
Data Warehouse	Depends on G5, EDEN, IPEDS, CCD (these are feeder systems).
Segment/Program: ITI –	OCIO
EDUCATE	EDUCATE is now a Contractor Owned Contractor Operated (COCO) environment with firm and agreed upon SLAs



5.4.2 Project Dependencies per Program & Segment Architecture

The following dependencies (Table 26) are associated with Department of Education Segment Architecture, which will be approved in writing according to the <u>ED's Segment</u> Prioritization Schedule.

Project	Dependency
Segment/Progra	m: Financial Management – OCFO
CPSS	 Migration to Windows 2003 (provided by EDUCATE) This IT investment depends on the implementation of a Departmental Document Management Shared Service Education needs to approve a eSignature Policy and standard by Q3 2009
FMSS	 Migration to Windows 2003 (provided by EDUCATE) This IT investment depends on the implementation of a Departmental Document Management Shared Service Education needs to approve a eSignature Policy and standard by Q3 2009
ISS	 ISS must rely on the ED network for access to the EDCAPS systems ISS must rely on OCIO/EDUCATE to configure servers
TMS	 Migration to Windows 2003 (provided by EDUCATE) EDUCATE EDCAPS Applications – CPSS and FMSS
Segment/Progra	m: Identity Management – OCIO
E-Authentication	 EDUCATE service compliance capability Continued service and interoperability is dependent upon GSA, OMB and external sources for capability assurance Successful transition and implementation by all POCs within ED to a common framework for identity management
Segment/Progra	m: Research and Statistics Services – IES
NCES Web Support	No known dependencies
IPEDS	No known dependencies
NAEP	No known dependencies
ERIC	No known dependencies

Table 26: Segment and Program by Project Dependencies



Project	Dependency						
Segment/Progra	Segment/Program: Human Resources Management – OM						
ID Access Control (EDSTAR)	No known dependencies						
Segment/Progra	m: Evaluation and Policy Analysis – OPEPD						
EDEN (EDFacts)	• Reporting for Program Offices and other users is dependent on acquisition of data that is fit for use. "Fitness for use" includes data quality attributes such as completeness, timeliness, consistency, criticality of need, etc.						
	• All areas of EDEN (EDFacts) operations and maintenance tasks are dependent on each other. Selection of one area not to fund or to delay will cause ALL to fail, thus the overall program will fail. The multiple areas of EDFacts will be collapsed into one WBS, "Maintenance," in FY 09 to avoid unneeded detail and confusion about the EDEN (EDFacts) program. Maintenance areas include: Data Definition, Data Infrastructure, Data Quality, Data Acquisition, Data Usage, Knowledge Management, Capability Building, Platform Infrastructure, Partner Customer Support, and EDW O&M						
	• EDEN (EDFacts) is dependent on the EDNet (EDUCATE) and the Data Warehouse. (Currently, EDEN (EDFacts) is supporting O&M for the EDEN- related portion of the Data Warehouse, but not other areas that may be used by other offices.)						
Segment/Progra	Segment/Program: Information Dissemination – OESE						
MSIX	No known dependencies						

5.5 ED Project – CES Linkage

In addition to defining the Department's Program and Projects, and their associated dependencies, the ED EA Program Office also linked Common Enabling Services (CES's) to each project, as appropriate. These common services were identified in Step 2 (Refine and Prioritize Develop Segments) of the Departments Transition Strategy Plan Approach.

As each project throughout the Department is development (throughout its life cycle) the EA Program Office will use the Project-CES Linkage to:

Identify opportunities for service component reuse

Implement new, common business solutions for use throughout the enterprise

This effort will result in significant cost savings cost avoidance for Education.

The Department has already started this effort by implementing a shared Enterprise Data Warehouse and is in the planning stages of a shared Document Management and Collaboration Management solutions.

The ED Project – CES Linkage is provided in the following table (Table 27).



Common Enterprise Service Needed	Currently in Place?	If Yes, Indicate Application/Tool Name	If No, Provide Date the CES is needed
Program Office/Project:	OCFO – C	PSS	
Document/ Content Management	Yes	Comprizon.Suite/CCR	
Report Management	Yes	Comprizon.Suite/FPDS-NG	
Knowledge Management	Yes	Comprizon.Suite	
Data Management	Yes	Comprizon.Suite/CCR/FPDS-NG	
Customer Management	Yes	Comprizon.Suite	
Portal Management	Yes	Comprizon.Suite/CCR/FPDS-NG	
Program Office/Project:	OCFO – F	MSS	
Document/ Content Management	Yes	Oracle 11.5.10	
Report Management	Yes	Cognos	
Data Management	Yes	Oracle 11.5.10	
Program Office/Project:	OCFO – IS	SS	
Work Management	Yes	PAWZ	
Report Management	Yes	Cognos, Oracle Discoverer	
Data Management	Yes	Oracle 10g Database	
Customer Management	Yes	Rational: Clearcase, Clearquest, RequisitePro, Rose	
Operations Support	Yes	IBM P-Series Servers, AIX operating system, IBM support services	
Network, Storage, and Computing Platforms	Yes	IBM SAN, Oracle RAC	
Security & Privacy	Yes	NetBackup, SSH, Tripwire, Verisign, Secure Shell, FindIT	
Program Office/Project:	OCFO – G	5 (GAPS)	
Report Management	No		Q1 2010
Work Management	Yes	Websphere process server	
Collaboration Management	No		Q1 2009
Document/Content Management	No		Q1 2010
Data Management	Yes	Oracle	Q1 2009
Portal Management	Yes	Websphere Portal	
Network, Storage, and Computing Platforms	Yes	IBM Servers	

Table 27: Common Enterprise Service Needed by Program Office and Project



Common Enterprise Service Needed	Currently in Place?	If Yes, Indicate Application/Tool Name	If No, Provide Date the CES is needed			
Security & Privacy	Yes	Tivoli Access Manager and Federated Identity Manager				
SOA, Enabling Platforms	Yes	Websphere				
Digital Signatures	No		Q1 2010			
Program Office/Project:	IES – NCE	S Web Support				
Survey Design Tools	Yes	CCD Collection				
		ALS Collection				
Statistical and Analysis Tools	Yes	BAT				
		Library Compare Tool				
Report Management	Yes	Build A Table				
		PDMS				
		CCD Survey				
		Library Compare Tool				
Program Office/Project:	IES – IPEI	DS				
Data Management	Yes	IPEDS Database				
Statistical and Analysis Tools	Yes	Peer Analysis System				
Survey Management	Yes	IPEDS Web-based Data Collection System				
Report Management	Yes	NAEP Integrated Management System NAEP Data Explorer				
Customer Management	Yes	NAEP Customer Relationship Management Tools NAEP Network				
Statistical and Analysis Tools	Yes	WebTrends				
		NAEP Data Explorer				
Program Office/Project:	IES – ERI	C				
Document/ Content Management	Yes	Documentum and BEA				
Portal Management	Yes	Documentum and BEA				
Knowledge Management	Yes	ERIC Workflow				
Statistical and Analysis Tools	Yes	Web Trends				
Customer Management	Yes	CA Unicenter				
Program Office/Project:	OM – ID A	Access Control (EDSTAR)	_			
Operations Support	Yes	EDSTAR provides operation support through the control of access to ED facilities and positive Identification verification – the applications are GSA				



Common Enterprise Service Needed	Currently in Place?	If Yes, Indicate Application/Tool Name	If No, Provide Date the CES is needed
		approved NIST approved HSPD-12 components to include smart card technology, PKI certificates, and Windows XP servers).	
Security & Privacy	Yes	Use of Public Key Infrastructure (PKI Certificates as mandated by HSPD-12). Vendor is Verisign, GSA approved provider for PKI. The PKI contract is managed in OCIO-IA and there are additional PKI certificates available on the vehicle for identity management and logical access use.	
Program Office/Project:	OPEDP – I	EDEN	
Knowledge Management	Yes	Data Warehouse	
	No	Appian Enterprise	5/2/2008
Report Management	Yes	Cognos	
Data Management	Yes	Cognos	
	No	Appian	5/2/2008
Collaboration Management	No	Appian	5/2/2008
Work Management	No	Appian	5/2/2008
Survey Design tools	Yes	ResQSoft	
	No	Appian	5/2/2008
Survey Management	Yes	ResQSoft	Getting obsolete
	No	Appian	5/2/2008
Other		Cognos are good candidates for enterprise us n] All features Appian Enterprise offers may EDFacts.	
Program Office/Project:	OESE – M	SIX	
Report Management	Yes	Cognos Reports Oracle Reports	
Network, Storage, and Computing Platforms	Yes	Unix	
Security and Privacy	Yes	Oracle 11i	
Data Management	Yes	Oracle 11i	
Program Office/Project:	OCIO – E-	Authentication	
Customer Management	Yes	EDUCATE	
Mobility Tools	Yes	EDUCATE	



Common Enterprise Service Needed	Currently in Place?	If Yes, Indicate Application/Tool Name	If No, Provide Date the CES is needed
Operations Support	Yes	EDUCATE	
SOA Enabling Platforms	Yes	Webseal	
Program Office/Project:	OCIO – Da	ata Warehouse	
Document/ Content Management	No		Q1 2008
Report Management	Yes	Cognos Report Net; Cognos Power Play – OLAP	
Knowledge Management	Yes	Cognos	
Data Management	Yes	Oracle	
Portal Management	Yes	Provided by EDUCATE	
Program Office/Project:	OCIO – El	DUCATE	•
Collaboration Management	Yes	Microsoft Exchange, Microsoft Outlook	
Report Management	Yes	OPAS, ED-INSIGHT, Atrium Asset Management System (database), SMS, BMC Marimba, CMDB (configuration management database), Asset Management System (AMS)	
Document Management	Yes	EMC's Documentum	
Data Management	Yes	Oracle	
Customer Management	Yes	OPAS, ED-INSIGHT	
Portal Management	Yes	OPAS, ED-INSIGHT	
Statistical and Analysis Tools	Yes	OPAS, ED-INSIGHT	
Network, Storage, and Computing Platforms	Yes	PTC/FTC	

5.5.1 Using ED's TSP: CES Investments

Based upon the <u>ED Project – CES Linkage</u> analysis results, provided in Section 5.5, the following services represent the most common business needs across the Department (in order of priority):

- 1. Document Management
- 2. Collaboration Management
- 3. Report Management

These three services are not currently available to G5 (part of the Grants Segment Architecture) but are a critical component of its functionality. Additionally, Data Warehouse requires this service as well.



Although there is not an immediate need for Report Management (specified 9 times) is the most commonly expressed business need for the Department's major and significant IT projects, followed by:

- 1. Data Management (specified 8 times)
- 2. Document Management (specified 5 times)
- 3. Customer Management (specified 5 times)
- 4. Knowledge Management (specified 4 times)
- 5. Portal Management (specified 4 times)
- 6. Security and Privacy (specified 4 times)
- 7. Statistical Analysis Tools (specified 4 times)
- 8. Survey Design Tools (specified 4 times)

Due to business need, the Department will pursue implementation of the following Common Enabling Services (Table 28), hosted and managed on EDUCATE (ED's IT Infrastructure Initiative):

CES	Method of Implementation	Planned Implementation Date
Document Management	Capture business requirements from all appropriate program office and obtain/implement a common tool that can accommodate common business needs across the Department. The new solution may include the reuse of an existing Program Office solution (<i>i.e.</i> , Documentum) if it meets the Department's requirements. Existing Document Management Solutions that are not architecturally compliant to the Departmental solution will be required to transition accordingly. The new solution will be hosted and managed by EDUCATE according to established Service Level Agreements (SLA's).	FY2008
Collaboration Management	Capture business requirements from all appropriate program office and obtain/implement a common tool that can accommodate common business needs across the Department. The new solution may include the reuse of an existing Program Office solution (<i>i.e.</i> , Appian) if it meets the Department's requirements. Existing Collaboration Management Solutions that are not architecturally compliant to the Departmental solution will be required to transition accordingly. The new solution will be hosted and managed by EDUCATE according to established Service Level Agreements (SLA's).	FY2009
Report Management	Capture business requirements from all appropriate program office and obtain/implement a common tool that can accommodate common business needs across the Department. The new solution will most likely be the reuse of an existing Program Office solution (<i>i.e.</i> , Cognos or Oracle) if it meets the Department's requirements. Existing Report Management Solutions that are not architecturally compliant to the Departmental solution will be required to transition accordingly. The new solution will be hosted and managed by EDUCATE according to established Service Level Agreements (SLA's).	FY2010
Data Management	The EA Program Office will facilitate the requirements gathering and expansion of the Department's Data Warehouse to meet Program Office Data Management needs. The Enterprise Data Warehouse is hosted and management by EDUCATE according to established Service Level Agreements (SLA's).	FY2008 – FY2011

Table 28: Planned Implementation of CES's



The Common Enabling Service implementation timeline (Table 29) is illustrated below:

Table 29: CES Implementation Timeline

	FY2008	FY2009	FY2010	FY2011
Document Management				
Collaboration Management				
Report Management				
Data Management				



6.0 ED TRANSITION SEQUENCING PLAN

6.1 Transition Strategy Plan Timeline Overview

ED's enterprise sequencing plan provides a Department-wide view of programs and projects across the agency, giving ED's leadership the visibility to use ED's EA for Department-wide planning. This enables high-level impact assessment of investment decisions and programmatic changes on ED's overall plans for moving toward ED's target EA. The plan is used to quickly assess the impacts of budget cuts, cancelled or delayed projects, or changes to program priorities. The effects of those changes on other projects and programs are then identified and dealt with as needed.

Figure 8 below graphically represents the timeline for the transition strategy plan:

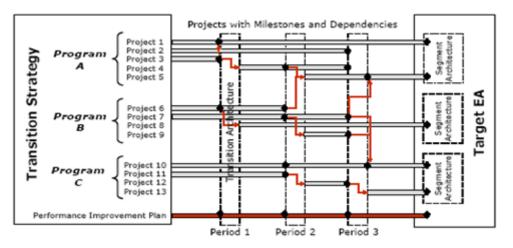


Figure 8: Transition Strategy Plan Timeline



The graphic below (Figure 9) provides a comprehensive overview of the transition timeline from FY2006 through FY2011, per Life Cycle Management phase, for the projects defined as part of the Department of Education's Transition Strategy Plan. Each Life Cycle Stage can be distinguished by color, as described in the "Legend" at the top of the graphic – allowing for a quick overview of each projects implementation path. The red line in Q2 FY2008 delineates the Department's current status.

		Legend:						
		Vision	Definition	Construction/V	alidation	Implementation	Support/ Ir	nprovement
			FY2006	FY2007	FY2008	FY2009	FY2010	FY2011
Segment	Program Office	Investments	Q1 Q2 Q3 Q	4 Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4	4 Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4
Financial Management	OCFO	Contracts and Purchasing Support System (CPSS)						
Financial Management	OCFO	Financial Management Support System (FMSS)						
Research and Statistics Services	IES	NCES Web Support						
ITI	0010	EDUCATE (formerly EDNet)						
Financial Management	OCFO	Integrated Support Service (ISS)						
Research and Statistics Services	IES	Integrated Postsecondary Education Data System (IPED	s)					
Research and Statistics Services	IES	National Assessment of Educational Progress (NAEP)						
Financial Management	OCFO	Travel Management System (TMS)						
Human Resources Management	ом	ID Access Control (EDSTAR)						
Research and Statistics Services	IES	Education Resources Information Center (ERIC)						
Evaluation and Policy Analysis	OPEPD	Education Data Exchange Network (EDEN)						
Information Dissemination	OESE	Migrant Student Information Exchange (MSIX)						
Grants	OCFO	G-5 G5 Phase 1 Payments G5 Phase 2 Planning & Scheduling G5 Phase 3 Post Award						
Identity Management	0010	E-Authentication (ED)						
Knowledge and Data Services	осю	Data Warehouse						

Figure 9: Transition Strategy Lifecycle

The graphic below (Figure 10) provides a comprehensive overview of the transition timeline from FY2007 through FY2011, per Life Cycle Management phase, for the projects defined as part of the Department of Education's Loans Segment Architecture. Each Life Cycle Stage can be distinguished by color, as described in the "Legend" at the top of the graphic – allowing for a quick overview of each projects implementation path. The red line in Q2 FY2008 delineates the Federal Student Aid's (FSA's) current status.



