

1. INTRODUCTION

Project EASI (Easy Access for Students and Institutions) is an effort by members of the postsecondary education community to define and to implement a customer-focused – vice provider-focused – “system” to support postsecondary education. The specific focus of Project EASI is on those processes and systems with which students, prospective students, and their families most directly interact. Project EASI goals will be realized through the efforts of concerned schools, lenders, servicers, guarantors, professional organizations, state agencies, the United States (US) Department of Education (ED), and other related organizations. Within Project EASI, Project EASI/ED is the Department’s initial effort to implement the EASI vision within the scope of its own business processes and systems.

The purpose of the *Project EASI/ED Program Management Plan (EASI/ED PMP)* is to establish a plan: (1) to guide ED’s initial implementation of the EASI vision within ED’s area of responsibility, and (2) to ensure coordination of community-based development activities expected to occur in parallel with ED efforts.

To provide a context for understanding the remainder of the *EASI/ED PMP*, Section 1 briefly describes Project EASI/ED:

- Subsection 1.1 – History
- Subsection 1.2 – Objectives
- Subsection 1.3 – Goals and Concept
- Subsection 1.4 – Scope
- Subsection 1.5 – *PMP* Organization and Content
- Subsection 1.6 – *PMP* Revision Procedure
- Subsection 1.7 – References

Throughout the document each major topic is presented as a stand-alone subsection so that the *EASI/ED PMP* can be maintained more easily. Whenever possible, readers are referred to related Project EASI/ED documents, databases, or the Web site instead of including duplicate information in the *EASI/ED PMP*.

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1.1 History

1.1.1 Concept Phase

Early in 1995, a Project EASI Core Team and a Project EASI Steering Committee, each comprising representatives of ED and of the external postsecondary education community, began working to define and confirm a vision to support Project EASI objectives (see subsection 1.2). Exhibit 1-1 presents the names of Project EASI Core Team and Steering Committee members involved in this effort. For nearly 2 years, the Project EASI Core Team led the “visioning” effort, working closely with representatives from throughout the postsecondary education community and advocating Project EASI at ED and to the postsecondary community at large.

In October 1996, ED retained a system integrator to complete the concept phase of the development life cycle and to begin work on the definition phase. The *Project EASI Concept Document* (revised final, June 23, 1997) was developed to document the EASI vision. This document, which forms the basis for subsequent work on EASI and on EASI/ED, marked completion of the concept phase.

1.1.2 Definition Phase

Through work performed during the concept phase, Project EASI/ED was defined as ED’s initial opportunity to implement the EASI vision in systems and business processes within ED’s area of responsibility. In late December 1996, the definition phase of the Project EASI/ED life cycle began. Project EASI/ED is currently at the end of the definition phase for the information technology facet of EASI/ED based upon completion of the following work:

- Initial definition of functional requirements in *the Project EASI/ED Business Area Requirements Document (BARD)* (July 1, 1997) and subsequent update of these requirements (*BARD*, version 2.0, August 17, 1998).
- Completion of the initial *Project EASI/ED Cost/Benefit Analysis* (September 22, 1997) based upon functional requirements in the *BARD*, version 1.0.
- Selection of an architectural model for EASI/ED implementation (documented in the *Project EASI/ED Technical Vision and Target Architecture [TVTA] Report* [September 15, 1997]).
- Definition of technical architecture standards to govern EASI/ED implementation (documented in the *Project EASI/ED Common Operating Environment [COE]* [July 10, 1998]).
- Identification of EASI/ED subsystems, of logical interfaces between EASI/ED and external systems and users, and of implementation options by subsystem (documented in the *Project EASI/ED Application Services Definition Document [ASDD]* [May 15, 1998], and updated in the *ASDD* version 2.0 [October 14, 1998]).

Project EASI Core Team Members

Bill Banks	Steven Corey-Bey
Lee Gordon	Molly Hockman
Amy Henne	Phil Moody
Kay Jacks	Laurent Ross
Keith Jepsen	Fred Sellers
Peggy Loewy-Wellisch	George Sotos
Otto Reyer	Christine Williams
Paul Stutzman	Steve Willis
Jerry Sullivan	
Star Wilbraham	

Project EASI Steering Committee Members

Wayne Becraft	AACRAO
Steve Biklen	Student Loan Corp, Citibank
Brian Fitzgerald	Advisory Committee
Edward Franzeim, Jr.	NASSGP
Betsy Hicks	ED/SFAP
Steve Kelman	OMB
Leo Kornfeld	ED/CIO
Mitch Laine	ED/CFO
Brett Lief	NCHELP
Laura McClintock	USSA
Dallas Martin	NASFAA
Jay Morley	NACUBO
Barmak Nassirian	AASCU
Gloria Parker	ED/CFO
Linda Paulsen	ED/SFAP/AFMS
Glenn Perry	ED/OM
Carol Seifert	ED/SFAP/PSS
Tom Skelly	ED/CFO
Marshall Smith	ED
Pat Smith	OMB

Project EASI Team Members – Concept Phase
Exhibit 1-1

- Definition of the *Project EASI/ED Logical Data Model Document (LDMD)* (May 15, 1998) and incorporation of preliminary voluntary data standards in the *LDMD* (version 2.0, October 29, 1998).
- Coordination of data standards for EASI/ED through community representatives to the Postsecondary Electronic Standards Council (PESC), an independent student aid industry organization, in August 1998. Proposed data standards defined in the EASI/ED LDMD were compared with existing Electronic Data Interchange, ED Central Database System, CommonLine, and the *Postsecondary Student Data Handbook* (US Department of Education, National Center for Education Statistics, March 1997, Draft).
- Initial definition of the *Project EASI/ED Transition Strategy* (September 25, 1998).

Organizational change and manual process definition activities normally associated with the definition phase have not yet begun.