		Legend:						
			B C C				— • • •	
		Vision	Definition	Construction	/ Validation	Implementation	Support/	Improvement
			FY2006	FY2007	FY2008	FY2009	FY2010	FY2011
Segment	Program Office	Investments	Q1 Q2 Q3 C) <mark>4</mark> Q1 Q2 Q3 Q	4 Q1 Q2 Q3 Q	4 Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q
Loans	FSA	Enterprise Information System (formerly Data Strategy)						
Loans	FSA	Common Origination and Disbursement (COD)						
Loans	FSA	National Student Loan Data System (NSLDS)						
Loans	FSA	ADvance - Aid Delivery						
Loans	FSA	ADvance Person Data Management (Advance PDM)						
Loans	FSA	Student Aid Internet Gateway (SAIG)						
Loans	FSA	Federal Student Aid Financial Management System (FSA FMS)						
Loans	FSA	Common Services for Borrowers (CSB)						
		Integrated Partner Management (IPM)						
Loans	FSA	IPM Phase 1						
		IPM Phase 2						
		Integrated Technical Architecture/Enterprise Application						
		Integration (ITA/EAI)						
		ITA/EAI Phase 1 Implementation: Go Live with SAIG,						
Loans	FSA	IFAP & Schools Portal Ops Support, CPS, COD &						
		SAOTW (Advance)						
		ITA/EAI Phase 2 Implementation: Go Live with NSLDS,						
		CSB or the successor Systems						
Loans	FSA	Virtual Data Center (VDC)						
Loans		Federal Student Aid Enterprise Web Portal Strategy						
Louno	FSA	(Portals)						

Figure 10: Loans Segment Lifecycle



6.1.1 ED Projects Life Cycle Start/End Dates per Completed Segment

The following table (Table 30) provides a detailed start and end dates, per Life Cycle Phase, for projects associated with completed ED Segment Architectures (authorized in writing). These detailed schedules correspond directly to the <u>ED's Project Timelines</u>.

Project	Stage Gate Substage Gate	Stage Gate Start Date			Date
Segment/Program: Loans -	0				
Enterprise Information	Support and Improvement	Q1 20	07	On-g	going
System (formerly Data Strategy)	Retirement	TBD)	TI	3D
Common Origination and	Support and Improvement	Q1 20	07	On-g	going
Disbursement (COD)	Retirement	TBD)	Tł	3D
National Student Loan Data	Support and Improvement	Q1 20	07	On-g	going
System (NSLDS)	Retirement	TBD)	Tł	3D
ADvance – Aid Delivery	Support and Improvement	Q1 20	07	On-g	going
(ADvance Operations)	Retirement	TBD)	TI	3D
ADvance Person Data	Definition	Q3 2007		Q3 2008	
Management (PDM)	Construction/Validation Q4 2008			Q2 2009	
	Implementation	Q3 20	09	Q4 2	2009
	Support and Improvement	Q1 2010		On-g	going
	Retirement	TBD)	TI	3D
Student Aid Internet Gateway (SAIG)	Support and Improvement	Q1 2007		On-g	going
(SAIG)	Retirement	TBD		TBD	
Federal Student Aid Financial	Support and Improvement	Q1 2007		On-going	
Management System (FSA FMS)	Retirement	TBD		TBD	
Common Services for	Support and Improvement	Q1 2007		On-g	going
Borrowers (CSB)	Retirement	TBD		TBD	
Integrated Partner		Phase 1	Phase 2	Phase 1	Phase 2
Management (IPM)	Vision	Q1 2007	Q2 2008	Q1 2007	Q2 2008
	Definition	Q2 2007	Q3 2008	Q4 2007	Q4 2008
	Construction/Validation	Q1 2008	Q4 2008	Q4 2008	Q1 2009
	Implementation	Q4 2008	Q1 2009	Q4 2008	Q1 2009

Table 30: Completed ED Segment Architecture Projects



Project		e Gate ge Gate	S	tart Da	ate	K	End Dat	te
	Support and I	mprovement	Q1 20	009	Q2 2009	Q3 200)9 O	n-going
	Retirement		N//	A	TBD	N/A		TBD
Integrated Technical			Phas	e 1	Phase 2	Phase	1 F	hase 2
Architecture/Enterprise Application Integration (ITA/EAI)	Implementati	on	Q1 20	007	Q1 2011	Q1 200	08 Q	2 2011
	Support and I	mprovement	Q2 20	009	Q3 2011	On-goi	ng O	n-going
	Retirement		TB	D	TBD	TBD		TBD
Virtual Data Center (VDC)		Support and Improvement		Q1 2007	7		On-going	
	Retirement			TBD			TBD	
Federal Student Aid	Vision			Q3 2007	7		Q3 2007	
Enterprise Web Portal Strategy	Definition			Q4 2007	7		Q4 2007	
-	Construction	Construction/Validation		Q1 2008		Q2 2008		
	Implementation		Q3 2008		Q3 2008			
	Support and Improvement		Q3 2008		On-going			
	Retirement		TBD		TBD			
Segment/Program: Grant	s – OCFO							
G5	Vision		Q1 200	07		Q2 2007		
	Definition	Requirements Definition	Q1 2007	Q4 2007	Q4 2008	Q2 2007	Q2 2008	Q1 2009
		Design	Q1 2007	Q1 2008	Q1 2009	Q2 2007	Q2 2008	Q2 2009
	Construction and	Development	Q1 2007	Q2 2008	Q1 2009	Q2 2007	Q4 2008	Q3 2009
	Validation	Testing	Q3 2007	Q3 2008	Q3 2009	Q1 2008	Q1 2009	Q1 2010
	Implementati	on	Q1 2008	Q1 2009	Q1 2010	Q1 2008	Q1 2009	Q1 2010
	Support and I	mprovement	Q1 2008	Q1 2009	Q1 2010	Conti nuous	Conti nuous	Conti nuous
	Retirement		TBD	TBD	TBD	TBD	TBD	TBD
Segment/Program: Know	ledge and Da	ta Services –	οςιο					
Data Warehouse	Implementati	on	Q1 2006		Q3 2006			
	Support and I	mprovement		Q4 200	б		On-going	5
	Retirement			TBD			TBD	



Project	Stage Gate Substage Gate	Start Date	End Date				
Segment/Program: ITI – OCIO							
EDUCATE	Implementation	Q1 2008	Q2 2008				
	Support and Improvement	Q2 2008	On-going				
	Retirement	TBD	TBD				

6.1.2 ED Projects Life Cycle Start/End Dates per Segment

The following table provides a detailed start and end dates, per Life Cycle Phase, for projects associated with ED Segment Architectures. These detailed schedules correspond directly to the <u>ED's Project Timelines</u>.

These segments will be detailed and authorized in writing according to the <u>ED's Segment</u> <u>Architecture Prioritization schedule</u>.

Project	Stage Gate Substage Gate	Start Date	End Date					
Segment/Program: Financ	ial Management – OCFO							
CPSS	Implementation	Q1 2005 (Web Version)	Q1 2005					
	Support and Improvement	Q1 2005	On-going					
	Retirement	TBD	TBD					
FMSS	Implementation	Q3 2002	Q1 2006					
	Support and Improvement	Q1 2006	On-going					
	Retirement	TBD	TBD					
ISS	Implementation -Set up EDCAPS infrastructure	Q2 1997	Q2 1998					
	Support and Improvement	Q2 1998	On-going					
	Retirement	TBD	TBD					
TMS	Implementation	Q2 2004	Q4 2006					
	Support and Improvement	Q1 2007	On-going					
	Retirement	TBD	Q4 2017					
Segment/Program: Identity	Segment/Program: Identity Management – OCIO							
E-Authentication	Implementation	Q4 2005	Q2 2006					
	Support and Improvement	Q3 2006	On-going					
	Retirement	TBD	TBD					

Table 31: Detailed ED Segment Architecture Projects



Department of Education Enterprise Transition Strategy Plan, February 2008

Project	Stage Gate Substage Gate	Start Date	End Date
Segment/Program: Resear	rch and Statistics Services –	IES	
NCES Web Support	Implementation	Q3 1998	Q4 1998
	Support and Improvement	Q1 2005	Q2 2009
	Retirement	TBD	TBD
IPEDS	Implementation	Q1 2000	Q4 2001
	Support and Improvement	Q1 2001	On-going
	Retirement	TBD	TBD
NAED	Implementation		
	NAEP Integrated Management System Version 4.0	Q2 2008	Q1 2009
	NAEP Web Content Management System Upgrade 2.0	Q1 2009	Q4 2009
	NAEP Network Upgrade Version 3.0	Q1 2010	Q4 2010
	NAEP CRM Consolidation and Upgrade	Q1 2011	Q4 2011
	NAEP Integrated Management System Enhancement Version 5.0	Q1 2012	Q4 2012
	Support and Improvement	Q1 2008	Q4 2012
	Retirement Process Improvement Log NAEP CRM 1.0 Applications ADTracker	Q2 2008 Q2 2008 Q2 2008	Q2 2008 Q4 2008 Q4 2008
ERIC	Implementation	Q2 2004	Q4 2004
	Support and Improvement	Q1 2005	On-going
	Retirement	N/A	N/A
Segment/Program: Huma	n Resources Management –	ОМ	
ID Access Control (EDSTAR)	Implementation	Q1 2004	Q4 2007
	Support and Improvement	Q1 2008	On-going
	Retirement	N/A	N/A



Project	Stage GateStart DateSubstage GateStart Date		End Date
Segment/Program: Evalua	OPEDP		
EDEN	Support and Improvement	Q4 2004	On-going
	Retirement	N/A	N/A
Segment/Program: Inform	ation Dissemination – OES	BE	
MSIX	Implementation	Q4 2007	Q4 2007
	Support and Improvement	Q1 2008	Q4 2012
	Retirement	TBD	TBD



7.0 IT INVESTMENT MILESTONES

7.1 Implementation Milestones

The Department of Education's major and significant IT investments have defined specific implementation milestones throughout the course of their respective life cycles. Implementation milestones (associated with specific completion dates) represent:

Individual stages into which a program or project is divided for monitoring and measurement of work performance.

A major scheduled event that indicates the completion of a major stage of the project, leading towards the realization of its Target Architecture.

Each implementation milestone results in performance milestones. Performance milestones are quantifiable metrics that are direct, business and results-oriented outcomes of each implementation effort - thereby rationalizing the need/purpose of each implementation milestone and defining measurable performance improvements.

The Department actively monitors all investment milestones to manage and monitor investments throughout implementation.

7.2 FSA Investment Milestones

Please click <u>here</u> to view Federal Student Aid's IT Investment Milestones (captured as part of the Loans Segment Architecture).

7.3 G5 Milestones

The following table (Table 32) defines the milestones for G5 phases, I, II, and III, providing measurement indicators, fiscal year of milestones, baselines, planned improvements, and actual results/completion dates:

Milestone Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results / Completion Dates
Implementation	G5 Phase I Implemented (Payments)	2008			Q1 2008
Performance	System Availability	2008	G5 will be available 95% of the time	98% availability	Results available Q4 2008
Performance	System Availability	2009	G5 will be available 95% of the time	98 availability	Results available Q4 2009
Performance	System Availability	2010	G5 will be available 95% of the time	Maintain 98% availability	Results available Q4 2010
Performance	System Availability	2011	G5 will be available 95% of the time	Maintain 98% availability	Results available Q4 2011
Performance	Timeliness of Hotline issues	2008	Resolved -95% @ 24 hr 98	98% resolved @24 hours	Results available Q4 2008
Performance	Timeliness of Hotline issues	2009	Resolved -95% @ 24 hr 98	98% resolved @24 hours	Results available Q4 2009
Performance	Timeliness of Hotline issues	2010	Resolved -95% @ 24 hr 98	Maintain 98% resolved @24 hours	Results available Q4 2010
Performance	Timeliness of Hotline issues	2011	Resolved -95% @ 24 hr 98	Maintain 98% resolved @24 hours	Results available Q4 2011
Implementation	G5 Phase II Implemented (Planning & Scheduling)	2009			Q1 2009
Performance	Percentage of grant applications submitted electronically (for programs participating)	2009	80	Increase to 85%	Results available Q4 2009
Performance	Percentage of grant applications submitted electronically (for	2010	TBD 8/2009	Increase to 90%	Results available Q4 2010

Table 32: G5 Milestones



Milestone Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results / Completion Dates
	programs participating)				
Performance	Percentage of grant applications submitted electronically (for programs participating)	2011	TBD 8/2010	Increase to 95%	Results available Q4 2011
Implementation	G5 Phase III Implemented (Post Award)	2010			Q1 2010
Performance	e-Signature feature implemented	2010	75% of Grants Award Notifications (GAN's) will be sent electronically	75%	Results available Q4 2010
Performance	e-Signature feature implemented	2011	75% of Grants Award Notifications (GAN's) will be sent electronically	Increase to 80%	Results available Q4 2011

7.4 Data Warehouse Milestones

The following table (Table 33) defines the milestones for Data Warehouse, providing measurement indicators, fiscal year of milestones, baselines, planned improvements, and actual results/completion dates:

Table 33: Data Warehouse Milestones

Milestone Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results / Completion Dates
Implementation	Implement Data Warehouse solution	2006			Q4 2006
Performance	One measurable indicator of improved Grants Management is the reduction in grants funds returned to the Treasury because states have not obligated the funds within the required timeframes. Unit of Measurement dollars returned to Treasury.	2006	166,000,000	160,000,000	160,000,000 Investment retired no performance metrics tracked and reported beyond FY06.
Performance	New capabilities launched deliver demonstrable improvements in	2006	1	4	4 new capabilities in place (Grants Monitoring Reports,



Milestone Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results / Completion Dates
	grants fund usage and compliance. Unit of measurement equals number of capabilities in place.				Grants Risk Monitoring Reports, EDEN Profile Reports, and ad hoc Grants Reports). This measure was discontinued for future years.
Performance	Number of Program Offices that have benefited from improved knowledge management in the grants and evaluation areas. Unit of Measurement is number of Program Offices.	2006	1	3	3 Investment retired no performance metrics tracked and reported beyond FY06.
Performance	Interoperability measurement. Unit of measurement is the number of new applications. Number of new capabilities that share common data definitions, data repository (data warehouse) and end user data access and analysis tools.	2006	1	4	4 new applications share data and service components. The Data Warehouse contains EDEN Submission data, GAPS data, CSPR data, and EDEN profile data. EDW realized cost savings of over \$600K as a result of merging EDEN reporting with the EDW.
Performance	Grants Management: Maintain grants funds returned to the Treasury because states have not obligated the funds within the required timeframes. Unit of Measurement dollars returned to Treasury.	2007	160,000,000	160,000,000	\$160,000,000 grants funds were returned to the Treasury (maintain status)
Performance	Reducing the number of grantees with high enterprise risk management ratings. Unit of measurement is the percentage of formula grant funds awarded to grantees with high ratings.	2007	33.4%	30%	30% of grantees with high enterprise risk (maintained).
Performance	Interoperability measurement. Unit	2007	4	4	4 applications were



Milestone Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results / Completion Dates
	of measurement is the number of new applications. Maintain the number of capabilities that share common data definitions, data repository (data warehouse) and end user data access and analysis tools.				maintained to share common data.
Performance	Maintain the number of Program Offices that have benefited from improved knowledge management in the grants and evaluation areas. Unit of Measurement is number of Program Offices.	2007	5	5	7 Program Offices that have benefited from improved knowledge management in the grants and evaluation areas.
Performance	Grants Management: Maintain grants funds returned to the Treasury because states have not obligated the funds within the required timeframes. Unit of Measurement dollars returned to Treasury.	2008	160,000,000	160,000,000	TBD
Performance	Maintain the number of grantees with high enterprise risk management ratings. Unit of measurement is the percentage of formula grant funds awarded to grantees with high ratings.	2008	30%	30%	TBD
Performance	Maintain the number of Program Offices that have benefited from improved knowledge management in the grants and evaluation areas. Unit of Measurement is number of Program Offices.	2008	7	7	TBD
Performance	Interoperability measurement. Unit of measurement is the number of new applications.	2008	4	4	TBD



Milestone Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results / Completion Dates
	Maintain the number of capabilities that share common data definitions, data repository (data warehouse) and end user data access and analysis tools.				
Performance	Grants Management: Maintain grants funds returned to the Treasury because states have not obligated the funds within the required timeframes. Unit of Measurement dollars returned to Treasury.	2009	160,000,000	160,000,000	TBD
Performance	Maintain the number of grantees with high enterprise risk management ratings. Unit of measurement is the percentage of formula grant funds awarded to grantees with high ratings.	2009	30%	30%	TBD
Performance	Maintain the number of Program Offices that have benefited from improved knowledge management in the grants and evaluation areas. Unit of Measurement is number of Program Offices.	2009	7	7	TBD
Performance	Interoperability measurement. Unit of measurement is the number of new applications. Maintain the number of capabilities that share common data definitions, data repository (data warehouse) and end user data access and analysis tools.	2009	4	4	TBD



7.5 EDUCATE Milestones

The following table (Table 34) defines the milestones for EDUCATE, providing measurement indicators, fiscal year of milestones, baselines, planned improvements, and actual results/completion dates:

Milestone Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results / Completion Dates
Implementation	Perform IT Refresh Rapid Achievement of N-1 (Hardware)	2008			Q4 2008
Performance	IT Refresh Rapid Achievement of N-1 (Hardware)	2008	100 % N-1	Maintain 100% N-1	Q4 2008
Implementation	Go Live with OPAS processes	2008			Q1 2008
Performance	Achieve 100% implementation of the pre-defined CLINs (each CLIN represents a service offered by EDUCATE to the Department of Education, see separate section)	2008	100%	Maintain 100%	Q1 2008
Desktop Services					
Implementation	Define Operational Requirements for Anti-virus	2008			Q1 2008
Implementation	Complete and confirm detailed Inventory of hardware, software, and user profiles	2008			Q1 2008
Implementation	Transition of OS and Office automation to all users	2008			Q4 2008
Performance	Maintain N-1 versions of OS and Office automation to all users	2008	N-1 (XP, Vista, Office 2007)	Maintain N-1 (XP, Vista, Office 2007)	Q4 2008
Performance	DS-1 Move, Change, Add and Removal (MCAR)	2008	Standard Service Without Cabling Requirement: No More than 3 Business Days With Cabling Requirement: No More than 10 Business Days	Maintain Standard Service Without Cabling Requirement: No More than 3 Business Days With Cabling Requirement: No More than 10 Business	TBD

Table 34: EDUCATE Milestones



Milestone Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results / Completion Dates
				Days	
Help Desk Supp	ort Services				
Implementation	Deployment of Helpdesk Tools	2008			Q1 2008
Implementation	Phone Setup	2008			Q1 2008
Implementation	Go Live (Service Desk Ready for Operational Readiness Review)	2008			Q1 2008
Performance	HD-3 RCA Delivery	2008	99.90% delivered within the agreed upon time	Maintain 99.90	TBD
Performance	HD-1 Disable User Accounts	2008	Less than 1 hour	Maintain Less than 1 hour	TBD
Performance	HD -2 Maintain User Accounts	2008	Less than 4 hours	Maintain Less than 4 hours	TBD
Performance	HD-4 First Call Resolution	2008	80% in 5 minutes	Maintain 80% in 5 minutes	TBD
Performance	HD-5 Call Abandon Rate	2008	Less than or equal to 7%	Maintain Less than or equal to 7%	TBD
Performance	HD-6 Average Wait Time	2008	Less than or equal to 30 seconds	Maintain Less than or equal to 30 seconds	TBD
Systems/Data Ce	enter Services				
Implementation	Define Operational Requirements for Intel	2008			Q1 2008
Implementation	Design Operations Transition	2008			Q1 2008
Implementation	Intel Ready for Transfer of Operations	2008			Q1 2008
Implementation	Define Operational Requirements for UNIX	2008			Q1 2008
Implementation	Design Operations Transition	2008			Q1 2008
Implementation	UNIX Ready for Transfer of Operations	2008			Q1 2008



Milestone Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results / Completion Dates
Implementation	Define Operational Requirements for Storage	2008			Q1 2008
Implementation	Design Operations Transition	2008			Q1 2008
Implementation	Storage Ready for Transfer of Operations	2008			Q1 2008
Implementation	Define Operational Requirements for Database Services	2008			Q1 2008
Implementation	Design Operations Transition	2008			Q1 2008
Implementation	Database Services Ready for Transfer of Operations	2008			Q1 2008
Implementation	Define Operational Requirements for Middleware	2008			Q1 2008
Implementation	Design Operations Transition	2008			Q1 2008
Implementation	Middleware Ready for Transfer of Operations	2008			Q1 2008
Implementation	Define Operational Requirements for Data Center Operations	2008			Q1 2008
Implementation	Design Operations Transition	2008			Q1 2008
Implementation	Data Center Operations Ready for Transfer of Operations	2008			Q1 2008
Implementation	Systems/Data Centers Ready for Transfer of Operations	2008			Q1 2008
Implementation	DATA CENTER MIGRATION	2008			Q4 2008
Implementation	Completion of Move Package 1 (dev/test)	2008			Q2 2008
Implementation	Completion of Move Package 2 (dev/test)	2008			Q2 2008
Implementation	Completion of Move Package 3 (dev/test)	2008			Q2 2008



Milestone Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results / Completion Dates
Implementation	Completion of Move Package 4 (production)	2008			Q3 2008
Implementation	Completion of Move Package 5 (production)	2008			Q3 2008
Implementation	Completion of OXON HILL SITE & CONTENTS DISPOSITION	2008			Q3 2008
Implementation	Deployment of Server Updates	2008			TBD
Implementation	SOC Ready for Operations	2008			Q1 2008
Performance	Security Ready for Transfer of Operations	2008	100%	Maintain 100%	Q1 2008
Implementation	Define Operational Requirements for Asset Management	2008			Q1 2008
Implementation	Asset Management Ready for Transfer of Operations	2008			Q1 2008
Implementation	Define Operational Requirements for Service Management	2008			Q1 2008
Implementation	Service Management Ready for Transfer of Operations	2008			Q1 2008
Performance	ISP Hosting Services Availability	2008	99.6% availability	Maintain 99.6% availability	TBD
Performance	ED.gov Services Availability	2008	99.9% availability	Maintain 99.9% availability	TBD
Performance	connectED Services Availability	2008	99.6% availability	Maintain 99.6% availability	TBD
Email Services					
Implementation	Design Operations Transition	2008			Q1 2008
Implementation	Email Ready for Transfer of Operations	2008			Q1 2008
Performance	Email (Electronic Messaging Services Availability)	2008	Availability 99.6%	Maintain Availability 99.6%	Q1 2008
Performance	Email Backups (Electronic Messaging Services Backups)	2008	100%	Maintain 100 %	Q1 2008



Milestone Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results / Completion Dates				
Network, Telecommunications, and Multimedia Services									
Implementation	Complete VPN Setup/Testing	2008			Q1 2008				
Implementation	Design Operations Transition	2008			Q1 2008				
Implementation	Network Operations Ready for Transfer of Operations	2008			Q1 2008				
Performance	NS-1 Managed Network Services Availability	2008	Latency 120 ms	Maintain Latency 120 ms	TBD				
Performance	NS-4 Network Services Availability	2008	99.60%	Maintain 99.60%	TBD				
Performance	NS-2 Remote Access and Teleworking Services Availability	2008	Latency 120 ms	Maintain Latency 120 ms	TBD				
Performance	NS-3 Audio/Video/Data Conferencing Services Availability	2008	99.60%	Maintain 99.60%	TBD				
Performance	GN-1 General Services Availability	2008	99.60%	Maintain 99.60%	TBD				
Performance	GN-2 Event Notification	2008	4 levels; Less Than 15min/ 15min/ 12 hrs/ 24 hrs	Maintain 4 levels; Less Than 15min/15min/12 hrs/24 hrs	TBD				
Performance	GN-3 Customer Surveys	2008	90% at a 4/5 rating	Maintain 90% at a 4/5 rating	TBD				
Performance	GN-4 System Backup	2008	100%	Maintain 100%	TBD				
Performance	GN-5 Time to Restore	2008	4 levels; 2/4/8/24 hours to Resolution 99%	Maintain 4 levels; 2/4/8/24 hours to Resolution 99%	TBD				
Performance	GN-7 Customer Satisfaction Support to Business	2008	90% at a 4/5 rating	Maintain 90% at a 4/5 rating	TBD				
Crisis Managem	ent, Business Continuity, and Disa	ster Reco	very Services						
Implementation	Completion of Move Package 6 DISASTER RECOVERY SITE	2008			Q3 2008				
Implementation	Completion of KENNESAW SITE & CONTENTS DISPOSITION	2008			Q4 2008				



Milestone Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results / Completion Dates
Performance	Managed DR Services (Hot Services)	2008	100% & immediate	Maintain 100% & immediate	Q1 2008
Performance	Managed DR Services (Warm Services)	2008	100% @ 8 hours & immediate	Maintain 100% @ 8 hours & immediate	Q1 2008
Performance	Managed DR Services (Cold Services)	2008	100% @ 72 hours & immediate	Maintain 100% @ 72 hours & immediate	Q1 2008
Performance	Managed DR Services (Disaster & Recovery Testing)	2008	100%	Maintain 100%	Q1 2008
Implementation	Update and Maintain Current BC and DR plans per Gaps in Gap Analysis	2008			Q1 2008
Implementation	Update CM, BC, and DR Plans with New Requirements	2008			Q1 2008
Implementation	Crisis Management, Business Continuity and Disaster Recovery Ready for Transfer of Operations	2008			Q1 2008
Performance	Incident Response and Problem Management	2008	100% Response within the required time	Maintain 100%	TBD
Implementation	Define Operational Requirements for Intrusion Detection and Monitoring	2008			Q1 2008
Performance	Intrusion Detection/Protection Monitoring/Log Analysis	2008	99.9% detection & prevention	Maintain 99.9%	TBD
Performance	Audit and Data Call Support	2008	100%	Maintain 100%	TBD
Performance	Enterprise Vulnerability Management Service/Analysis/Remediation Recommendations	2008	99.9% successful remediation	Maintain 99.9%	TBD
Special Services					
Implementation	IES Support Ready for Transfer of Operations	2008			Q1 2008



Milestone Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results / Completion Dates
Implementation	OIG Support Ready for Transfer of Operations	2008			Q1 2008
Printer Services					
Implementation	Complete Inventory of printer/fax/scanner/copier devices	2008			Q1 2008
Implementation	Printer Services Ready to Assume Operations	2008			Q1 2008
Implementation	Define Operational Requirements for Policy-Audit Remediation	2008			Q1 2008
	FY2009 – FY2010 ED	UCATE (DPERATIONS AND MAINTE	NANCE MILESTONES	
Implementation	Complete Implementation of EDUCATE and all defined Services (CLINs). Begin Operations and Maintenance	2009			Q1 2009
Performance	Maintain N-1 versions of OS and Office automation to all users	2009	N-1	Maintain N-1	Q4 2009
Performance	Maintain IT Refresh Achievement of N-1 (Hardware)	2009	100 % N-1	Maintain 100% N-1	Q4 2009
Performance	DS-1 Move, Change, Add and Removal (MCAR)	2009	Standard Service Without Cabling Requirement: No More than 3 Business Days With Cabling Requirement: No More than 10 Business Days	Maintain Standard Service Without Cabling Requirement: No More than 3 Business Days; With Cabling Requirement: No More than 10 Business Days	TBD
Performance	HD-3 RCA Delivery	2009	99.90% delivered within the agreed upon time	Maintain 99.90	TBD
Performance	HD-1 Disable User Accounts	2009	Less than 1 hour	Maintain Less than 1 hour	TBD
Performance	HD -2 Maintain User Accounts	2009	Less than 4 hours	Maintain Less than 4 hours	TBD
Performance	HD-4 First Call Resolution	2009	80% in 5 minutes	Maintain 80% in 5 minutes	TBD



Milestone _ Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results / Completion Dates
Performance	HD-5 Call Abandon Rate	2009	Less than or equal to 7%	Maintain Less than or equal to 7%	TBD
Performance	HD-6 Average Wait Time	2009	Less than or equal to 30 seconds	Maintain Less than or equal to 30 seconds	TBD
Performance	Managed DR Services (Hot Services)	2009	100% and immediate	Maintain 100% and immediate	Q1 FY2009
Performance	Managed DR Services (Warm Services)	2009	100% @ 8 hours & immediate	Maintain 100% @ 8 hours & immediate	Q1 FY2009
Performance	Managed DR Services (Cold Services)	2009	100% @ 72 hours & immediate	Maintain 100% @ 72 hours & immediate	Q1 FY2009
Performance	Managed DR Services (Disaster & Recovery Testing)	2009	100%	Maintain 100%	Q1 FY2009
Performance	Deployment of Server Updates	2009	100%	Maintain 100 %	TBD
Performance	ISP Hosting Services Availability	2009	99.6% availability	Maintain 99.6% availability	TBD
Performance	ED.gov Services Availability	2009	99.9% availability	Maintain 99.9% availability	TBD
Performance	ConnectED Services Availability	2009	99.6% availability	Maintain 99.6% availability	TBD
Performance	Email (Electronic Messaging Services Availability)	2009	Availability 99.6%.	Maintain 99.6% availability	Q1 FY2009
Performance	Email Backups (Electronic Messaging Services Backups)	2009	100%	Maintain 100 %	Q1 FY2009
Performance	NS-1 Managed Network Services Availability	2009	Latency 120 ms	Maintain Latency 120 ms	TBD
Performance	NS-4 Network Services Availability	2009	99.60%	Maintain 99.60%	TBD
Performance	NS-2 Remote Access and Teleworking Services Availability	2009	Latency 120 ms	Maintain Latency 120 ms	TBD
Performance	NS-3 Audio/Video/Data Conferencing Services Availability	2009	99.60%	Maintain 99.60%	TBD
Performance	GN-1 General Services Availability	2009	99.60%	Maintain 99.60%	TBD
Performance	GN-2 Event Notification	2009	4 levels; Less than 15min/	Maintain 4 levels; Less than	TBD



Milestone Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results / Completion Dates
			15min/ 12 hrs/ 24 hrs	15min/ 15min/ 12 hrs/ 24 hrs	
Performance	GN-3 Customer Surveys	2009	90% at a 4/5 rating	Maintain 90% at a 4/5 rating	TBD
Performance	GN-4 System Backup	2009	100%	Maintain 100%	TBD
Performance	GN-5 Time to Restore	2009	4 levels; 2/4/8/24 hours to Resolution 99%	Maintain 4 levels; 2/4/8/24 hours to Resolution 99%	TBD
Performance	GN-7 Customer Satisfaction Support to Business	2009	90% at a 4/5 rating	Maintain 90% at a 4/5 rating	TBD
Performance	Incident Response and Problem Management	2009	100% response within the required time	Maintain 100%	TBD
Performance	Intrusion Detection/Protection Monitoring/Log Analysis	2009	99.9% detection & prevention	Maintain 99.9%	TBD
Performance	Audit and Data Call Support	2009	100%	Maintain 100%	TBD
Performance	Enterprise Vulnerability Management Service/Analysis/Remediation Recommendations	2009	99.9% successful remediation	Maintain 99.9%	TBD
Performance	Server Availability During Core Hours	2009	99.00%	99.60%	TBD
Performance	Maintain N-1 versions of OS and Office automation to all users	2010	N-1	Maintain N-1	Q4 FY2010
Performance	Maintain IT Refresh Achievement of N-1 (Hardware)	2010	100 % N-1	Maintain 100% N-1	Q4 FY2010
Performance	DS-1 Move, Change, Add and Removal (MCAR)	2010	Standard Service Without cabling requirement: No more than 3 Business Days. With cabling requirement: No more than 10 Business Days.	Maintain Standard Service Without cabling requirement: No more than 3 Business Days. With cabling requirement: No more than 10 Business Days.	TBD



Milestone _ Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results / Completion Dates
Performance	HD-3 RCA Delivery	2010	99.90% delivered within the agreed upon time	Maintain 99.90	TBD
Performance	HD-1 Disable User Accounts	2010	Less than 1 hour	Maintain Less than 1 hour	TBD
Performance	HD -2 Maintain User Accounts	2010	Less than 4 hours	Maintain Less than 4 hours	TBD
Performance	HD-4 First Call Resolution	2010	80% in 5 minutes	Maintain 80% in 5 minutes	TBD
Performance	HD-5 Call Abandon Rate	2010	Less than or equal to 7%	Maintain Less than or equal to 7%	TBD
Performance	HD-6 Average Wait Time	2010	Less than or equal to 30 seconds	Maintain Less than or equal to 30 seconds	TBD
Performance	Managed DR Services (Hot Services)	2010	100% and immediate	Maintain 100% and immediate	Q1 FY2009
Performance	Managed DR Services (Warm Services)	2010	100% @ 8 hours and immediate	Maintain 100% @ 8 hours and immediate	Q1 FY2009
Performance	Managed DR Services (Cold Services)	2010	100% @ 72 hours and immediate	Maintain 100% @ 72 hours and immediate	Q1 FY2009
Performance	Managed DR Services (Disaster & Recovery Testing)	2010	100%	Maintain 100%	Q1 FY2009
Performance	Deployment of Server Updates	2010	100%	Maintain 100 %	TBD
Performance	ISP Hosting Services Availability	2010	Availability 99.6%	Maintain 99.6% availability	TBD
Performance	ED.gov Services Availability	2010	Availability 99.6%	Maintain 99.9% availability	TBD
Performance	ConnectED Services Availability	2010	Availability 99.6%	Maintain 99.6% availability	TBD
Performance	Email (Electronic Messaging Services Availability)	2010	Availability 99.6%	Maintain Availability 99.6%	Q1 FY2009
Performance	Email Backups (Electronic Messaging Services Backups)	2010	100%	Maintain 100 %	Q1 FY2009
Performance	NS-1 Managed Network Services Availability	2010	Latency 120 ms	Maintain Latency 120 ms	TBD
Performance	NS-4 Network Services Availability	2010	99.60%	Maintain 99.60%	TBD