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1.2 Objectives

Project EASI and Project EASI/ED share the following objectives:

- **Create a customer-focused “system” to support postsecondary education.** While the desire is to maximize the use and value of available automation, this “system” will also include manual support and processes as required to effectively reach all customers.
- **Provide the customer a single point of interface with the postsecondary education community.** Today, students, prospective students, and their families are required to deal with many separate organizations whose activities are largely uncoordinated. Creating a single point of interface with the postsecondary community is expected to simplify interaction, and to improve the community’s effectiveness in supporting customers and in executing business relationships with students and with financial aid recipients.
- **Streamline, simplify, and improve the accessibility of processes associated with postsecondary education.** The processes associated with postsecondary education – and particularly with delivering and managing postsecondary financial assistance – are complex, paper intensive, and expensive to administer. Project EASI and Project EASI/ED are intended to provide more flexible, simplified, and universally applicable processes to support postsecondary education.
- **Reduce costs associated with managing and delivering services associated with postsecondary education.** The complexity and redundancy of current processes – especially those associated with delivering and managing student financial assistance – make them resource intensive (e.g., staff, information systems, time). By improving these processes and the efficiency with which technology can be applied by all involved organizations, Project EASI is expected to lower costs for all participants.

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1.3 Goals and Concept

Five functional areas comprise the Project EASI vision:

- Information Sharing
- Applying
- Disbursing Funds
- Repayment
- Enrollment Tracking and Reporting

One or more goals are associated with each of these functional areas. These goals support EASI and EASI/ED objectives and link to specific requirements for Project EASI capabilities. Project EASI goals are presented in priority order in Exhibit 1-2.

Refer to the *Project EASI Concept Document* for a full description of the Project EASI vision, and to the *Project EASI/ED BARD*, version 2.0, for a complete list of EASI/ED functional requirements.

APPLYING

1. Streamline student aid application, packaging, and origination process.
2. Facilitate school admissions process.
3. Streamline the institution application for eligibility process, making it less burdensome for schools.

INFORMATION SHARING

1. Provide access to a comprehensive information source regarding postsecondary education and financial aid programs, policy and guidelines, schools, funding sources, and topics of interest to the postsecondary education community and to its clients.
2. Provide an enhanced customer service mechanism throughout the student financial assistance community by facilitating information sharing among participants.
3. Enable participants to provide feedback on the services that Project EASI provides and use this feedback to drive continuous improvement of the financial aid process and of Project EASI.

Project EASI Goals by Functional Area
Exhibit 1-2

DISBURSING FUNDS

1. Simplify the origination, payment, and reconciliation process for all student financial assistance programs.
2. Provide students and institutions improved access to student account information (i.e., student loan data and payment history).
3. Improve management of Federal funds to reduce excess cash at institutions and to improve timeliness of accounting.
4. Capture and maintain information to satisfy all Federal and institutional reporting requirements associated with student transaction histories.

TRACKING ENROLLMENT

1. Ensure timely, accurate enrollment status data is distributed to fund sources.

REPAYING

1. Provide information and services to assist aid recipients in the timely, efficient, and complete repayment of student loans.
2. Provide information and services to assist loan holders in the timely, efficient, and complete collection of outstanding student loans.
3. Provide students and institutions improved access to student account information (i.e., student loan data and payment history).

Project EASI Goals by Functional Area (continued)
Exhibit 1-2

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1.4 Project EASI/ED Scope

The EASI vision encompasses the entire life of postsecondary education customers. Project EASI/ED focuses on realizing this vision as it applies to delivering and administering student financial assistance authorized under Title IV of the Higher Education Act of 1965, as amended. ED's goal is to implement changes to existing systems, services, and policies to support the EASI vision while affording flexibility for these processes to accommodate other student financial aid programs at a later date. ED leaders are committed to realizing EASI objectives and goals in a manner that protects the integrity and continuity of the overall vision.

The scope of EASI/ED is initially those business processes associated with information sharing, applying for aid, disbursing funds, tracking enrollment status, and repayment, as they apply to ED's current Title IV aid responsibilities. EASI/ED also encompasses direct communications between ED and external organizations in support of information sharing. EASI/ED is envisioned to implement these capabilities through six subsystems:

- Aid Application
- Aid Origination and Disbursement
- Aid Repayment
- Financial Services
- Program Management and Oversight (PMOS)
- Decision Support

ED's focus is on reengineering 14 financial aid systems and associated processes currently used to manage and deliver Title IV aid. These systems are listed below.

- Campus-Based Programs System
- Central Processing System
- Central Database System
- Electronic Data Entry Express
- Free Application for Federal Student Aid (FAFSA) on the Web
- Loan Consolidation System
- Loan Origination System
- Loan Servicing System
- Federal Family Education Loan Program System
- Multiple Data Entry System
- National Student Loan Data System
- Recipient and Financial Management System
- Postsecondary Education Participants System
- Title IV Wide Area Network

EASI/ED requirements will be implemented as a single virtual system, with specific functionality delivered via reuse of existing Title IV applications or data, commercial-off-the-shelf (COTS) software, custom software, and/or outsourced services. Refer to the *Project EASI/ED ASDD: Implementation Options Analysis* (June 12, 1998) and to the *Project EASI/ED Transition Strategy* for further information regarding possible implementation approaches. In addition to information technology, Project EASI/ED encompasses the organizational, administrative (e.g., contract architecture), and manual business process changes required to realize the EASI vision within ED

and to maximize the benefit of the revised student aid delivery processes implemented in the automated system.

Project EASI implementation is expected to involve complementary parallel efforts by ED and by members of the postsecondary education community. ED will work with the Project EASI Core Team to identify specific candidate functionality for community-based implementation. EASI/ED requirements may fit into this category. While such efforts may be conducted independent of ED and under the oversight of the Project EASI Core Team, they must be coordinated as part of the overall EASI/ED implementation effort to ensure that all pieces ultimately work together as a single, consistent “system.”

ED anticipates continuing to work with the Project EASI Core Team and with other members of the external postsecondary education community (a) to ensure that the EASI vision is realized through EASI/ED, (b) to ensure that new process are flexible enough to accommodate other participants in the future, and (c) to continue receiving and validating EASI/ED requirements.

1.5 Project EASI/ED Program Management Plan Organization and Content

The remainder of the *EASI/ED PMP* is organized into the major sections and appendices described below.