Milestone _ Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results / Completion Dates
Performance	NS-2 Remote Access and Teleworking Services Availability	2010	Latency 120 ms	Maintain Latency 120 ms	TBD
Performance	NS-3 Audio/Video/Data Conferencing Services Availability	2010	Availability 99.6%	Maintain 99.60%	TBD
Performance	GN-1 General Services Availability	2010	Availability 99.6%	Maintain 99.60%	TBD
Performance	GN-2 Event Notification	2010	4 levels; Less than 15min/ 15min/ 12 hrs/ 24 hrs	Maintain 4 levels; Less than 15min / 15min / 12 hrs / 24 hrs	TBD
Performance	GN-3 Customer Surveys	2010	90% at a 4/5 rating	Maintain 90% at a 4/5 rating	TBD
Performance	GN-4 System Backup	2010	100%	Maintain 100%	TBD
Performance	GN-5 Time to Restore	2010	4 levels; 2/4/8/24 hours to Resolution 99%	Maintain 4 levels; 2 / 4 / 8 / 24 hours to Resolution 99%	TBD
Performance	GN-7 Customer Satisfaction Support to Business	2010	90% at a 4/5 rating	Maintain 90% at a 4/5 rating	TBD
Performance	Incident Response and Problem Management	2010	100% response within the required time	Maintain 100%	TBD
Performance	Intrusion Detection/Protection Monitoring/Log Analysis	2010	99.9% detection and prevention.	Maintain 99.9%	TBD
Performance	Audit and Data Call Support	2010	100%	Maintain 100%	TBD
Performance	Enterprise Vulnerability Management Service/ Analysis/ Remediation Recommendations	2010	99.9% successful remediation.	Maintain 99.9%	TBD
Performance	Server Availability During Core Hours	2010	99.00%	99.60%	TBD

7.6 CPSS Milestones

The following table (Table 35) defines the milestones for CPSS, providing measurement indicators, fiscal year of milestones, baselines, planned improvements, and actual results/completion dates:



Table	35:	CPSS	Milestones
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Milestone Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results / Completion Dates
Implementation	Implementation of CPSS system. CPSS is currently in the O&M phase, all performance metrics through FY 2007 have been achieved	2005			Q1 FY2005
Performance	75% of required reports needed to reconcile data between the Financial System and Procurement System.	2007	85%	Maintain a 90% or greater availability of required reports	6/30/07 – est. 90% of the data sent is accurate.
Performance	90% of required reports needed to reconcile data between the Financial System and Procurement System.	2008	87%	Maintain a 90% or greater availability of required reports (92% -of reports are available to perform reconciliation between the Financial and Procurement systems)	Results expected Q1 FY2009.
Performance	90% of required reports needed to reconcile data between the Financial System and Procurement System.	2009	Results expected Q1 2009	Maintain a 90% or greater availability of required reports	Results expected Q1 FY2010.
Performance	90% of required reports needed to reconcile data between the Financial System and Procurement System.	2010	Results expected Q1 2010	Maintain a 90% or greater availability of required reports	Results expected Q1 FY2011
Performance	90% of required reports needed to reconcile data between the Financial System and Procurement System.	2011	Results expected Q1 2011	Maintain a 90% or greater availability of required reports	Results expected Q1 FY2012
Implementation	Implement Enhancement of Electronic proposals	2008			Q1 FY2008
Performance	55% of all proposals will be submitted on the Procurement Website	2008	60%	65% of all proposals will be submitted on the Procurement Website.	Results expected Q1 FY2009
Performance	65% of proposals submitted on the Procurement Website	2009	Results expected Q1 2009	Maintain 65% of all proposals will be submitted on the Procurement Website	Results expected Q1 FY2010
Performance	65% of proposals submitted on the	2010	Results expected Q1	Maintain 65% of all proposals	Results expected



Milestone Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results / Completion Dates
	Procurement Website		2010	will be submitted on the Procurement Website.	Q1 FY2011
Performance	65% of proposals submitted on the Procurement Website	2011	Results expected Q1 2011	Maintain 65% of all proposals will be submitted on the Procurement Website.	Results expected Q1 FY2012
Performance	Transactions sent to the financial system have the correct Transaction Code associated with them.	2007	95%	Maintain a 95% or greater	Q3 FY2007 – 95% or greater of transactions are assigned the correct Transaction Code.
Performance	Transactions sent to financial system with correct Transaction Code	2008	95%	Maintain a 95% or greater	TBD
Performance	Transactions sent to financial system with correct Transaction Code.	2009	95%	Maintain a 95% or greater	TBD
Performance	Transactions sent to financial system with correct Transaction Code.	2010	95%	Maintain a 95% or greater	TBD
Performance	Transactions sent to financial system with correct Transaction Code.	2011	95%	Maintain a 95% or greater	TBD
Implementation	Implement Enhancement to allow electronic deliverable submission.	2008			Q1 FY2008
Performance	E-deliverable module is available for submission of proposals.	2008	System not currently available	Module available 98% of the time for submission of deliverables.	Results expected Q1 FY2009
Performance	System is available for submission of proposals.	2009	TBD	Maintain Module availability 98% of the time for submission of deliverables.	Results expected Q1 FY2010
Performance	System is available for submission of proposals.	2010	TBD	Maintain Module availability 98% of the time for submission of deliverables.	Results expected Q1 FY2011
Performance	System is available for submission of proposals.	2011	TBD	Maintain Module availability 98% of the time for submission of deliverables.	Results expected Q1 FY2012



7.7 FMSS Milestones

The following table (Table 36) defines the milestones for FMSS, providing measurement indicators, fiscal year of milestones, baselines, planned improvements, and actual results/completion dates:

Milestone Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results / Completion Dates
Implementation	Implement FMSS solution	2006			Q1 2007
Performance	10% or less of Teamtrack items are FMSS related.	2007	10% of Teamtrack items are FMSS related.	8-9% of Teamtrack items are FMSS related.	Through the forth quarter of FY 2007 the Help Desk Tickets related to the FMSS were within the target parameter at $< 9\%$.
Performance	Less than 10% of Teamtrack items are FMSS related.	2008	8-9% of Teamtrack issues are FMSS related.	7-8% of Teamtrack issues are FMSS related.	Results will be available on a quarterly basis during FY2008.
Performance	Less than 10% of Teamtrack items are FMSS related.	2009	8-9% of Teamtrack issues are FMSS related.	6-7% of Teamtrack issues are FMSS related.	Results will be available on a quarterly basis during FY2009.
Performance	Less than 10% of Help Desk items are FMSS related.	2010	8-9% of Help Desk issues are FMSS related.	6-7% of Help Desk issues are FMSS related.	Results will be available quarterly during FY2010.
Performance	Less than 10% of Help Desk items are FMSS related.	2011	8-9% of Help Desk issues are FMSS related.	6-7% of Help Desk issues are FMSS related.	Results will be available quarterly during FY2011.
Performance	FMSS receives an unqualified audit opinion by independent auditors on FY 2007 annual financial statements.	2007	Unqualified opinion on the FY2006 financial statements.	Maintain unqualified opinion.	The Department received a clean audit opinion on the FY2007 department-wide annual financial statements produced by the FMSS.
Performance	FMSS receives an unqualified audit opinion by independent auditors on FY 2008 annual financial statements.	2008	Unqualified audit opinion on previous year's financial statements.	Maintain unqualified opinions on financial statements.	Results are expected to be available November 2008.
Performance	FMSS receives an unqualified audit opinion by independent auditors on FY 2009 annual financial statements.	2009	Unqualified audit opinion on previous year's financial statements.	Maintain unqualified opinions on financial statements.	Results are expected to be available November 2009.
Performance	FMSS receives an unqualified audit opinion by independent	2010	Unqualified audit opinion on previous year's	Maintain unqualified opinions on financial	Results are expected to be

Table 36: FMSS Milestones



Milestone Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results / Completion Dates
	auditors on FY 2010 annual financial statements.		financial statements.	statements.	available November 2010
Performance	FMSS receives an unqualified audit opinion by independent auditors on FY 2011 annual financial statements.	2011	Unqualified audit opinion on previous year's financial statements.	Maintain unqualified opinions on financial statements.	Results are expected to be available November 2011
Performance	Ability to produce financial statements on a quarterly basis (4 times per year).	2007	Financial statements are produced quarterly.	Financial statements will be produced quarterly.	The fiscal year 2007 quarterly financial statements were successfully generated by the FMSS per the requirement.
Performance	Ability to produce financial statements on a quarterly basis (4 times per year).	2008	Financial statements are produced quarterly	Quarterly financial statements will be produced by the FMSS during FY2008 (4 times per year).	Results will be available each quarter during FY2008.
Performance	Ability to produce financial statements on a quarterly basis (4 times per year).	2009	Financial statements are produced quarterly	Quarterly financial statements will be produced by the FMSS during FY2009 (4 times per year).	Results will be available each quarter during FY2009.
Performance	Ability to produce financial statements on a quarterly basis (4 times per year).	2010	Financial statements are produced quarterly	Quarterly financial statements will be produced by the FMSS during FY2010 (4 times per year).	Results will be available each quarter during FY2010.
Performance	Ability to produce financial statements on a quarterly basis (4 times per year).	2011	Financial statements are produced quarterly	Quarterly financial statements will be produced by the FMSS during FY2011 (4 times per year).	Results will be available each quarter during FY2011.
Performance	A Green rating on the annual OMB Stoplight Scorecard System.	2007	Green rating on scorecard system.	Maintain Green rating.	The FMSS received a Green rating on the scorecard for 2007
Performance	FMSS receives a Green rating on the OMB scorecard.	2008	FMSS has scored Green in previous years	FMSS will maintain Green rating.	Results will be available June 2008
Performance	FMSS receives a Green rating on the OMB scorecard.	2009	FMSS has scored Green in previous years	FMSS will maintain Green rating.	Results will be available June 2009.



Milestone _ Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results / Completion Dates
Performance	FMSS receives a Green rating on the OMB scorecard.	2010	FMSS has scored Green in previous years	FMSS will maintain Green rating.	Results will be available June 2010.
Performance	FMSS receives a Green rating on the OMB scorecard.	2011	FMSS has scored Green in previous years	FMSS will maintain Green rating.	Results will be available June 2011.
Performance	100% of risks in the Risk Log are reviewed monthly or quarterly, as indicated for each risk, by the Project Management Team.	2007	100% of risks reviewed either monthly or quarterly.	Maintain 100% review of all risks both monthly and quarterly.	As of the fourth quarter of FY2007, 100% of all scheduled risk reviews were held by the Project Management Team.
Performance	100% of risks associated with the FMSS are reviewed monthly by the Project Manager.	2008	100% of risks reviewed by the Project Manager.	Continue reviewing all FMSS risks monthly.	Results will be available monthly during FY2008
Performance	100% of risks associated with the FMSS are reviewed monthly by the Project Manager.	2009	100% of risks reviewed by the Project Manager.	Continue reviewing all FMSS risks monthly.	Results will be available monthly during FY2009.
Performance	100% of risks associated with the FMSS are reviewed monthly by the Project Manager.	2010	100% of risks reviewed by the Project Manager.	Continue reviewing all FMSS risks monthly.	Results will be available monthly during FY2010.
Performance	100% of risks associated with the FMSS are reviewed monthly by the Project Manager.	2011	100% of risks reviewed by the Project Manager.	Continue reviewing all FMSS risks monthly.	Results will be available monthly during FY2011.
Performance	Percentage of time system available is 98% or greater.	2007	FMSS available 98% of time.	Maintain 98% or greater availability of the FMSS.	Through the fourth quarter of FY 2007, the FMSS was available 99% of the planned scheduled availability.
Performance	Percentage of time FMSS available is 98% or greater.	2008	FMSS available 98% or better.	Maintain 98% availability of the FMSS during FY2008.	Results will be available quarterly during FY2008.
Performance	Percentage of time FMSS available is 98% or greater.	2009	FMSS available 98% or better.	Maintain 98% availability of the FMSS during FY2009.	Results will be available quarterly during FY2009.
Performance	Percentage of time FMSS available is 98% or greater.	2010	FMSS available 98% or better.	Maintain 98% availability of the FMSS during FY2010.	Results will be available quarterly during FY2010.
Performance	Percentage of time FMSS available is 98% or greater.	2011	FMSS available 98% or better.	Maintain 98% availability of the FMSS during FY2011.	Results will be available quarterly during FY2011.



7.8 ISS Milestones

The following table (Table 37) defines the milestones for ISS, providing measurement indicators, fiscal year of milestones, baselines, planned improvements, and actual results/completion dates:

Milestone Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results / Completion Dates
Implementation	Implemented ISS solution	1998	**Solution is currently in C enhancements are planned have been met through 200	and all performance metrics	Q4 1998
Performance	Monthly customer service survey results.	2007	Score of 4 out of 5	Increase to 4. 5 out of 5.	4.2
Performance	Monthly customer service survey results.	2008	Score 4.2 out of 5.	Increase to 4.5 out of 5.	Results available 11/2008.
Performance	Monthly customer service survey results.	2009	TBD 11/2007.	Increase to 4.5 out of 5.	Results available 11/2009.
Performance	Monthly customer service survey results.	2010	TBD 11/2008.	Increase to 4.5 out of 5.	Results available 11/2010.
Performance	Monthly customer service survey.	2011	TBD 11/2009.	Increase to 4.5 out of 5.	Results available 11/2011.
Performance	Percentage of grant applications submitted electronically (for programs participating).	2007	74%	Increase to 80%	78%
Performance	Percentage of grant applications submitted electronically (for programs participating).	2008	78%	Increase to 80%	Results available 8/2008.
Performance	Percentage of grant applications submitted electronically (for programs participating).	2009	TBD 8/2008.	Increase to 85%	Results available 8/2009.
Performance	Percentage of grant applications submitted electronically (for programs participating).	2010	TBD 8/2009.	Increase to 90%	Results available 8/2010.
Performance	Percentage of grant applications	2011	TBD 8/2010.	Increase to 95%	Results available 8/2011.

Table 37: ISS Milestones



Milestone Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results / Completion Dates
	submitted electronically (for programs participating).				
Performance	Clean audit opinion	2007	Clean audit	Maintain clean audit.	Results available 12/2007.
Performance	Clean audit opinion	2008	TBD 12/2007.	Maintain clean audit.	Results available 12/2008.
Performance	Clean audit opinion	2009	TBD 12/2008.	Maintain clean audit.	Results available 12/2009.
Performance	Clean audit opinion	2010	TBD 12/2009.	Maintain clean audit.	Results available 12/2010.
Performance	Clean audit opinion	2011	TBD 12/2010.	Maintain clean audit.	Results available 12/2011.
Performance	Percentage of time EDCAPS platform is available to customers during regular operating hours	2007	99%	Increase to 99.5%	99.10%
Performance	Percentage of time EDCAPS platform is available to customers during regular operating hours	2008	99.10%	Increase to 99.5%	Results available 8/2008.
Performance	Percentage of time EDCAPS platform is available to customers during regular operating hours	2009	TBD 8/2008.	Increase to 99.5%	Results available 8/2009.
Performance	Percentage of time EDCAPS platform is available to customers during regular operating hours	2010	TBD 8/2009	Maintain 99.5%	Results available 8/2010
Performance	Percentage of time EDCAPS platform is available to customers during regular operating hours	2011	TBD 8/2010	Maintain 99.5%	Results available 8/2011



7.9 TMS Milestones

The following table (Table 38) defines the milestones for TMS, providing measurement indicators, fiscal year of milestones, baselines, planned improvements, and actual results/completion dates:

Milestone Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results / Completion Dates
Implementation	TMS System Implemented	2007			Q1 2007
Performance	Help Desk Support	2007	Maintain 50% End-User Traveler Issues resolved within one hour.	75% End-User Traveler Issues resolved within one hour	As of 9/30/07, 99% of end-user travel issues were resolved with the EDCAPS Help Desk. Those that could not be resolved by Help Desk Staff or Functional Team were referred to the vendor's Help Desk for resolution.
Performance	Help Desk Support	2008	Maintain 75% End-User Traveler Issues resolved within one hour.	80% End-User Traveler Issues resolved within one hour	Results expected December 2008.
Performance	Help Desk Support	2009	Maintain 75% End-User Traveler issues resolved within one hour.	Maintain 80% end-user traveler issues resolved within one hour	Results expected December 2009.
Performance	Help Desk Support	2010	Maintain 75% End-User Traveler issues resolved within one hour.	Maintain 80% end-user traveler issues resolved within one hour	Results expected December 2010.
Performance	Help Desk Support	2011	Maintain 75% End-User Traveler issues resolved within one hour.	Maintain 80% end-user traveler issues resolved within one hour	Results expected December 2011.
Performance	Reduced Travel Ticket Transactions Fees	2007	Maintain 50% usage of on- line booking engine.	Maintain 70% usage of on- line booking engine	As of 9/30/07, 70% usage of on- line booking by ED staff to secure travel reservations.
Performance	Reduced Travel Ticket Transactions Fees	2008	Maintain 70% adoption rate of on-line booking engine.	Maintain 75% usage of on- line booking engine	Results expected December 2008.
Performance	Reduced Travel Ticket Transactions Fees	2009	Maintain 70% usage of on- line booking engine.	Maintain 75% usage of on- line booking engine	Results expected December 2009.