- **Section 2 – Project Organization.** Specifies the system development life cycle and approach for EASI/ED implementation. Describes Project EASI/ED organization, roles and responsibilities, and organizational boundaries and interfaces.
- **Section 3 – Managerial Process.** Describes how EASI/ED implementation and integration will be managed. Present management objectives and priorities that guide the effort. Documents assumptions, constraints, and dependencies affecting *EASI/ED PMP* development. Defines Project EASI/ED risk management processes and controls.
- **Section 4 – Technical Process.** Introduces methods, tools, and techniques planned for use in EASI/ED implementation and integration. Identifies applicable technical standards, and establishes procedures for developing and modifying work products.
- **Section 5 – Work Packages, Schedule, and Budget.** Defines work packages for Project EASI/ED and identifies interdependencies among work packages. Identifies resource requirements and budget. Presents the Project EASI/ED master schedule. Content in this section is based upon the *Project EASI/ED Transition Strategy*.
- **Appendix A – Acronyms and Definitions.** Lists every acronym used in the *EASI/ED PMP* and the associated definition.
- **Appendix B – Documentation Matrix.** Correlates documentation recommended for EASI/ED to ED requirements.

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1.6 Project EASI/ED Program Management Plan Revision Procedure

The *EASI/ED PMP* is a living document that must be revised and refined throughout Project EASI/ED implementation. The *EASI/ED PMP* is intended to be a tool for staff and managers involved with Project EASI and with Project EASI/ED. Updates and changes to the *EASI/ED PMP* must be carefully controlled to ensure that the document's integrity is maintained and that all associated staff use a consistent tool.

Following the *EASI/ED PMP*'s initial acceptance, it was placed under formal configuration control. The Project EASI/ED integrator will maintain the *EASI/ED PMP* in support of ED. The *PMP* will be reviewed and updated as required at the beginning of each new phase of the system development life cycle and at other key points as deemed appropriate or as requested by ED. The *EASI/ED PMP* will be updated no less than once each fiscal year. This subsection describes the process that will be followed to revise the *EASI/ED PMP* and to provide change control.

1.6.1 Revision Procedure

A consistent process will be followed to review and revise the *EASI/ED PMP* at each scheduled or unscheduled review point.

- **Step 1: Initiate review cycle.** For scheduled reviews, the EASI/ED integrator will notify ED that a review of the *EASI/ED PMP* is being initiated in accordance with the schedule. For unscheduled reviews, the person seeking the review will, through ED, notify the EASI/ED integrator that a review is requested and will explain the reason for the review. Once ED approves the unscheduled review, the EASI/ED integrator will initiate step 2.
- **Step 2: Check out *EASI/ED PMP* from configuration management library.** The master copy of the *EASI/ED PMP* (electronic and paper) is maintained in the Project EASI/ED configuration management (CM) library. When a review begins, the EASI/ED integrator will check out the current electronic version of the *EASI/ED PMP* from this library in accordance with procedures documented in the *Project EASI/ED Configuration Management (CM) Plan* (November 1997).
- **Step 3: Review deliverable and draft updates.** The EASI/ED integrator first will review the *EASI/ED PMP* to ensure its completeness, accuracy, and currency in relation to the scheduled review point or to factors cited for an unscheduled review. The integrator will draft changes to the *EASI/ED PMP* as appropriate to ensure that it is accurate, complete, and current. To the degree required, the integrator will work with ED staff, the Project EASI Core Team, other contractors, and other members of the community to resolve issues and to obtain needed information.
- **Step 5: Coordinate revised *EASI/ED PMP*.** Once draft revisions are complete, the integrator will provide a draft revised *EASI/ED PMP* to ED and to the Project EASI Core Team for review and comment. If requested, the integrator will meet with staff to walk through changes and to discuss comments. Changes to the *EASI/ED PMP* will be coordinated with the Configuration Control Board (CCB) as appropriate, in accordance

with the *Project EASI/ED CM Plan*. ED will provide formal written comments on the draft revised *EASI/ED PMP* at the conclusion of these reviews.

- **Step 6: Incorporate comments and submit final revised *EASI/ED PMP*.** Once formal written comments are received from ED, the integrator will incorporate these in a final revised document. Changes will be recorded in a change log, included in the *EASI/ED PMP*, and a new version number will be assigned. The revised final will be submitted to ED and will be subject to the change control process identified in subsection 1.6.2.

1.6.2 Change Control Process

All Project EASI/ED deliverables and products are subject to formal configuration control in accordance with the *Project EASI/ED CM Plan*. The Project EASI/ED configuration manager will receive the final of each product or deliverable. The configuration manager is responsible for establishing and maintaining a CM library, and for maintaining each version of each product or deliverable associated with EASI/ED.

When a deliverable is to be reviewed and updated, the configuration manager will (a) sign out the current electronic version of the deliverable, (b) track the progress of the review and update process, (c) inform the responsible party of the correct version number for the updated product or deliverable, and (d) receive and catalog the final deliverable or product. Only those changes to the *EASI/ED PMP* that are made with the knowledge of the configuration manager and through the process described above will be considered valid.

1.7 References

The *EASI/ED PMP* was developed using the reference materials cited below.

Standards and Guidelines

- Institute of Electrical and Electronics Engineers, *Draft Standard 1058*, 1987.
- US Department of Commerce, *Federal Information Processing Standards Publication 38: Guidelines for Documentation of Computer Programs and Automated Data Systems*, February 15, 1976.
- US Department of Education, Information Resources Group, *System Life Cycle Management Manual*, September 16, 1994.

EASI/ED Documentation

- US Department of Education, *Project EASI Concept Document*, revised final, June , 1997.
- US Department of Education, *Project EASI/ED Application Services Definition Document*, revised final, October 14, 1998.
- US Department of Education, *Project EASI/ED Business Area Requirements Document*, revised final, August 17, 1998.
- US Department of Education, *Project EASI/ED Common Operating Environment*, July 10, 1998.
- US Department of Education, *Project EASI/ED Configuration Management Plan*, November 1, 1997.
- US Department of Education, *Project EASI/ED Cost/Benefit Analysis*, September 22, 1997.
- US Department of Education, *Project EASI/ED Logical Data Model*, revised final, October 29, 1998.
- US Department of Education, *Project EASI/ED Technical Vision and Target Architecture Report*, September 15, 1997.
- US Department of Education, *Project EASI/ED Transition Strategy*, September 25, 1998.