Table 38: TMS Milestones



Milestone _ Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results / Completion Dates
Performance	Reduced Travel Ticket Transaction Fees	2010	Maintain 70% usage of on- line booking engine.	Maintain 75% usage of on- line booking engine	Results expected December 2010.
Performance	Reduced Travel Ticket Transaction Fees	2011	Maintain 70% usage of on- line booking engine.	Maintain 75% usage of on- line booking engine	Results expected December 2011.
Performance	Interface Failures	2007	Maintain 26 interface failures preventing documents from processing in the general ledger.	Maintain less than 18 per year.	As of 9/30/07, 6 interface failures have resulted. Resolution of file failure were addressed and resolved within 24 hours as outlined in the SLAs.
Performance	Interface Failures	2008	Maintain 18 interface failures preventing documents from processing in the general ledger.	Maintain less than 15 per year.	Results expected December 2008.
Performance	Interface Failures	2009	Maintain 18 interface failures preventing documents from processing in the general ledger.	Maintain less than 15 per year.	Results expected December 2009.
Performance	Interface Failures	2010	Maintain 18 interface failures preventing documents from processing in the general ledger.	Maintain less than 15 per year.	Results expected December 2010.
Performance	Interface Failures	2011	Maintain 18 interfaces failures preventing documents from processing in the general ledger.	Maintain less than 15 per year.	Results expected December 2011
Performance	Travel Document Processing	2007	Maintain 3-4 days for travel document processing.	Reduce processing to 2-3 days.	As of 9/30/07, travel files were processed timely and payment were made within 24 hours of successful file processing.
Performance	Travel Document Processing	2008	Maintain 2-3 days for travel document processing.	Reduce processing to 1-2 days.	Results expected December 2007.
Performance	Travel Document Processing	2009	Maintain 2-3 days for travel document processing.	Maintain reduction of Processing to 1-2 days.	Results expected December 2008.



Milestone Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results / Completion Dates
Performance	Travel Document Processing	2010	Maintain 2-3 days for travel document processing.	Maintain reduction of processing to 1-2 days.	Results expected December 2009.
Performance	Travel Document Processing	2011	Maintain 2-3 days for travel document processing.	Maintain reduction of processing to 1-2 days.	Results expected December 2010.
Performance	System Downtime	2007	Maintain 20 system reboots due to hung applications.	Reduce to 14.	As of 9/30/07, ED requested no system reboots to the vendor. System availability is monitored by GSA. Scheduled maintenance was performed as required.
Performance	System Downtime	2008	Maintain 14 system reboots due to hung applications.	Reduce to 10.	Results expected December 2007.
Performance	System Downtime	2009	Maintain 10 system reboots due to hung applications.	Maintain reduction to 10	Results expected December 2008.
Performance	System Downtime	2010	Maintain 10 system reboots due to hung applications.	Maintain reduction to 10	Results expected December 2009.
Performance	System Downtime	2011	Maintain 10 system reboots due to hung applications.	Maintain reduction to 10	Results expected December 2010.

7.10 E-Authentication Milestones

The following table (Table 39) defines the milestones for e-Authentication, providing measurement indicators, fiscal year of milestones, baselines, planned improvements, and actual results/completion dates:

Table 39: E-Authentication Milestones

Milestone Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results / Completion Dates
Implementation	E-Authentication Infrastructure implemented	2006			Q3 FY2006
Performance	Integrate Systems with the E- Authentication Infrastructure. Number of System integrated to the E-Authentication Infrastructure.	2006	0	1	1, Q3 FY2006



Milestone _ Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results / Completion Dates
Performance	Integrate Systems with the E- Authentication Infrastructure. Number of System integrated to the E-Authentication Infrastructure.	2007	1	2	2, Q4 FY2007
Performance	Integrate Systems with the E- Authentication Infrastructure. Number of System integrated to the E-Authentication Infrastructure.	2008	3	6	Actual results will be available as of September 2008.
Performance	Percentage time that the E- Authentication Infrastructure is available excluding scheduled maintenance.	2006	0	98%	98%, Q3 FY2006
Performance	Maintain percentage of time that the E-Authentication Infrastructure is available excluding scheduled maintenance.	2007	98%	98%	98%, Q4 FY2007
Performance	Maintain percentage of time that the E-Authentication Infrastructure that is available excluding scheduled maintenance.	2008	98%	98%	Actual results will be available as of September 2008.
Performance	Maintain percentage of time that the E-Authentication Infrastructure that is available excluding scheduled maintenance.	2009	98%	98%	Actual results will be available as of 9/2009.
Performance	Service availability.	2006	99%	99%	99%, Q3 FY2006
Performance	Maintain optimal Service availability.	2007	99%	99%	99%, Q4 FY2007
Performance	Maintain optimal Service availability.	2008	99%	99%	Actual results will be available as of September 2008.
Performance	Maintain optimal Service availability.	2009	99%	99%	Actual results will be available as of September 2009.



Milestone _ Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results / Completion Dates
Performance	Response time to initiate knowledge transfer of E- Authentication knowledge upon request (in business days).	2006	0	5	5 days, Q3 FY2006
Performance	Number of days from request to Account creation and Password Resets.	2007	7	0	0, Q4 FY2007
Performance	Percentage of problems related to the E-Authentication infrastructure. Percentage of problem resolution.	2007	0	80%	80%, Q4 FY2007
Performance	Percentage of problems resolved that related to the E- Authentication infrastructure. Percentage of problem resolution.	2008	80%	85%	Actual results will be available as of September 2008.
Performance	Number of unauthorized user accesses found during audits and system scans.	2007	0	0	0, Q4 FY2007
Performance	Number of verified, major system vulnerabilities found during audits and system scans.	2008	0	0	Actual results will be available as of September 2008.
Implementation	Integrate FSA applications into E- Authentication service.	2008			Q4 FY2008
Performance	Integrate 1 FSA application (eCampus Based application) into the Federal Student Aid E- Authentication service.	2008	0	1	Q4 FY2008
Performance	Completion of assessment, risk evaluation, preliminary population determination and sequence plan for three additional Federal Student Aid systems.	2008	1	4	Q2 FY2008
Performance	Completion of assessment, risk	2008	4	7	Q3 FY2008



Milestone _ Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results / Completion Dates
	evaluation, preliminary population determination and sequence plan for three additional Federal Student Aid systems.				
Performance	Completion of assessment, risk evaluation, preliminary population determination and sequence plan for three additional Federal Student Aid systems	2008	7	10	Q4 FY2008

7.11 NCES Web Milestones

The following table (Table 40) defines the milestones for NCES Web, providing measurement indicators, fiscal year of milestones, baselines, planned improvements, and actual results/completion dates:

Milestone Type	Measurement Indicator	Fiscal Year	BaselinePlanned Improvement to the Baseline		Actual Results / Completion Dates
Implementation	CCD Web Implementation (Web Usage to BAT)	2007			Q4, 2007
Performance	Increase the average number of unique user sessions per month.	2007	26K (As of 9/30/06)	27.5K	26.5K (As of March 31, 2007)
Performance	Increase the average number of unique user sessions per month.	2008	26.5K	30K	Q4 FY2008
Performance	Web usage to BAT. Increase the average number of unique user sessions per month.	2009	30K	32.5K	Q4 FY2009
Performance	Decreased CCD Collection System (used by states to transmit collection data to NCES) data processing time. This is calculated by Benchmark file "import time + processing time in minutes.	2007	60	20	18 (as of March 31, 2007)

Table 40: NCES Web Milestones



Milestone Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results / Completion Dates
Performance	Decreased CCD Collection System (used by states to transmit collection data to NCES) data processing time. This is calculated by Benchmark file "import time + processing time in minutes.	2008	18	15	Q4 FY2008
Performance	Decreased CCD Collection System (used by states to transmit collection data to NCES) data processing time. This is calculated by Benchmark file "import time + processing time in minutes.	2009	15	12	Q4 FY2009
Implementation	ESLSD database consolidations phase two. Continue expansion of metadata layer of the ESLSD DB	2007			Q4 FY2007
Performance	Number of NCES Web Applications (total of 8) incorpor- ating all reusable metadata items.	2007	4	6	6 - Q4 FY2007
Performance	Number of NCES Web Applications (total of 8) incorpor- ating all reusable metadata items.	2008	6	8	Q4 FY2008
Implementation	ALS Collection Application production migration and operation.	2007			Q4 FY2007
Performance	Prepare the ALS collection application 2 weeks earlier than the previous year.	2007	October 15 th	October 1 st	Collection date changed by NCES to Nov 22. Application testing was completed on Nov 13, 2007.
Performance	Prepare the ALS collection application 2 weeks earlier than the previous year.	2008	October 15 th	October 1 st	Q4 FY2008
Performance	Prepare the ALS collection application 2 weeks earlier than	2009	October 1 st	September 15 th	Q4 FY2009



Milestone _ Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results / Completion Dates
	the previous year.				
Performance	State Library (STLa) survey online collection application – reduced number of reported defects by 50% from same period last year	2007	6	3	0 – as of March 31, 2007
Performance	State Library (STLa) survey online collection application – maintain 0 reported defects.	2008	0	0	Q4 FY2008
Performance	State Library (STLa) survey online collection application – maintain 0 reported defects.	2009	0	0	Q4 FY2009

7.12 IPEDS Milestones

The following table (Table 41) defines the milestones for IPEDS, providing measurement indicators, fiscal year of milestones, baselines, planned improvements, and actual results/completion dates:

Table 41: IPEDS Milestones

Milestone Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results / Completion Dates
Implementation	Implemented IPEDS solution	2000	** Solution is currently in O&M, no additional enhancements are planned and all performance metrics have been met through 2007.		Q4, 2000
Performance	Percentage of customers reporting they are satisfied with IPEDS.	2007	85%	Maintain/improve percentage of satisfied customers.	Q4, 2007 - The NCES Customer Survey included items on IPEDS respondents' satisfaction. Over 88 percent of respondents were satisfied or very satisfied with IPEDS systems, including the Help Desk responsiveness.
Performance	Percentage of customers reporting they are satisfied with IPEDS.	2008	88%	Maintain/improve percentage of satisfied customers.	Data not available until Fall 2008.



Milestone _ Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results / Completion Dates
Performance	Percentage of customers reporting they are satisfied with IPEDS.	2009	Actual data will used from 2008 above	Maintain/improve percentage of satisfied customers.	Data not available until Fall 2009.
Performance	Maintain 95 percent response rate.	2007	95 percent	Maintain or improve at least 95% response rate.	Q4 FY2007 – All response rates met or exceeded goals
Performance	Maintain 95 percent response rate.	2008	95 percent	Maintain or improve at least 95% response rate.	Final response rates will be available approximately in July 2008.
Performance	Maintain 95 percent response rate.	2009	95 percent	Maintain or improve at least 95% response rate.	Final response rates will be available approximately in July 2009.
Performance	Data transfer time from collection to dissemination.	2007	6 months	Goal is to get data from collection to dissemination within 6 months.	Information on this will be available in late-2008.
Performance	Help Desk response time	2007	Less than 5 minutes	The goal is to maintain or to improve Help Desk response time.	In FY2007, it took an average of 5 minutes, 24 seconds per call.
Performance	Help Desk response time	2008	Less than 5 minutes	The goal is to maintain or to improve Help Desk response time.	Data on this will be available approximately in June 2008.
Performance	Help Desk response time	2009	Less than 5 minutes	The goal is to maintain or to improve Help Desk response time.	Data on this will be available approximately in June 2009.
Performance	Days delay in opening	2007	Less than 10 days	Maintain/improve number of days that opening is delayed.	For Fall 2007, there was a one day delay in opening.
Performance	Days delay in opening	2008	Less than 10 days	Maintain/improve number of days that opening is delayed.	This information will be available by October 1, 2008.
Performance	Days delay in opening	2009	Less than 10 days	Maintain/improve number of days that opening is delayed.	This information will be available by October 1, 2009.



7.13 NAEP Milestones

The following table (Table 42) defines the milestones for NAEP, providing measurement indicators, fiscal year of milestones, baselines, planned improvements, and actual results/completion dates:

Milestone Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results/Completion Dates
Implementation	Implementation of the NAEP system. NAEP is documented as a mixed life cycle investment (Due to planned enhancements reflected below as implementation milestones).	2008		·	Q1 FY2008
Implementation	FY09 NAEP Public Site Redesign to implement new site design and information architecture.	2008			Q4 FY2008
Implementation	FY09 Public Site Redesign to take feedback from user logs and focus groups to refine/update site redesign.	2009			Q4 FY2009
Implementation	Upgrade to NAEP Network to the latest SharePoint version to implement new collaborative features and increased workflow capabilities	2010			Q4 FY2010
Implementation	Upgrade to NAEP CRM applications to lead to a consolidation and integration of the NAEP CRM applications. This will result in a single set of application code and data to report dashboard components to managers.	2011			Q4 FY2011
Performance	Average visitors to Integrated Management System per day to be measured by number of unique users (unique IP addresses) to the IMS as measured in user logs.	2007	60 visitors	85 visitors	65, Q1 FY2007
Performance	Average visitors to Integrated Management System per day to be measured by number of unique users (unique IP addresses) to the IMS as measured in user logs.	2008	65 visitors	85 visitors	TBD Q1 FY2008

Table 42: NAEP Milestones



Milestone Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results/Completion Dates
Performance	Average visitors to Integrated Management System per day to be measured by number of unique users (unique IP addresses) to the IMS as measured in user logs.	2009	85 visitors	95 visitors	TBD Q1 FY2009
Performance	Average visitors to Integrated Management System per day to be measured by number of unique users (unique IP addresses) to the IMS as measured in user logs.	2010	95 visitors	110 visitors	TBD Q1 2010
Performance	Average visitors to Integrated Management System per day to be measured by number of unique users (unique IP addresses) to the IMS as measured in user logs.	2011	110 visitors	120 visitors	TBD Q1 FY2011
Performance	Average visitors to Integrated Management System per day to be measured by number of unique users (unique IP addresses) to the IMS as measured in user logs.	2012	120 visitors	120 visitors	TBD Q1 FY2012
Performance	Percentage of NAEP data users who are satisfied or very satisfied with NAEP products. This information will be provided as part of the NAEP Web Contractor's Award Fee Evaluation.	2007	75	100%	100 – Q1 FY2007
Performance	Percentage of NAEP data users who are satisfied or very satisfied with NAEP products. This information will be provided as part of the NAEP Web Contractor's Award Fee Evaluation.	2008	100	Maintain 100%	TBD, Q1 FY2008
Performance	Percentage of NAEP data users who are satisfied or very satisfied with NAEP products. This information will be provided as part of the NAEP Web Contractor's Award Fee Evaluation.	2009	100	Maintain 100%	TBD, Q1 FY2009
Performance	Percentage of NAEP data users who are satisfied or very satisfied with NAEP	2010	100	Maintain 100%	TBD, Q1 FY2010



Milestone Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results/Completion Dates
	products. This information will be provided as part of the NAEP Web Contractor's Award Fee Evaluation.				
Performance	Percentage of NAEP data users who are satisfied or very satisfied with NAEP products. This information will be provided as part of the NAEP Web Contractor's Award Fee Evaluation.	2011	100	Maintain 100%	TBD, Q1 FY2011
Performance	Percentage of NAEP data users who are satisfied or very satisfied with NAEP products. This information will be provided as part of the NAEP Web Contractor's Award Fee Evaluation.	2012	100	Maintain 100%	TBD, Q1 FY2012
Performance	Average number of page requests per month on NAEP web site	2007	45,000	55,000	300,000 – Q1 FY2007
Performance	Average number of page requests per month on NAEP web site as measured by total page requests from the NAEP public web site.	2008	300,000	350,000	TBD, Q1 FY2008
Performance	Average number of page requests per month on NAEP web site as measured by total page requests from the NAEP public web site.	2009	350,000	375,00	TBD, Q1 FY2009
Performance	Average number of page requests per month on NAEP web site as measured by total page requests from the NAEP public web site.	2010	375,000	385,000	TBD, Q1 FY2010
Performance	Average number of page requests per month on NAEP web site as measured by total page requests from the NAEP public web site.	2011	385,000	400,000	TBD, Q1 FY2011
Performance	Average number of page requests per month on NAEP web site as measured by total page requests from the NAEP public web site.	2012	400,000	410,000	TBD Q1 FY2012
Performance	Content Management System (CMS) and ADTracker content items increase with additional use, to be measured in number of	Q1 2007	10	20	20



Milestone Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results/Completion Dates
	published pages and content items contained within the CMS/ADTracker.				
Implementation	ADTracker/WebCMS Integration results in removal of ADTracker as a stand-alone tracking system	2008			Q1 FY2008
Performance	Removal of ADTracker as a stand-alone tracking system	2008	N/A	Retire ADTracker as a stand- alone tracking system	Q1 FY2008
Performance	Content Management System (CMS) and ADTracker content items increase with additional use, to be measured in number of published pages and content items contained within the CMS/ADTracker.	Q1 2008	10	20	TBD, Q1 FY2008
Implementation	WebCMS system is upgraded to a new system with more advanced workflow and latest supported language. Table creation embedded into system	2009			Q4 FY2009
Performance	Content Management System (CMS) and ADTracker content items increase with additional use, to be measured in number of published pages and content items contained within the CMS/ADTracker.	2009	12	18	TBD, Q1 FY2009
Performance	Content Management System (CMS) and ADTracker content items increase with additional use, to be measured in number of published pages and content items contained within the CMS/ADTracker.	2010	18	24	TBD, Q1 FY2010
Performance	Content Management System (CMS) and ADTracker content items increase with additional use, to be measured in number of published pages and content items contained within the CMS/ADTracker.	2011	24	30	TBD, Q1 FY2011
Performance	Content Management System (CMS) and ADTracker content items increase with	2012	30	36	TBD, Q1 FY2012



Milestone Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results/Completion Dates
	additional use, to be measured in number of published pages and content items contained within the CMS/ADTracker.				
Performance	Percentage of time NAEP web site is available to be measured using up-time logs and access times recorded at host.	2007	94	97	96 – Q1 FY2007
Performance	Percentage of time NAEP web site is available to be measured using up-time logs and access times recorded at host as hours available per month.	2008	96	99	TBD, Q1 FY2008
Performance	Percentage of time NAEP web site is available to be measured using up-time logs and access times recorded at host as hours available per month.	2009	96	99	TBD, Q1 FY2009
Performance	Percentage of time NAEP web site is available to be measured using up-time logs and access times recorded at host as hours available per month.	2010	96	99	TBD, Q1 FY2010
Performance	Percentage of time NAEP web site is available to be measured using up-time logs and access times recorded at host as hours available per month.	2011	96	99	TBD, Q1 FY2011
Performance	Percentage of time NAEP web site is available to be measured using up-time logs and access times recorded at host as hours available per month.	2012	96	99	TBD, Q1 FY2012
Implementation	Integrated Management System is upgraded to version 3.5 to include dashboard reporting and improved search capability	2008			Q1 2009
Performance	Integrated Management System (IMS) content items increase with additional use to be measured in number of published pages and content items contained within the IMS.	2009	10	20	TBD, Q1 FY2009



Milestone Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results/Completion Dates
Performance	Integrated Management System (IMS) content items increase with additional use to be measured in number of published pages and content items contained within the IMS.	2010	10	20	TBD, Q1 FY2010
Performance	Integrated Management System (IMS) content items increase with additional use to be measured in number of published pages and content items contained within the IMS.	2011	10	20	TBD, Q1 FY2011

7.14 ERIC Milestones

The following table (Table 43) defines the milestones for ERIC, providing measurement indicators, fiscal year of milestones, baselines, planned improvements, and actual results/completion dates:

Milestone Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results / Completion Dates
Implementation	Implemented ERIC.ED.GOV web site	2004			Q4 FY2004
Performance	Customer satisfaction rate with Web site.	2006	A customer satisfaction survey was not competed prior to FY 2005, so it is not possible to identify a customer satisfaction baseline at this time. The survey will be conducted in FY 2005 and will serve as the baseline for the project.	Maintain at least a 70% customer satisfaction rating (this performance goals is based on industry best practices as identified by the American Customer Satisfaction Index for Web sites).	For December 2006, the customer satisfaction score was 68 based on 601 respondents to the survey.
Performance	Percentage of new content in all areas of information mandated by legislation available to the public.	2007	Only a limited degree of full text material was available to the public at the end of FY 2004.	95% of full text material will be available to the public in FY 2006.	A project initiated to digitize the back file of about 339,000 full text documents. Once copyright permission is obtained from the authors, the ERIC web

Table 43: ERIC Milestones



Milestone Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results / Completion Dates
					site will post additional documents for which permission to disseminate has been granted. At the end of Q4 2007 an additional 54,000 full text materials were released to the user community.
Performance	Average amount of time to enter a journal into the database after publication.	2007	6 to 9 months was the average amount of time to enter a journal into the database after publication during FY 2004.	1 month	For Q2 2007 the average cycle time from date of acquisition to publication on the ERIC web site was less than 30 days for both journal and non-journal materials
Performance	Percentage of time the online system (website, database, and search engine) is available to the public.	2007	98% This baseline is only based on one month of data - September 2004.	99%	For Q2 2007, the website and database were up 99.69% of time.
Performance	Customer satisfaction rate with Web site.	2008	A customer satisfaction survey was not competed prior to FY 2005, so it is not possible to identify a customer satisfaction baseline at this time. The survey will be conducted in FY 2005 and will serve as the baseline for the project.	Maintain at least a 70.05% customer satisfaction rating (this performance goals is based on industry best practices as identified by the American Customer Satisfaction Index for Web sites).	December 2008
Performance	Percentage of new content in all areas of information mandated by legislation available to the public.	2008	Only a limited degree of full text material was available to the public at the end of FY2004.	100% of full text material will be available to the public in FY 2006.	December 2008
Performance	Average amount of time to enter a journal into the database after publication.	2008	6 to 9 months was the average amount of time to enter a journal into the database after publication	3 weeks	December 2008



Milestone Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results / Completion Dates
			during FY2004.		
Performance	Percentage of time the online system (website, database, and search engine) is available to the public.	2008	98% This baseline is only based on one month of data - September 2004.	99.50%	December 2008
Performance	Customer satisfaction rate with Web site.	2009	A customer satisfaction survey was not competed prior to FY 2005, so it is not possible to identify a customer satisfaction baseline at this time. The survey will be conducted in FY2005 and will serve as the baseline for the project.	Maintain at least a 70.05% customer satisfaction rating (this performance goals is based on industry best practices as identified by the American Customer Satisfaction Index for Web sites).	December 2009
Performance	Percentage of new content in all areas of information mandated by legislation available to the public.	2009	Only a limited degree of full text material was available to the public at the end of FY2004.	100% of full text material will be available to the public in FY 2006.	December 2009
Performance	Average amount of time to enter a journal into the database after publication.	2009	6 to 9 months was the average amount of time to enter a journal into the database after publication during FY2004.	3 weeks	December 2009
Performance	Percentage of time the online system (website, database, and search engine) is available to the public.	2009	98% This baseline is only based on one month of data – September 2004.	99.50%	December 2009
Performance	Customer satisfaction rate with Web site.	2010	A customer satisfaction survey was not competed prior to FY2005, so it is not possible to identify a customer satisfaction baseline at this time. The survey will be conducted in FY2005 and will serve as the baseline for the project.	Maintain at least a 70.05% customer satisfaction rating (this performance goals is based on industry best practices as identified by the American Customer Satisfaction Index for Web sites).	December 2010



Milestone _ Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results / Completion Dates
Performance	Percentage of new content in all areas of information mandated by legislation available to the public.	2010	Only a limited degree of full text material was available to the public at the end of FY2004.	100% of full text material will be available to the public in FY 2006.	December 2010
Performance	Average amount of time to enter a journal into the database after publication.	2010	6 to 9 months was the average amount of time to enter a journal into the database after publication during FY2004.	3 weeks	December 2010
Performance	Percentage of time the online system (website, database, and search engine) is available to the public.	2010	98% This baseline is only based on one month of data – September 2004.	99.50%	December 2010
Performance	Customer satisfaction rate with Web site.	2011	A customer satisfaction survey was not competed prior to FY2005, so it is not possible to identify a customer satisfaction baseline at this time. The survey will be conducted in FY2005 and will serve as the baseline for the project.	Maintain at least a 70.05% customer satisfaction rating (this performance goals is based on industry best practices as identified by the American Customer Satisfaction Index for Web sites).	December 2011
Performance	Percentage of new content in all areas of information mandated by legislation available to the public.	2011	Only a limited degree of full text material was available to the public at the end of FY2004.	100% of full text material will be available to the public in FY2006.	December 2011
Performance	Average amount of time to enter a journal into the database after publication.	2011	6-to-9 months was the average amount of time to enter a journal into the database after publication during FY2004.	3 weeks	December 2011
Performance	Percentage of time the online system (website, database, and search engine) is available to the public.	2011	98%; This baseline is only based on one month of data – September 2004.	99.50%	December 2011



7.15 ID Access Control (EDSTAR) Milestones

The following table (Table 44) defines the milestones for ID Access Control (EDSTAR), providing measurement indicators, fiscal year of milestones, baselines, planned improvements, and actual results/completion dates:

Milestone Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results / Completion Dates
Implementation	Implementation of ID Access Control (EDSTAR). The system is in full production (started in Q4 2007); all performance metrics through FY2007 have been achieved.	2004			Q4 FY2007
Performance	Department of Education (ED) staff and contractors processed for PIV I.	2007	30%	50%	80% completed by Q1 FY2008
Performance	Department of Education Staff and Contractors issued HSPD-12 compliant ID cards/badges.	2008	50%	75% by Q3 100% by Q4	TBD
Performance	Issuance of HSPD-12 compliant ID cards/badges within 90 calendar days of new employee and/or contractor entrance on duty	2009	75%	25% to have 100% compliance by end of fiscal year	TBD, Q1 FY2009
Performance	Issuance of HSPD-12 compliant ID cards/badges within 90 calendar days of new employee and/or contractor entrance on duty.	2010	100%	Maintain 100%	TBD, Q1 FY2010
Performance	Issuance of HSPD-12 compliant ID cards/badges within 90 calendar days of new employee and/or contractor entrance on duty.	2011	100%	Maintain 100%	TBD, Q1 FY2011
Performance	Number of security breaches in Department buildings.	2007	0	Maintain 0	Q4 FY2007, 0 security breaches
Performance	Number of security breaches in Department Buildings.	2008	0	Maintain 0	Results Q4 FY2008

Table 44: ID Access Control (EDSTAR) Milestones



Milestone _ Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results / Completion Dates
Performance	Number of security breaches in Department Buildings.	2009	0	Maintain 0	Results Q4 FY2009
Performance	Number of security breaches in Department Buildings.	2010	0	Maintain 0	Results Q4 FY2010
Performance	Number of security breaches in Department Buildings.	2011	0	Maintain 0	Results Q4 FY2011
Performance	Percentage of time the security system is available.	2007	100% availability	Maintain 100%	100% – Q1 FY2007
Performance	Percentage of time security system is available.	2008	100% availability	Maintain 100%	Results Q4 FY2008
Performance	Percentage of time security system is available.	2009	100%	Maintain 100%	Results Q4 2009
Performance	Percentage of time security system is available.	2010	100%	Maintain 100%	Results Q4 2010
Performance	Percentage of time security system is available.	2011	100%	Maintain 100%	Results Q4 2011
Performance	Upgraded card readers and access control systems for HSPD-12 compliant ID cards/badges.	2008	70%	30% to reach 100%	70% completed as of Q2 FY2008 100% by Q4 FY2008
Performance	Maintenance and operation of HSPD- 12 compliant hardware (enrollment stations, readers, etc.).	2009	70%	100%	Results Q4 FY2009
Performance	Maintenance and operation of HSPD- 12 compliant hardware (readers, etc.).	2010	100%	Maintain 100%	Results Q4 FY2010
Performance	Maintenance and operation of HSPD- 12 compliant hardware (readers, etc.).	2011	100%	Maintain 100%	Results Q4 FY2011



7.16 EDEN Milestones

The following table (Table 45) defines the milestones for EDEN, providing measurement indicators, fiscal year of milestones, baselines, planned improvements, and actual results/completion dates:

Milestone Type	Measurement Indicator	Fiscal Year	Baseline Planned Improvement to the Baseline		Actual Results / Completion Dates
Implementation	Implement EDEN and Go Live	2007			Q4 FY2007
Performance	Average score on year-end annual partner satisfaction survey.	2008	FY2006 Partner Satisfaction Survey Score.	Maintain or improve on score of better than very satisfied.	To be determined by survey conducted by third party after end of FY2007. (Note: This survey requires OMB clearance, as well as approval from other offices in ED, so data collection can be delayed to another quarter).
Performance	Average score on year-end annual partner satisfaction survey.	2009	FY2007 Partner Satisfaction Survey Score	Maintain or improve on score of better than very satisfied	TBD, Q2 FY2009
Performance	Average score on year-end annual partner satisfaction survey.	2010	FY2007 Partner Satisfaction Survey ScoreMaintain or improve score of better than v satisfied		TBD, Q2 FY2010
Performance	Average speed to answer inbound calls from SEA partners during hours of operation. (Data is collected daily and reported at the end of each week.)	2007	As of October 20, 2006, 4 seconds.	Maintain 4 seconds or better	4 seconds – 8/10/2007
Performance	Average speed to answer inbound calls from State partners during hours of operation.	2008	08 July 2007, 5 seconds within queue. 20 seconds to answer the phone		Q4, 2008 (Metrics are collected weekly and reported monthly by the 15th.) As of 1/20/2008: 7 seconds
Performance	Average speed to answer inbound	2009	To be determined based on	Minimum of 50% of calls in	Q4 FY2009 (Metrics are

Table 45: EDEN Milestones



Milestone Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results / Completion Dates
	calls from State partners during hours of operation.		prior year results.	queue within 60 seconds, all others (voice mail) within 5 minutes.	collected weekly and reported monthly by the 15th.)
Performance	Average speed to answer inbound calls from State partners during hours of operation.	2010	To be determined based on prior year results.	Minimum of 50% of calls in queue within 60 seconds, all others (voice mail) within 5 minutes.	Q4 FY2010 (Metrics are collected weekly and reported monthly by the 15th.)
Performance	EDEN Knowledge Management compliance with ED's policies, directives, and federal acts and statutes that govern records management.	2007	Baseline established for 10/1/2005 to 3/31/2006: 93.5%	100% compliant. Due to contract change, data will be available April and September	96% – April 2007
Performance	EDEN Knowledge Management compliance with ED's policies, directives, and federal acts and statutes that govern records management.	2008	96% Compliance	100% compliant	Q4 FY2008
Performance	EDEN Knowledge Management compliance with ED's policies, directives, and federal acts and statutes that govern records management.	2009	100% Compliance	Maintain 100% Compliance	TBD, Q4 FY2009
Performance	EDEN Knowledge Management compliance with ED's policies, directives, and federal acts and statutes that govern records management.	2010	100% Compliance	Maintain 100% Compliance	TBD, Q4 FY2010
Performance	Reduction in State Education Agency data transmission problems [LEAD003].	2008	The current running average for October 1 through July 31, 2007 is 51.32% success rate in transmissions for all states. (The baseline will be the average for the entire fiscal year, but can't be completed until after	Improvement of 5% annual average success rate over prior fiscal year.	Q4 FY2008 (A running average is reported monthly through the end of the prior month. (Report LEAD003 is available online with user selected time period that can run through the current day and time.)



Milestone Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results / Completion Dates
			September 30.)		
Performance	Reduction in State Education Agency data transmission problems [LEAD003].	2009	To be determined based on prior year results.	Improvement of 5% annual average success rate over prior fiscal year.	Q4 FY2009 (A running average is reported monthly through the end of the prior month. (Report LEAD003 is available online with user selected time period that can run through the current day and time.)
Performance	Reduction in State Education Agency data transmission problems [LEAD003]	2010	10 To be determined based on prior year results. Improvement of 5% annual average success rate over prior fiscal year.		Q4 FY2010 (A running average is reported monthly through the end of the prior month. (Report LEAD003 is available online with user selected time period that can run through the current day and time.)
Performance	Percentage of critical trouble tickets closed or with an action plan to fix in three days.	2008	95% were closed or had an action plan within 3 days for FY 2007	Maintain or improve upon 95% closure/plan rate.	Q4 FY2008 (Metrics are collected monthly and reported monthly by the 15^{th})
Performance	Percentage of critical trouble tickets closed or with an action plan to fix in three days.	2009	To be determined based on prior year results.	Maintain or improve upon 95% closure/plan rate.	Q4 FY2009 (Metrics are collected monthly and reported monthly by the 15 th)
Performance	Percentage of critical trouble tickets closed or with an action plan to fix in three days.	2010	To be determined based on prior year results.	Maintain or improve upon 95% closure/plan rate.	Q4 FY2010 (Metrics are collected monthly and reported monthly by the 15 th)
Performance	Aggregate state capability for submissions by school year (SY) [LEAD006]	2007	In FY 2006, capabilities 3% over prior SY SY were: SY 03-04: 67%; SY 04-05: 73%; SY 05-06: 83%		SY 06-07: 92%, as of 8/21/2007.
Performance	Percent states submitting only through EDEN by collection. (Collection due dates and certification are determined by Program Offices.)	2007	10/06 CRDC 100%; July 2006: 1810-0614: 100%; 1820-0517: 46.2%; 1820- 0043:46.2%; 1820-0521: 12.6%	100% for all collections by 11/1/2007, excluding 2-year extension exceptions approved by the Secretary.	1820-0043, 65.4%; 1820-0517, 61.5%; 1820-0521, 63.5%. EASIE collection 100%. Title III Biennial Report 100%. CCD 100% – as of July 07:
Implementation	Produce a data mart for administration of the ED <i>Facts</i>	2009			Q4 FY2009



Milestone _ Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results / Completion Dates
	program by PIMS (responsible for administering the EDFacts program) providing the capability to create unlimited ad hoc reports.				
Performance	EDFacts reports response time from a cross-section of reports.	2009	To be determined based on prior year results.	Not to exceed 30 seconds average response time across reports.	Q4 FY2009 (Results to be reported by the 15th of each month)
Performance	EDFacts reports response time from a cross-section of reports.	2010	To be determined based on prior year results.	Not to exceed 30 seconds average response time across reports.	Q4 FY2010 (Results to be reported by the 15th of each month)

7.17 MSIX Milestones

The following table (Table 46) defines the milestones for MSIX, providing measurement indicators, fiscal year of milestones, baselines, planned improvements, and actual results/completion dates:

Table 46: MSIX Milestones

Milestone _ Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results/Completion Dates
Implementation	Nationwide Deployment	2007			Q4 FY2007
Performance	Percentage of states that can track migrant student data via MSIX.	2007	0%	25%	Based on the 9 states that participated in the pilots, 100% could track student data during the pilot period. The system will not be fully operational until the end of September 2007.
Performance	Average number of days for SEAs to report migrant student data to MSIX.	2008	7 days	4 days	Actual results will be reported at the end of FY2008.
Performance	Average number of hours for the Department to produce nationwide migrant child counts.	2007	160 hours	2 hours	Actual results will be available for reporting after implementation FY2008.
Performance	Average number of hours per SEA to produce statewide migrant child counts.	2008	30 Hours	22.5 Hours	Actual Results will be reported at the end of FY2008.