Interviews

- Interviews with Project EASI Core Team members regarding the Project EASI vision.
- Interviews with ED managers regarding Project EASI priorities and objectives.

2. PROJECT ORGANIZATION

Successful system development efforts proceed in accordance with a well-structured development life cycle that provides managers necessary visibility into progress and issues at appropriate points. Successful programs also require a well-defined organization with clearly assigned responsibilities and authority. This section describes these two major components for Project EASI/ED.

The following subsections relate to the EASI/ED development life cycle and recommended implementation approach.

- Subsection 2.1 – Development Life Cycle
- Subsection 2.2 – Recommended Implementation Approach
- Subsection 2.3 – Major Milestones
- Subsection 2.4 – Reviews
- Subsection 2.5 – Baselines

The remaining subsections, listed below, relate to the EASI/ED organization.

- Subsection 2.6 – Organizational Structure
- Subsection 2.7 – Organizational Boundaries and Interfaces
- Subsection 2.8 – Project Responsibilities

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2.1 Development Life Cycle

For purposes of the *EASI/ED PMP*, the term “system” is used to mean automated processes (i.e., information system) along with the associated manual processes and supporting organizations. Project EASI/ED implementation encompasses the stages of a traditional system development life cycle, described below.

- **Concept Phase** – establish system objectives and general, very high level requirements.
- **Definition Phase** – define more detailed functional and data requirements for application software, determine the technical architecture, and initially identify organizational and support services change requirements.
- **Design Phase** – assess alternatives for satisfying requirements and define the overall system design, develop high-level and detailed specifications for application software and database(s), develop detailed specifications for technical architecture, evaluate COTS software, begin developing test plans, and define organization and manual processes needed to support implementation.
- **Construction Phase** – acquire and customize or tailor COTS software; generate code for new application programs and database(s) and/or reengineer existing application software; acquire and install supporting hardware, system software, and communications infrastructure; develop documentation for using, maintaining, and operating the new system; complete test plans; prepare to transition to new organization (e.g., training, hiring, reorganization); and document new manual processes.
- **Test Phase** – perform development testing of automated system, test manual processes, update system documentation, and continue organizational transition activities.
- **Implementation Phase** – install application software in production environment; perform user acceptance testing; convert data to load production database(s); train system users, operators, maintenance staff, and managers; and complete transition to new organization.
- **Operation Phase** – operate and maintain new system and organization, respond to requests for changes and enhancements, and periodically assess system, procedure, and organization effectiveness and efficiency.

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2.2 Recommended Implementation Approach

Seven key tenets guide the transition strategy recommended for Project EASI/ED. Further detail regarding these tenets may be found in the *Project EASI/ED Transition Strategy*.

1. Data is the key to integration.
2. Implement in phases.
3. Structure work into discrete packages that lead to tangible results.
4. Minimize technical risk.
5. Use prototypes and pilots to strategically explore technical and requirements issues.
6. Use interim improvements to provide near-term value to users.
7. Use program management and integration roles to provide unity, discipline, and leadership.

The implementation approach recommended for EASI/ED has two principal facets: (1) phased implementation, and (2) use of a spiral development life cycle within each phase.

Phased Implementation. Project EASI/ED implementation is planned to comprise five phases, each of which comprises major infrastructure components and/or one or more EASI/ED subsystems. The suggested phases are listed below.

- Phase 0 – System-Wide Activities (including infrastructure)
- Phase I – Financial Services & Aid Application Implementation
- Phase II – PMOS Implementation
- Phase III – Aid Origination and Disbursement & Repayment Implementation
- Phase IV – Decision Support Implementation

Phased implementation is intended to optimally balance the need for a technically and functionally unified EASI/ED system and ED's desire to implement EASI/ED functionality through a variety of implementation approaches and providers. To achieve this balance, the concept and definition phases of the life cycle encompassed the full scope of EASI/ED functionality. During the design phase, some system-wide activities continue; however, activities are also initiated that are specific to a single EASI/ED subsystem or major infrastructure component (e.g., enterprise database).

Spiral Development Life Cycle. For Project EASI/ED, it is recommended that the system development life cycle be executed using a tailored spiral approach. Traditionally, a system development life cycle was executed using a waterfall approach, in which each phase was completed for an entire system before the next phase began. Using the spiral approach, a system's functionality is segmented into discrete elements for which the development life cycle is executed. This approach helps minimize technical risk, increases opportunities for early user feedback regarding functionality and form, and facilitates earlier delivery of partial capability to customers.

Depending upon the specific implementation option undertaken – outsourcing, COTS implementation, reuse, or custom development – the appropriate life cycle stages will be executed for the subject subsystem or infrastructure component. A spiral approach is recommended for implementing new or reengineered software. However, individual providers with whom ED

contracts to implement functionality will propose life cycle strategies appropriate to their specific areas of responsibility, proposed tools and implementation methods, and internal expertise.

2.3 Major Milestones

Major milestones occur at the end of each life cycle phase. In the case of iterative design, construction, and implementation of functionality, major milestones occur for each subsystem or infrastructure element as it reaches the end of each phase. If a spiral life cycle is adopted to implement functionality within a single subsystem or infrastructure component, an iterative review approach should be adopted for that development effort.

Milestones are marked by a presentation to the Program Review Board (PRB) and to the Project EASI Steering Committee regarding the business problem addressed, progress during that phase, major activities and decisions during that phase, results of any other project reviews, and issues. The purpose of each review is to (a) resolve outstanding issues regarding senior management involvement, and (b) obtain support and approval needed to proceed with the next phase of development.

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2.4 Reviews

Formal reviews will be used to resolve issues regarding system development. The required reviews are listed below.