Milestone _ Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results/Completion Dates
Performance	Average number of hours per SEA to produce statewide migrant child counts.	2009	22.5 Hours	19 Hours	Actual results will be reported at the end of FY2009.
Performance	Average number of hours per SEA to produce statewide migrant child counts.	2010	19 Hours	16 Hours	Actual results will be reported at the end of FY2010.
Performance	Average number of hours per SEA to produce statewide migrant child counts.	2011	16 Hours	13 Hours	Actual results will be reported at the end of FY2011.
Performance	Percentage of States with improved data reliability, quality and standardization.	2007	25%	50%	Q4 2007 – 50% of states have improved data quality due to the special assistance the MSIX team provides to states to improve their data transmission capabilities.
Performance	Percentage of States with improved data reliability, quality and standardization	2008	50%	100%	Actual results will be reported at the end of FY08.
Performance	Number of states using the same data standards to achieve improved data reliability, quality, and standardization.	2007	0 States	8 States	Q4 2007 - 25 states have improved data quality due to the special assistance the MSIX team provides to states to improve their data transmission capabilities.
Performance	Number of states using the same data standards to achieve improved data reliability, quality, and standardization.	2008	25 States	30 States	Actual results will be reported at the end of FY08.
Performance	Number of states reporting improved data reliability, quality, and standardization from MSIX.	2009	0 States	25 States	Actual results will be reported at the end of FY09.
Performance	Number of states reporting improving data reliability, quality, and standardization from MSIX.	2010	25 States	35 States	Actual results will be reported at the end of FY10.



Milestone _ Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results/Completion Dates
Performance	Number of states reporting improving data reliability, quality, and standardization from MSIX	2011	35 States	45 States	Actual results will be reported at the end of FY11.
Performance	Percentage of MSIX Help Desk Issues that are resolved.	2008	0%	100%	Actual results will be reported at the end of FY08.
Performance	Percentage of MSIX Help Desk Issues that are resolved.	2009	100%	Maintain 100%	Actual results will be reported at the end of FY09.
Performance	Percentage of MSIX Help Desk Issues that are resolved.	2010	100%	Maintain 100%	Actual results will be reported at the end of FY10.
Performance	Percentage of MSIX Help Desk Issues that are resolved.	2011	100%	Maintain 100%	Actual results will be reported at the end of FY11.
Performance	Percentage of help desk problems that are resolved in one business day.	2009	0%	50%	Actual results will be reported at the end of FY09.
Performance	Percentage of help desk problems that are resolved in one business day.	2010	50%	75%	Actual results will be reported at the end of FY10.
Performance	Percentage of help desk problems that are resolved in one business day.	2011	75%	90%	Actual results will be reported at the end of FY11.
Performance	System Uptime is 99.5% after deployment of MSIX except for periods of routine maintenance.	2009	99.5% Availability	99.5% Availability	Actual results will be reported at the end of FY09.
Performance	System Uptime is 99.5% after deployment of MSIX except for periods of routine maintenance.	2010	99.5% Availability	99.5% Availability	Actual results will be reported at the end of FY10.
Performance	System Uptime is 99.5% after deployment of MSIX except for periods of routine maintenance.	2011	99.5% Availability	99.5% Availability	Actual results will be reported at the end of FY11.
Performance	The number of States that reported results for reading proficiency of elementary school migrant students.	2008	45	47	Actual results will be reported at the end of FY08.
Performance	The number of States that reported results for reading proficiency of middle school migrant students.	2008	45	47	Actual results will be reported at the end of FY08.



Milestone _ Type	Measurement Indicator	Fiscal Year	Baseline	Planned Improvement to the Baseline	Actual Results/Completion Dates
Performance	The number of States that reported results for mathematics proficiency of elementary school migrant students.	2008	45	47	Actual results will be reported at the end of FY08.
Performance	The number of States that reported results for mathematics proficiency of middle school migrant students.	2008	45	47	Actual results will be reported at the end of FY08.
Performance	The number of States meeting an annually set performance target in reading at the elementary school level for migrant students.	2008	20	22	Actual results will be reported at the end of FY08.
Performance	The number of States meeting an annually set performance target in reading at the middle school level for migrant students.	2008	21	23	Actual results will be reported at the end of FY08.
Performance	The number of States meeting an annually set performance target in mathematics at the elementary school level for migrant students.	2008	24	26	Actual results will be reported at the end of FY08.
Performance	The number of States meeting an annually set performance target in mathematics at the middle school level for migrant students.	2008	18	20	Actual results will be reported at the end of FY08.

7.18 ED eGov Alignment Milestones

This section provides an overview of the Department of Education's alignment and incorporation of Federal eGov Initiatives and the status of each, including specific status information and upcoming milestones (where appropriate). The following table (Table 47) describes the ED eGov Alignment Milestones and key next steps:

Table 47: ED eGov Alignment Milestones
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Portfolio	E-Gov Initiative	ED's Investment	Alignment Status	Key Next Steps
G2C	GovBenefits	ADvance – Aid Delivery	In progress	Establish process to enter and maintain all benefit eligibility programs on GovBenefits.gov (2Q06).



Portfolio	E-Gov – Initiative	ED's Investment	Alignment Status	Key Next Steps	
	E-Loans	ADvance – Aid Delivery	Completed	Ensure loan programs are accurately reflected on GovLoans Gateway.	
G2B	E-Rulemaking	TBD	TBD	 Convert paper-based docket processing to FDMS (3Q06). Migrate public comment system to E-Rulemaking (3Q06). 	
	Federal Asset Sales	TBD	TBD	Consolidate / Migrate personal and real property reuse and disposal process to FAS (4Q06).	
	USA Services	TBD	TBD	Identify all Tier 1 contact channels (email and toll free) and volume (1Q06).	
	Business Gateway	TBD	TBD	Provide report to OMB and Business Gateway identifying rules/regulations and related forms, and plain language guides that are not already contained in an existing on-line business compliance system (2Q06).	
G2G	Geospatial One-Stop	NCES Web Support	Completed	NCES continue to participate in the planning activities for posting metadata for all geospatial data acquisitions in the GeoData.	
	Disaster Management	EDUCATE (EDNet)	Completed	 Implement Common Alert Protocol (CAP) (4Q05). Implement Disaster Management Interoperability Services (DMIS) within all identified Emergency Operations Center (EOC) (4Q05). 	
	Grants.gov	 Grants Administration Payment System (GAPS) Peer Review Module FIPSE Dissemination and Grants Database GPOS Website 	Completed	Achieved 100% of discretionary application packages on Grants.gov as of Q2 FY2007.	
IEE	E-Training	 Interactive Job Aid TLN Technical Support 	In Progress	• Migrate agency-specific Learning Management Systems to one of the 3 E-Training service providers (GoLearn, FasTrac, NTIS).	
	Recruitment One-Stop	HR Web Recruiting	Completed	• Create interface to post and to receive information from USAJOBS.	



Portfolio	E-Gov Initiative	ED's Investment	Alignment Status	Key Next Steps
	EHRI	ED currently outsources HR shared services to DOI/NBC.	Completed	 Adopt eOPF data standards (4Q07). Complete interfaces (4Q06). Complete workforce tools (4Q06). Provide Payroll Data File to EHRI (3Q06).
	E-Travel	Travel Management System	Completed	 Integrate ED's Travel Management Center with the eTS vendor (4Q06). Process all travel vouchers through eTS vendor (4Q06). Decommission legacy system (2Q07). Enterprise-wide end-to-end e-Gov Travel solution went live on October 2, 2006.
	Integrated Acquisition Environment	Contracts and Purchasing Support System (CPSS)	Completed	Ongoing monitoring
E-Authentication	E- Authentication	E-Authentication	In Progress	 Implement E-Authentication service for FSA systems (2Q07). Implement e-Campus-based application into E- Authentication service for FSA systems (2Q08).



7.18.1 Federal Transition Framework (FTF)

The Department of Education is actively incorporating the <u>Federal Transition Framework</u> (<u>FTF</u>), which encourages agencies to identify opportunities for reuse and collaboration for cross-agency Initiatives. ED is actively working to align relevant programs/initiatives to this Framework through its Enterprise Architecture Program.

The Department of Education is actively using the Federal Transition Framework to:

- Determine the applicability and scope of cross-agency initiatives to ED.
- Update the ED EA Program Plan to incorporate tasks to develop or update agency enterprise architecture work products.
- Update the ED target enterprise architecture to reflect cross-agency initiatives.
- Conduct gap analysis between current and target architecture to identify gaps in the current implementation of cross-agency initiatives.
- Update the ED EA Transition Strategy to incorporate tasks, activities and milestones to close gaps between current and target architecture.

ED has reviewed the recently released Federal Transition Framework by OMB to identify gaps in cross-agency initiatives that are applicable to mission of the ED. Currently, the ED Target Enterprise Architecture includes the following cross-agency Initiatives and incorporates their business, data, service, technical, and performance components:

- E-Travel
- Grants Management Line of Business the Department of Education will be a shared service provider
- Grants.gov
- HSPD-12
- Human Resources Line of Business
- Internet Protocol Version 6 (IPv6)
- IT Infrastructure Optimization Line of Business
- Financial Management Line of Business
- Budget Formulation and Execution Line of Business Managed by the Department of Education
- E-Authentication
- Geospatial One-Stop
- Information Systems Security Line of Business

Additionally, the Department has incorporated the Transition Strategy and Timeline of each eGov Initiative into the ED Transition Strategy Plan.

The Department's Enterprise Architecture Program will continue to work with all ED agencies and business owners to align their IT investments to the cross-agency initiatives described in the FTF Service Catalog. This realignment will comply with the common structure developed to provide a common structure for the organization of cross-agency Initiative.



Figure 11 below graphically represents the structure of the Federal Transition Framework (FTF) Catalog:

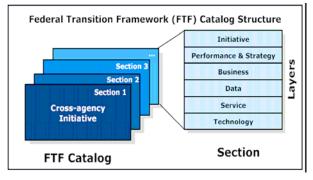


Figure 11: Federal Transition Framework (FTF) Catalog Structure



8.0 MAJOR IT INVESTMENT RISK ASSESSMENT ANALYSIS

All ED IT Investments have identified risks and associated mitigation strategies. This information is continuously monitored and updated, and addressed cost, IT, performance, and dependencies.

Federal Student Aid is addressing risk in the following two ways (from FY2010 Investments and beyond):

- 1. Risk Management is being standardized across Federal Student Aid projects and investment, with the initiation of a multi-year Enterprise Risk Management initiative,
- 2. Federal Student Aid is adding new modules to its Enterprise Management Support System to automate and standardize the preparation of FY2010 Investments and to manage risks and mitigation strategies for each investment. These new modules are currently expected to be deployed in mid-March 2008 and are consistent with the new Federal Student Aid Enterprise Risk Management initiative and Project Management Office guidelines.

A comprehensive listing of individual ED IT investment risks and mitigation strategies are provided in the table below (Table 48):

Area of Risk	Description	Strategy for Mitigation	
IT Investment: CPSS			
Reliability of Systems	System might not be scaleable to meet increased traffic.Test run the system for peak load handling capability before implementation		
Life-Cycle Costs	Inadequate funding in FY2009 will delay implementation of Phase III.Adjust project timeline/ resource needs to reflect allocated amount.		
IT Investment: FMSS			
Reliability of Systems	System might not be scaleable to meet increased traffic.	Test run the system for peak load handling capability before implementation.	
Life-Cycle Costs	Inadequate funding in FY2009 will delay implementation of Phase III.	Adjust project timeline/ resource needs to reflect allocated amount.	

Table 48: ED IT Investment Risks and Mitigation Strategies



Area of Risk Description Strategy		Strategy for Mitigation			
IT Investment: NCES	IT Investment: NCES Web Support				
Data / Info	NCES data is the linchpin of the NCES website. Providing comprehensive and intuitive access is critical. The data contained within web-based data dissemination systems must be thoroughly reviewed before being publicly available to ensure consistent and accurate data dissemination.	All releases are thoroughly reviewed by contractor subject matter experts. These releases then undergo a formal reviewed and approval by government subject matter experts and the NCES webmaster prior to production release.			
Data / Info / Security	Restricted use data sets must be protected and all applications must minimize the risk of unauthorized use.	No restricted datasets are available online. Each application release goes through a security audit as part of its NCES web standards review.			
Technology Data / Info	Overall systems engineering is not the responsibility of this contract. However the support of production applications is. Risk of application errors and incorrect data collection and dissemination exist in each application supported.	As part of the contractors CMMI Level 3 development process, each application is unit tested, system tested and independently verified prior to production release. Subsequent testing and bug reports are addressed at the highest priority and closely coordinated with NCES's server engineering team.			
Technology	Technical problems/failures with applications and their ability to provide planned and desired technical functionality.	Significant application testing mitigates risk and CMMI QA processes. When possible, application data are compared to existing print publications.			
Reliability of Systems / Security	Vulnerability of systems, websites, information and networks; risk of intrusions and connectivity to other systems; risk associated with the misuse (criminal/ fraudulent) of information.	All data in dissemination systems managed this contract are public use data sets and all aspects of data are publicly available.			
Organizational and Change Management	Objectives of the project could possibly be not clearly linked to program needs, to the agency's overall strategies, and to government-wide policies and standards.	Tasks within this contract are dictated and managed by all applicable program managers. Tasks are reviewed on a monthly basis both at the program and financial level to ensure continued viability and conformity to department and program strategy, policy and standards.			
Reliability of Systems	System might not be scaleable to meet increased traffic.	Mitigation Strategy: Test run the system for peak load handling capability before implementation.			
Life-Cycle Costs	Inadequate funding in FY2009 will delay implementation of Phase III.	Adjust project timeline/ resource needs to reflect allocated amount.			



Area of Risk	Description	Strategy for Mitigation		
IT Investment: CPSS				
Reliability of Systems	Equipment move out of ED Data Center may cause major disruption of EDCAPS services.	Accept risk and do an impact assessment and plan for change once risk occurs		
IT Investment: IPEDS				
Reliability of Systems	System might not be able to meet increased server traffic during peak periods.	Looking into staggering due dates to spread out usage over a longer time period		
Data / Info	There is a possibility of more data items being added to the IPEDS data collection.	Try to anticipate changes and have a long lead-time for implementation.		
IT Investment: NAEP				
Reliability of Systems	System might not be scaleable to meet increased traffic.	Test run the system for peak load handling capability before implementation.		
Life-Cycle Costs	Inadequate funding in FY2009 will delay implementation of required development and support for FY2009 NAEP Reading and Math assessment activities.	Adjust project timeline/ resource needs to reflect allocated amount		
Technology	Technology changes may impact current development efforts and result in unanticipated errors with applications.	Monitor current technology trends and update testing lab to evaluate impacts of changes on current development.		
Technical Obsolescence	Planned migration from IPv4 to IPv6 may impact connectivity and interaction between contractor sites and NCES.	Plan and evaluate impact of Ipv6 on current infrastructure. Validate readiness of system infrastructure for Ipv6.		
IT Investment: TMS				
Reliability of Systems	System might not be scaleable to meet increased traffic.	Test run the system for peak load handling capability before implementation.		
Life-Cycle Costs	Inadequate funding in FY2009and future budget years will impact the operation and maintenance of the system.	Prepare strong business case to support funding requests.		
Organizational and Change Management	E2 system is not accepted by ED staff.	On-going Training on E2 to ensure staff understanding and functionality of application.		
Dependencies and Interoperability Between This and Other Investments	E2 system is not hosted by ED therefore, immediate resolution for system issues will not be handled timely	SLAs will be used to measure performance.		



Enterprise Transition Strategy Plan, February 2008

Area of Risk	Description	Strategy for Mitigation
E2 is a multi-agency system. Fixes, enhancements and builds may not adequately be tested before release to Production.		SLAs will be used to measure performance.
IT Investment: ERIC		
Reliability of Systems	System might not be scaleable to meet increased traffic.	Monitor system utilization and add additional hardware to handle the increase in volume.
Technology	Bandwidth might not be scalable to meet increased traffic.	Monitor bandwidth utilization and add additional capacity to handle the increase in volume.
IT Investment: EDEN	(EDFacts)	
Dependencies and Interoperability Between This and Other Investments	If EDEN (EDFacts) does not complete reporting capabilities needed by Program Offices and other users, the program will not succeed.	This risk is currently being mitigated by the capabilities being provided through 2.2.1.3.2 Construct Metadata Tool, 2.2.1.4.2 Construct EDFacts.
Data / Info	Pata / InfoIf EDEN (EDFacts) does not acquire adequate K-12 data, through merging of Department collections and by an acceptable percentage of submissions from State Education Agencies, EDFacts reporting will not be useful to Program Offices and other users, and the program will not succeed.This risk is being m 1) Issued regulation submission throu 2) Mitigated by mer collections into E Merger, 2.2.2.1 I EASIE, 2.3.11.1.3 CSPR3) Use of a transition providing prioriti important inform	
IT Investment: MSIX		
Life-Cycle Costs	States may not have the resources and/or technical needs to support the preparation of their technical interfaces.	MSIX will secure additional funding to assist the states with preparing their technical interfaces.
Project Resources	Demand on ED Management Resources.	Efficient planning and scheduling to achieve productivity with limited resources. Implementation of COTS will ensure that contract services are available to support the MSIX Project.
Technology	Reliance on technical interfaces with other systems.	MSIX Pilots and National Rollout will demonstrate the functionality between MSIX and the state migrant information systems.



Area of Risk	Description	Strategy for Mitigation	
Risk of Creating a Monopoly For Future Procurements	Reliance on sunsetting technologies to implement MSIX can prevent the system from meeting its future requirements.	Outsourcing services including a hosting environment and use of COTS will help to mitigate this potential issue.	
Technology	Use of new, untested technology to provide MSIX Solution.	MSIX System must be approved by the ED PIRWG and new and/or untested technologies must be tested during the ED Security C&A Process.	
Data/Info	Incomplete or inaccurate data or data are misused. This would result in an increased burden on migrant community for data collection.	Information collection notice should be posted online along with the details associated with the minimum data elements (MDEs).	
Life-Cycle Costs	Lifecycle cost estimates are inaccurate due to inaccurate IGCE, ineffective planning, or project scope creep.	There should be a change control process to monitor and govern any and authorize project changes. CCB Activities were implemented during April 2007.	
Reliability of Systems	MSIX Standard Maintenance Window conflicts with the state data upload window, which could result in data being lost or not transmitted from states to MSIX.	The MSIX Project Team should address maintenance windows and clarify for the states when maintenance is being done so there will be no conflicts.	
Surety (Asset Protection) Considerations	Impact of loss, damage or theft ad the adequacy of physical protection, continuity of operations, and disaster recovery plans.	Execute a contract for backup facility for MSIX. C&A will ensure that backup facility operations are taken into account as a part of the security process.	
Reliability of Systems/Security	Vulnerability of system to intrusions and connectivity to other systems.	Ensure that MSIX successfully completes the C&A Process and that MSIX Project Team Members have the appropriate security clearances	
Risk of Creating a Monopoly For Future Procurements	Dependence on a single vendor or product can lead to government being reliant on a specific vendor/product.	MSIX is designed around a COTS Solution with minimal customization so that ED shoul be able to acquire future contract services to support the MSIX System.	
Technology	Technical problems with products that affect the ability to provide planned functionality.	The project should use pilots and prototypes to demonstrate the future functionality of the MSIX System. Two pilots were planned and implemented for MSIX.	
Business	Turnover of key contractor personnel.	Contractor should provide advanced notice to ED regarding key personnel replacement and their staffing plan and Personnel Roster should be updated when staff members change. This should be forwarded to ED when changes are made.	



Area of Risk	Description	Strategy for Mitigation
IT Investment: G5		
Reliability of Systems	EDUCATE data center move may cause disruption to development schedule because of system unavailability.	Accept risk and do an impact assessment and plan for change once risk occurs.
	Network or system outages in the development, testing, production or training environments will affect Integration Contractor's ability to meet project milestones.	Accept risk and do an impact assessment and plan for change once risk occurs.
IT Investment: E-Autl	nentication	
Security	Changes in OMB/GSA security focus, guidance and fees could adversely impact existing and planned authentication guidelines, requirements, and implementation plans.	Continued analysis of authentication and security policy changes and decisions as part of the developmental process rather than being a recipient of it. Uniform framework and technical policies across ED to preclude multiple sources of risk and inconsistency.
Reliability of Systems	EDUCATE vehicle capabilities and ability to ensure that interoperable standards and technical capabilities are in place, kept current with government wide needs and enable flexible integration of constituency required or regulatory authentication standards. Lack of credential acceptance and uniform policies may impact, delay or make inoperable various key systems across ED.	Integrate EDUCATE team into process and provide framework and Concept of Operations to contractor for this vehicle to ensure that requirements are defined and enabled by the EDUCATE contractor.
IT Investment: Data V	Varehouse	
Reliability of Systems	System might not be scaleable to meet increased traffic.	Research should an enhancement be needed for additional users added.
Life-Cycle Costs	Availability of future funding to continue operations and maintenance.	EDW will be transitioned to EDUCATE, which will provide hosting and management services. EDUCATE is fully funded.



9.0 IPv6 TRANSITION STRATEGY AND MILESTONES

OMB has directed the Department to implement Internet Protocol Version 6 (IPv6) within its core network backbone infrastructure by June 2008. On November 18, 2007, the U.S. Department of Education (ED) successfully fulfilled the requirements of OMB Memorandum M-05-22. In conjunction with contractor, vendor, and service provider personnel, the U.S. Department of Education (ED) successfully exchanged IPv6 traffic across the network core and with an external partner. The results of these demonstrations are documented in "U.S. Department of Education (ED) IPv6 Demonstration Plan and Results" which is consistent with the requirements of the CIO Council Demonstration Plan.

The following figure (Figure 12) shows a high level architecture of the Education Network.

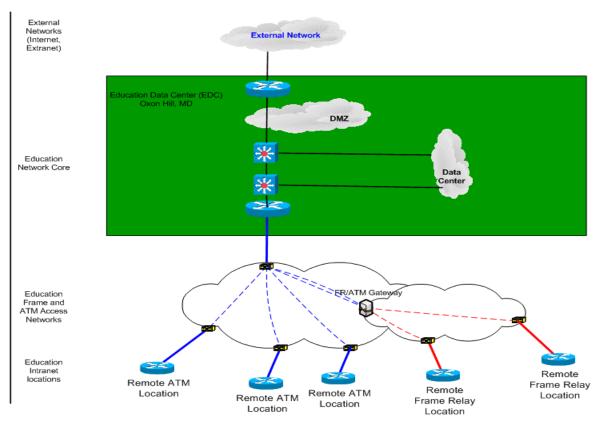


Figure 12: ED's High-level Network Architecture

The CIO Council plan states that:

"For the purposes of the IPv6 transition, the core network (a.k.a., backbone network) is the set of network transport devices (routers, switches) that provide the highest level of traffic aggregation in the network, and thus at the highest level of hierarchy in the network."



The Department of Education has defined that the Gigabit Ethernet LAN located in the Education Data Center (EDC) as the Agency "core network" for the purpose of the IPv6 demonstrations. Specifically, the Department of Education has added IPv6 addressing to VLAN 11. VLAN 11 spans two Cisco 6513 multi-layer switches within the data center. VLAN 11 will include the three Windows XP workstations used as the demonstration test points.

Sprint acted as the external partner for the demonstration. The Sprint IPv6 Internet will be used as the external network. Sprint will use the *sprintv6.net* webserver as the external test point. The Department of Education demonstration architecture is illustrated in Figure 13 below.

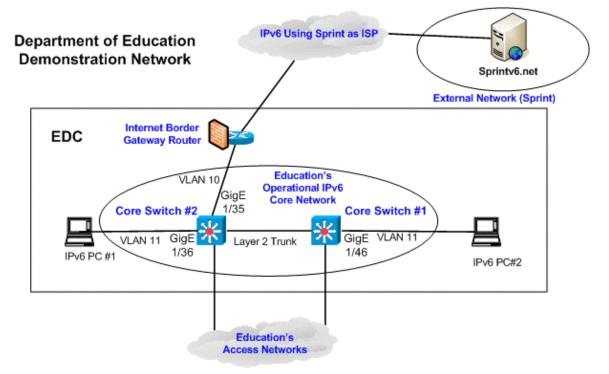


Figure 13: ED's Demonstration Architecture

Further details and demonstration results can be found in the U.S Department of Education's IPv6 Demonstration Plan and Results document attached with this submission.

Implementing IPv6 represents a strategic opportunity for the Department to provide improved services with greater efficiency. IPv6 is an enabling technology that can be used to support a number of the Department's business capability requirements, which in turn are aligned with the Department's Strategic Goals.



The following table (Table 49) summarizes the key features of IPv6 and the Department business capabilities supported by these features:

Table 49: IPv6 Features and Supported Business Capabilities Requirements in Each LOB

IPv6 Feature	Supported Business Capabilities Requirements	Description	
A larger address space IPv6 provides a virtually limitless	Information Dissemination LOB Information Clearinghouse	• Data storage management and network facilities	
address space thereby overcoming limitations of the current IPv4-based infrastructure. ED has the opportunity to network-enable new types of IT assets,	Administration LOB IT-business alignment and IT support and governance	Common enabling services	
such as remote sensors, handheld computing devices, mobile phones, and other devices with individual and unique IP addresses. This will enable direct end-to-end connectivity between IP- enabled devices and systems.	Administration LOB Facilities and security services	 Efficient, reliable facility services Safe and secure workplace Asset tracking 	
More robust mechanisms for prioritizing data traffic	Grants LOB Workflow-enabled collaborative grants planning	Collaborative planning within program offices	
These mechanisms provide a more reliable infrastructure for bandwidth- intencing applications such as streaming	Grants LOB Collaborative review, etc.	Location independent reviews	
intensive applications such as streaming video, voice over IP, near-real time collaboration, and others.	Evaluation LOB Evidence-based planning	Collaboration across programs to define / reuse performance information	
	Evaluation LOB Consolidated data collection	Collaboration tools to enable survey / data collection support to survey participants	
	Administration LOB IT-business alignment and IT support and governance	Common enabling services	



IPv6 Feature	Supported Business Capabilities Requirements	Description	
Auto-configuration Allows devices to automatically	Compliance LOB Case management and workflow tracking.	• Apply mobile tools and caseworker tools to field audits, inspections and investigation.	
configure themselves and join networks without requiring centralized servers to manage them. Mobility support built into IPv6 will enable devices to remain connected even while roaming across great physical distances and multiple networks. These capabilities will enable flexible, decentralized, "plug and play" networking that will decrease administration requirements and provide continuous connectivity.	Administration LOB IT-business alignment and IT support and governance.	Common enabling services.	
End-to-end security IPv6 incorporates (and requires) end-to-	Evaluation LOB Consolidated data collection.	• Secure, multi-channel data exchange between ED and data sources (web, paper, etc.).	
end security for all IP traffic directly within the network layer, simplifying and strengthening network security.	Research LOB Comprehensive data collection, sharing and analysis.	• Data exchange between ED and data sources through multiple secure channels.	
	Administration LOB IT-business alignment and IT support and governance.	Common enabling services.	



Given that the Internet Protocol is core to the Department's IT infrastructure, beginning in February 2006, OMB has been using the Enterprise Architecture Assessment Framework to evaluate the Department's IPv6 transition planning and progress, IP device inventory completeness, and impact analysis thoroughness. The images below (Figure 14 and Figure 15) illustrate the Department's high-level IPv6 Transition Strategy.

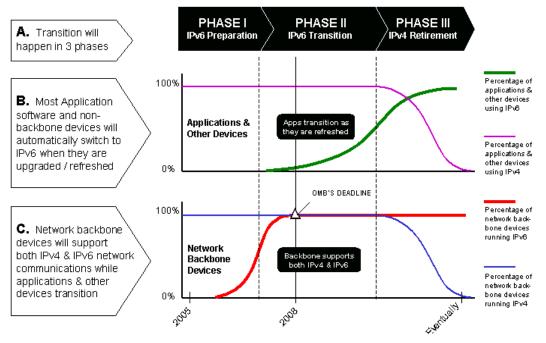
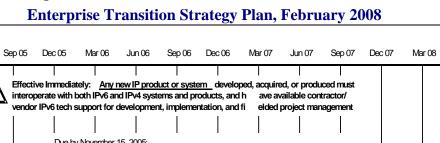
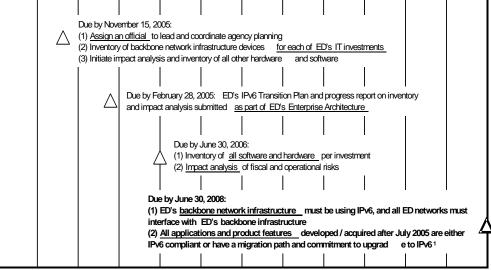


Figure 14: High-level IPv6 Transition Strategy



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Source: Memorandum issued by Karen Evans to Age000 son August 2, 2005 entitled "Transition Planning for Internetter Version 6 (IPV6)"

Figure 15: Department's IPv6 Transition Strategy¹

9.1 IPv6 Milestone Update

ED's IPv6 Transition is integrated into ED's EA Transition Strategy. Specifically, ED's EA Transition is represented as an EA Technical Transition Program in ED's IT Infrastructure Services Sequencing Plan and follows from ED's IPv6 Transition Strategy. Milestones for ED's IPv6 Transition Plan are identified in (Table 50) below:

Table 50:	IPv6	Transition	Plan	Milestones
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Qtr	Milestone	
FY2006		
Q1	Incorporate IPv6 capability requirements into ED's IT acquisition process (Complete)	
	Assign an official to lead and coordinate IPv6 agency planning (Complete) LEVEL 1 PRACTICE	
	Complete inventory network backbone infrastructure devices affected by IPv6 (Complete) LEVEL 2 PRACTICE	
	Begin IPv6 impact and risk analysis and inventory of non-backbone devices impacted by IPv6 (Complete)	
Q2	Incorporate elements of ED's IPv6 transition into ED's IRM Strategic Plan, Enterprise Architecture, and EA Transition Strategy. (Complete) LEVEL 3 PRACTICE	

Jun 08

¹ Source: OMB Memorandum M-05-22 "Transition Planning for Internet Protocol Version 6"



Qtr	Milestone	
	Submit a progress report on ED's IPv6 impact and risk analysis and inventory of non-backbone devices impacted by IPv6 (Complete)	
Q3	Complete IPv6 impact and risk analysis (Complete) LEVEL 4 PRACTICE	
	Complete inventory of non-backbone infrastructure devices impacted by IPv6 (Complete) LEVEL 4 PRACTICE	
	Begin IPv6 Testing and Engineering Project Sub-Phase (Complete; sub-phase is in progress)	
Q4	Begin IPv6 technical training (Complete; training will continue throughout the entire lifecycle) LEVEL 5 PRACTICE	
FY2007		
Q1	Incorporate IPv6 into ED's Information Security Plan (Complete ; document is under agency- wide review due to other security related matters)	
Q2	Demonstrate Readiness LEVEL 5 PRACTICE:	
	• Identify current network infrastructure and topology (Complete; see Section 1.3 of IPv6 Transition Strategy v2.2)	
	• Identify service providers (for Core Network) (Complete; Sprint is the Internet Service provider)	
	• Existing Core Networks Identified (Complete; see Section 1.3 of IPv6 Transition Strategy v2.2)	
	Transition Mechanism Selected (Complete; see Section 1.4 of IPv6 Transition Strategy v2.2)	
	• Request IPv6 Address Space (Complete and RECEIVED; see Section 1.8 of IPv6 Transition Strategy v2.2)	
	• Determination of IPv6 Capability of Existing Network Devices (Complete; see details of inventory submissions)	
	 Identification of Applications to be Migrated to IPv6 (Complete; see Section 1.12 of IPv6 Transition Strategy v2.2) 	
Q3	Submit Design for Core (Complete; see Section 1.12 of IPv6 Transition Strategy v2.2 and ED Demonstration Plan)	
	Validation of Transition Scenario(s) (Complete; see ED Demonstration Plan document under separate cover)	
Q4	Submit Pilot / Test Plan (Complete; see ED Test Plan document under separate cover)	
FY	2008	
Q1	Complete Equipment Upgrades / Replacements, as needed (Complete; numerous System Change Request (SCR) approved by Change Control Review Board (CCRB) are complete.)	
Q2	Report Results of Pilots / Tests (Complete October 18, 2007; see ED Test Plan document under separate cover)	
Q3	Perform IPv6 Capability Demonstrations (Complete November 18, 2007; see ED Demonstration Plan document under separate cover)	