- **System Requirement Review (SRR)** – conducted at the end of the definition phase to resolve open issues regarding specified software requirements.
- **Preliminary Design Review (PDR)** – conducted during the design phase after the completion of high-level specifications and draft test plans. Used to resolve open issues regarding system-wide or subsystem-wide design decisions.
- **Critical Design Review (CDR)** – conducted at the end of the design phase, prior to entering construction and after completing detailed specifications, to resolve open issues regarding design of specific computer software configuration items.
- **Test Readiness Review (TRR)** – conducted near the end of the test phase, prior to entering implementation, to resolve issues regarding the software test environment, test cases, test procedures for user acceptance testing, or the status of the system or subsystem being tested.
- **Software Usability Review (SUR)** – conducted during the implementation phase, after user acceptance testing, to resolve issues regarding system readiness for installation at user sites, supporting user and operator documentation, system documentation, or the status of installation preparation.
- **In-Process Review (IPR)** – conducted with ED Program Systems Service and with user management immediately prior to implementation to obtain approval to proceed with implementation.

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2.5 Baselines

A baseline is a snapshot of a set of configuration items that comprise the EASI/ED system overall or that comprise a specific subsystem or major infrastructure component. The baselines listed below will be used to document the EASI/ED system, in accordance with the *Project EASI/ED CM Plan*.

- **Concept Baseline** – established at the end of the concept phase to document EASI/ED high-level requirements.
- **Functional Baseline** – established at the end of the definition phase to document functional process, data, and technical architecture requirements for the EASI/ED system.
- **Allocated Baseline** – established at the end of the design phase to document the allocation of functional requirements to specific software subsystems and to document specific hardware, system software, and communications configuration items comprising the technical architecture.
- **Test Baseline** – established at the end of the construction phase to document the version of software and hardware submitted for system testing.
- **Product Baseline** – established at the end of the test phase to document the production version of the EASI/ED system or of an EASI/ED subsystem or infrastructure component being delivered for user acceptance.

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2.6 Organizational Structure

The internal management structure for Project EASI/ED is depicted in Exhibit 2-1. In September 1998, Congress passed legislation requiring ED to implement a Performance Based Organization (PBO) to manage the Title IV student aid programs. The PBO is led by a Chief Operating Officer (COO) who reports directly to the Secretary of Education. Mr. Greg Wood was appointed COO very recently. The organization shown in Exhibit 2-1 may change as Mr. Wood makes decisions regarding the future direction of the PBO.

Direct management relationships are depicted by vertical lines between boxes. The Project Sponsor has direct authority over Project Management, which in turn has direct authority over Integration and Development. Similarly, Project EASI Core Team Management has direct authority over the Project EASI Core Team. These entities are directly responsible for executing Project EASI/ED implementation.

Indirect relationships – e.g., advisory roles, supporting roles under a different organization’s direct authority – are depicted by horizontal lines. The Program Review Board and the Project EASI Steering Committee support the Project Sponsor in reviewing and validating the Project EASI/ED implementation effort and products.

Specific roles and responsibilities associated with individuals and teams depicted on the organization chart are described in subsection 2.8.

2.7 Organizational Boundaries and Interfaces

In addition to specific individuals and organizations identified on the organization chart (Exhibit 2-1), many other organizations are associated with Project EASI and with Project EASI/ED. The following paragraphs identify these organizations and describe the administrative and managerial boundaries between the implementation effort and these entities.

Schools. ED and the Project EASI Core Team have no direct authority over schools within the Project EASI implementation effort. However, one or more schools may initiate, participate in, or lead a parallel Project EASI development and implementation project. In this situation, the Project EASI Core Team will appoint a community coordinator responsible for administrative coordination with the involved school(s) to ensure that the overall integrity of Project EASI and/or of EASI/ED is protected. Further information on responsibilities of community coordinators is presented in subsection 2.8.

Lenders. ED and the Project EASI Core Team have no direct authority over lenders within the Project EASI implementation effort. However, one or more lenders may initiate, participate in, or lead a parallel Project EASI development and implementation project. In this situation, the Project EASI Core Team will appoint a community coordinator responsible for administrative coordination with the involved lender(s) to ensure that the overall integrity of Project EASI and/or of EASI/ED is protected.

Guarantors. ED and the Project EASI Core Team have no direct authority over guarantors within the Project EASI implementation effort. However, one or more guarantors may initiate, participate in, or lead a parallel Project EASI development and implementation project. In this situation, the Project EASI Core Team will appoint a community coordinator responsible for administrative coordination with the involved guarantor(s) to ensure that the overall integrity of Project EASI and/or of EASI/ED is protected.

Students. ED and the Project EASI Core Team have no direct authority over students. To the extent that student input to Project EASI/ED implementation is desired or required, members of the Project EASI Core Team will solicit student participation.

Servicers. ED and the Project EASI Core Team have no direct authority over servicers within the Project EASI implementation effort. However, one or more servicers may initiate, participate in, or lead a parallel Project EASI development and implementation project. In this situation, the Project EASI Core Team will appoint a community coordinator responsible for administrative coordination with the involved servicer(s) to ensure that the overall integrity of Project EASI and/or of EASI/ED is protected.

Other Customer Organizations. Examples of customer organizations include secondary markets, professional organizations (e.g., National Association of Student Financial Aid Administrators [NASFAA], National Association of College and University Business Officer [NACUBO]), state agencies, and other organizations currently involved in postsecondary education. ED and the Project EASI Core Team have no direct authority over these organizations. However, to the extent that any of these organizations initiate, participate in, or lead a parallel Project EASI development and implementation project. In this situation, the Project EASI Core Team will appoint a community coordinator responsible for administrative coordination with the

involved organization(s) to ensure that the overall integrity of Project EASI and/or of EASI/ED is protected.

Other ED Organizations. Organizations outside of Student Financial Assistance Programs have various interests in Project EASI and Project EASI/ED implementation. Additionally, input from these organizations may be required at various points in the implementation effort. Entities that might be involved include the Chief Financial Officer, the Chief Information Officer, and the Office of the Inspector General. The Project EASI Core Team and the ED staff responsible for EASI/ED implementation have no direct authority over staff from these organizations. To facilitate the exchange of necessary information, the ED staff associated with Project EASI/ED and the Project EASI Core Team will maintain an administrative interface with these entities.

Other Federal Government Organizations. External Federal government organizations, such as the Office of Management and Budget and the General Accounting Office may be expected to have an interest in Project EASI/ED. To facilitate the exchange of necessary information, ED staff associated with EASI/ED will maintain an administrative interface with these entities.

2.8 Project Responsibilities

This subsection identifies each of the primary roles associated with EASI/ED, names the specific staff member(s) filling each role or the organization responsible for filling any role where specific staff are not identified, and describes the principal program responsibilities associated with each position.

Subsections 2.8.1 through 2.8.6 present line functions. The following individuals and organizations are directly responsible for EASI/ED activities.

- Subsection 2.8.1 – Project Sponsor
- Subsection 2.8.2 – Project Management
- Subsection 2.8.3 – Project EASI Core Team Management
- Subsection 2.8.4 – Integration
- Subsection 2.8.5 – Development
- Subsection 2.8.6 – Project EASI Core Team

Subsections 2.8.7 and 2.8.8 present staff functions. The following individuals and organizations are responsible for supporting and/or providing oversight to EASI/ED line staff.

- Subsection 2.8.7 – Program Review Board
- Subsection 2.8.8 – Project EASI Steering Committee

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2.8.1 Project Sponsor

Name: Mr. Greg Woods

Title: Chief Operating Officer

Responsibilities:

- Ultimately responsible for EASI/ED success.
- Provides overall leadership to the Project EASI/ED team.
- Reviews the Project EASI/ED at key points in the life cycle.
- Appoints members to the Program Review Board.
- Solicits support and approval from other review bodies and ED organizations as appropriate.
- Champions EASI/ED to senior ED management and to external agencies and organizations.

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2.8.2 Project Management

Name: Mr. Jerry Russomano

Title: Director, Program Systems Service

Responsibilities:

- Directs day-to-day activities of implementation team members, including Project EASI Core Team members supporting EASI/ED, the integrator, and development staff.
- Plans and solicits necessary resources to support the effort.
- Reports on progress to the Project Sponsor and to review organizations, as appropriate.

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2.8.3 Project EASI Core Team Management

Name: Mr. Tom Babel
Title: Project EASI Core Team Chairman (ED consultant)
Responsibilities:

The Project EASI Core Team Chairman reports directly to the COO for Project EASI matters in general.

- Serves as national spokesperson for Project EASI and ensures coverage at strategic community events and meetings.
- Links the Project EASI vision to specific strategic plans for implementation.
- Assists Project EASI task teams with understanding tasking, staying on schedule, eliminating barriers, and reaching closure;
- Acts as advocate of Project EASI vision to the larger postsecondary education community and to ED.
- Monitors contractor activities in support of Project EASI/ED, in collaboration with the ED Contracting Officer's Technical Representative (COTR).
- Coordinates with ED on Project EASI and EASI/ED activities, issues, and vision.
- Seeks participation of ED staff in Project EASI Core Team activities.
- Conducts and organizes Project EASI Core Team meetings.
- Defines and implements a communications strategy for the Project EASI Core Team.
- Appoints community coordinators to monitor and facilitate community-based development efforts in support of Project EASI and EASI/ED.
- Provides input to the ED budget for Project EASI.
- Establishes operational priorities for Project EASI.

Name: Ms. Molly Hockman
Title: Project EASI Coordinator
Responsibilities:

- Helps ensure that the Project EASI Core Team and internal ED organizations work collaboratively to implement the Project EASI vision. This includes facilitating communications between the Project EASI Core Team and ED staff to gain ED buy-in to Project EASI goals, including Project EASI in ED processes (e.g., budgeting, contract scheduling), and serving as the primary contact point for ED staff regarding Project EASI and Project EASI/ED.
- Supports and assists the Project EASI Core Team as the full-time project coordinator for ED. This includes working with the Project EASI Core Team on issues requiring ED approval, assisting with resolution of administrative issues, directly supporting the COO with regard to Project EASI, and providing information and advice on ED initiatives where Project EASI may have a role.
- Ensures that the Project EASI Core Team activities conform with Federal contracting rules, that all expenditures are properly accounted for and justified, and that time and travel of Project EASI Core Team members are properly authorized and justified.

The Project EASI Core Team has three principal responsibilities with respect to EASI/ED.

1. Act as the first-level review and advisory board regarding EASI/ED activities and products.
2. Identify and define new EASI/ED requirements.
3. Perform as community coordinators for parallel, community-based development efforts in support of Project EASI.

Further information regarding these responsibilities is provided in subsection 2.8.6.

2.8.4 Integration

Name: PricewaterhouseCoopers, LLP

Title: System Integrator (Contractor)

Responsibilities:

- Provides overall planning and management support to Project EASI/ED to ensure that activities are coordinated, are proceeding in accordance with decisions regarding standards and technology, and are proceeding according to the established master schedule.
- Analyzes detailed EASI/ED functional and data requirements.
- Defines EASI/ED common operating environment standards and system-wide architecture, including consideration of hardware, system software, communications, data distribution, and appropriate supporting software tools.
- Performs system-wide design activities, as requested by ED.
- Analyzes costs and benefits associated with EASI/ED implementation, as requested by ED.
- Provides acquisition support (e.g., development of specifications, technical analyses, plans) to ED for procurements supporting Project EASI/ED implementation.
- Provides integration support for Project EASI/ED, including participating in ED meetings regarding existing Title IV systems and planned changes to these systems.
- Plans and performs user acceptance testing of migrated, converted, and new applications, in conjunction with ED staff.
- Provides configuration management support for EASI/ED to ensure Project Management has visibility to and control over continuing enhancements and changes to the current systems as ED moves to a COE and as new EASI/ED functionality is implemented.
- Provides quality assurance of multiple coordinated activities performed by other organizations in support of EASI/ED implementation (e.g., community-based activities, development activities).
- Defines recommended standards to govern operations, support services, and software development for EASI/ED.
- Supports ED in assessing organizational and service delivery change requirements generated by EASI/ED implementation and in planning to realize needed changes.
- Assists ED and the Project EASI Core Team in briefing ED staff and the external postsecondary education community on EASI/ED content and plans.

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2.8.5 Development

Name: To be determined.

May be drawn from existing Title IV system contractors, other contractors whose services are obtained through competitive procurements, or postsecondary education community organizations.

Title: (Contractors)

Responsibilities:

EASI/ED functionality may be implemented through a variety of approaches: reengineering of existing applications or data, use of COTS software, outsourcing to external service providers, and/or custom development. Specific responsibilities will vary depending upon the implementation approach taken for a specific increment of functionality. In general, entities undertaking responsibility for software development, software reengineering, and/or COTS implementation will be responsible for the following activities.

- Perform high-level and detailed design for specific increments of EASI/ED functionality.
- Construct new applications, modify existing applications, and tailor or customize COTS software as necessary to implement functionality in code.
- Perform unit, string or module, and system testing for assigned functionality.
- Manage development project(s).
- Adhere to standards, guidelines, and procedures specified for EASI/ED overall.
- Participate in EASI/ED configuration management meetings.
- Cooperate with other EASI/ED contractors as necessary to support EASI/ED integration and implementation.

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2.8.6 Project EASI Core Team

Name: See Exhibit 2-2 for current list.

Title:

Responsibilities:

- Continually identify new opportunities to improve the postsecondary education processes in accordance with the Project EASI vision, identify specific requirements that support these opportunities, and define these requirements in the context of the Project EASI vision.
- Brief the Project EASI Steering Committee on new requirements for validation. Submit validated requirements to Project Management to be considered for implementation by ED or through community-based efforts.
- For those requirements that will be satisfied through a community-based development effort, solicit community interest in the development effort and appoint a community coordinator to monitor the ensuing activities.
- Review Project EASI/ED products and activities to confirm that they correctly reflect the Project EASI vision.
- Ensure any community-based development team fully understands the desired functionality and that the capability envisioned is in accordance with the Project EASI vision and with EASI/ED requirements, if applicable.
- Establish lines of communication and administrative reporting between any community-based development team and the Project EASI Core Team.
- Ensure that any community-based development team is fully apprised of EASI/ED implementation plans, standards, and milestones.
- Provide input to any community-based development team regarding their development plan and provide a copy of the plan to Project Management (and, in turn, to the integrator) for incorporation in the *EASI/ED PMP*.
- Monitor the progress and direction of any community-based development team's efforts in relationship to their plan and to EASI/ED plans.
- Raise concerns and issues to any community-based development team, the Project EASI Core Team, and Project Management as early as possible so that they can be resolved or mitigated.

Tom Babel*	DeVry, Inc.
Bill Banks	Consultant
Sandy England	US Dept. of Education
Lynda Folwick	US Dept. of Education
Karen Fooks	University of Florida
Ellen Frishberg	Johns Hopkins University
Dave Hawn	
Molly Hockman	US Dept. of Education
Kay Jacks	Colorado State University
Keith Jepsen	New York University
Carole Kurlatnikova	US Dept. of Education
Peggy Loewy-Wellisch	FELMAC
Phillip Moody	US Dept. of Education
Jay Noell	
Gina Pearson	US Dept. of Education
Otto Reyer	American Express
Micky Roemer	Tarrant County Jr. College
Ira Sachs	US Dept. of Education
Fred Sellers	US Dept. of Education
Paul Stutzman	Consultant
Jerry Sullivan	AACRAO

* Denotes National Chairman

Project EASI Core Team Members – Current List
Exhibit 2-2

Name: Program/User Group

Every project requires the support of expert staff and users to be successful. For EASI/ED, the team will include representatives from:

- Accounting and Financial Management Service (AFMS)
- Debt Collection Service (DCS)
- Direct Loan Task Force (DLTF)
- Guarantor and Lender Oversight (GLOS)
- Institutional Participation Oversight Service (IPOS)
- Policy, Training, and Analysis Service (PTAS)
- Program Systems Service (PSS)

Recognizing that expert staff from each of these Services are already deeply committed to other responsibilities, support from these staff to Project EASI will be on a part-time, as-required basis. Nonetheless, a firm commitment of specific staff members from each Service will be requested in support of EASI/ED.

Title:

Responsibilities:

- Provide detailed input regarding EASI/ED functional requirements and regarding existing information systems and business processes to support requirements definition and system design.
- Provide detailed input regarding current systems -- including workload, technical architecture, etc. -- in support of EASI/ED technical architecture analysis and planning.
- Provide detailed input regarding current system, process, and staff costs in support of EASI/ED acquisition planning and cost/benefit analysis.
- Review EASI/ED deliverables and products.
- Assist with issue resolution and risk management.

Required skills for these team members are listed below.

- Expert, in-depth knowledge of each of the current Title IV information systems.
- Expert, in-depth knowledge of each Title IV financial aid program.
- Expert, in-depth knowledge of Federal financial management and accounting requirements.
- Understanding of regulations, policy, and legislation relating to delivery of postsecondary financial aid -- e.g., Privacy Act.

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2.8.7 Program Review Board

Name(s):	AFMS –	Ms. Linda Paulsen
	DCS –	Mr. Tom Peska
	DLTF –	Mr. Joe McCormick
	GLOS –	Mr. Larry Oxendine
	IPOS –	Ms. Jean Van Vlandren
	PM –	Ms. Cyndi Reynolds
	PSS –	Mr. Jerry Russomano
	PTAS –	Ms. Nina Winkler

Title(s):

Responsibilities:

- Provide oversight to the implementation effort.
- Convene at the end of each phase of the EASI/ED development life cycle. The Board will be briefed EASI/ED progress in relation to the master schedule and on any outstanding issues. The Board will make recommendations to the Project Sponsor regarding whether to continue EASI/ED through the next phase of the life cycle and regarding issues and concerns.
- Convene at the Project Sponsor's discretion to review and to provide advice on specific aspects of EASI/ED.

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2.8.8 Project EASI Steering Committee

Name(s): See Exhibit 2-3 for current list.

Title(s):

Responsibilities:

- Advise the Project Sponsor on EASI/ED implementation.
- Continue to solicit and to define Project EASI requirements, and to make recommendations on requirements to ED.
- Solicit community responses regarding Project EASI.
- Help resolve conflicts regarding Project EASI.
- Provide Project EASI vision, guidance, and support to ED and to the community.
- Facilitate communications between the community and ED regarding Project EASI concepts and issues.
- Monitor Project EASI performance measures.
- Advocate Project EASI concepts to ED and the community.
- Help establish Project EASI priorities.

Jeff Baker	US Dept. of Education
Betsy Bainfridge	PESC
Stephen C. Biklen*	Consultant
Paul Combe	ASA
Nora Corralez	AFSA Data Corporation
Brian Fitzgerald	Advisory Committee
Brett Lief	NCHELP
Ron Gambill	NASSGAP
Dallas Martin	NASFAA
Joe McCormick	US Dept. of Education
Jay Morley	NACUBO
Mark Olson	Sallie Mae, Inc.
Linda Paulsen	US Dept. of Education
Glenn Perry	US Dept. of Education
Donald Rappaport	US Dept. of Education
Diane Rogers	US Dept. of Education
Tony Rosati	NAGPS, Inc.
Jerry Russomano	US Dept. of Education
Anthony Samu	USSA
Jerry Sullivan	AACRAO
Marshall Smith	US Dept. of Education
Kathy Stack	OMB
Omer Waddles	Career Colleges Association
Kathleen Smith	Education Finance Council

* Denotes Chairman

Project EASI Steering Committee – Current Members
Exhibit 2-3

3. MANAGERIAL PROCESS

This Section describes the philosophies, goals, and mechanisms that guide management of Project EASI/ED. Information is presented in the subsections named below.

- Subsection 3.1 – Management Objectives and Priorities
- Subsection 3.2 – Assumptions, Dependencies, Constraints
- Subsection 3.3 – Risk Management Process
- Subsection 3.4 – Monitoring and Controlling Mechanisms
- Subsection 3.5 – Issue Resolution Process

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3.1 Management Objectives and Priorities

Senior ED managers responsible for EASI/ED implementation are committed to timely and efficient delivery of the new system, in accordance with the Project EASI vision. They believe that successful implementation requires the full support of internal ED staff responsible for the current systems and business processes. These managers also support the continued involvement of the Project EASI Core Team and of other postsecondary education community representatives. Senior ED managers are committed to an integrated approach to Project EASI/ED implementation that uses multiple parallel, incremental development efforts coordinated through a single, central project authority to ensure that the integrity of the EASI vision is retained.

The tenets underlying the management approach for EASI/ED implementation are listed below.

- Maximize leverage of internal ED experts to provide subject-matter insight and review regarding Project EASI/ED requirements, products, and plans.
- Continue to work closely with the Project EASI Core Team and with other members of the postsecondary education community to support the design of flexible, streamlined processes that will enable ED to begin realizing the Project EASI vision and that will accommodate other organizations in the future.
- Rely heavily upon contractor support, particularly the support of the EASI/ED integrator and of development contractors, to plan, manage, coordinate, and implement EASI/ED capabilities.

ED managers have also identified a number of architecture principles pertinent to the EASI/ED implementation effort. Refer to the *Student Financial Aid Program Enterprise Information Technology Framework: Architecture Principles* to review these principles.

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3.2 Assumptions, Dependencies, Constraints

The assumptions, dependencies, and constraints listed in the following subsections affect the content of the *EASI/ED PMP*.

3.2.1 Assumptions

1. Appropriately skilled and knowledgeable ED staff will be available to the implementation effort as necessary to provide timely, high quality input to project deliverables, products, plans, and decisions.
2. Maximum flexibility must be retained to implement EASI/ED via various implementation approaches and through multiple providers.
3. The *Project EASI/ED Concept Document* and other concept phase activities satisfied requirements for a feasibility study for Project EASI/ED.

3.2.2 Dependencies

EASI/ED PMP work packages and master schedule reflect the implementation approach recommended in the *Project EASI/ED Transition Strategy*.

3.2.3 Constraints

1. Detailed work plans and schedules for EASI/ED implementation cannot be included in the *EASI/ED PMP* until specific decisions are made regarding the project's future and the acquisition approach for EASI/ED, and until specific contractor commitments and approaches are obtained for discrete work elements.
2. Insufficient information is available regarding future plans – i.e., provider selection, acquisition approach, schedule, tools, implementation approach – to include reliable EASI/ED cost information and resource requirements in this version of the *PMP*.

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3.3 Risk Management Process

Risk management is a critical activity throughout the development life cycle. Through risk management processes, managers gain visibility to new or continuing risks to project success, mechanisms to mitigate or eliminate risks are evaluated and selected, and the success of risk mitigation techniques are monitored.

Specific Project EASI/ED risks, anticipated impacts, and recommended mitigation techniques are maintained in the Project EASI/ED Risk Management Database.

The following process will be used throughout the EASI/ED life cycle to ensure effective risk management.

1. **Identify risks.** Risks may be identified: (1) through scheduled reviews at the beginning of each life cycle phase when the *EASI/ED PMP* is reviewed, (2) through monthly EASI/ED integrator risk management reviews, or (3) by any project participant at any time during the project. A person who identifies a risk outside of a formal review will document the risk briefly and provide this information to Project Management and to the EASI/ED integrator.
2. **Analyze risks.** The EASI/ED integrator will analyze initially all identified risks. Analysis will include validating the risk; categorizing the potential impact as cost, schedule, and/or technical; assessing the degree of impact the risk would have on the project and the likelihood that the risk will occur; and identifying risk mitigation measures that might be applied.
3. **Present risk analysis to Project Management.** When the analysis is complete, the integrator will present the results to the Project Management for consideration and action. Project Management may decide to act or may present the risk analysis to other involved organizations including the Project EASI Core Team, the Program Review Board, the Project Sponsor, and the Project EASI Steering Committee.
4. **Implement selected mitigation techniques.** At Project Management's direction, selected risk mitigation techniques will be implemented by the appropriate organization(s).
5. **Monitor risk.** Project Management, the EASI/ED integrator, and the responsible organization(s) will monitor each risk to assess the effectiveness of mitigation techniques and to determine whether further action is required.
6. **Track and report risk status.** Project risks will be tracked in the Project EASI/ED Risk Management Database from the time they are identified through their resolution.

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3.4 Monitoring and Controlling Mechanisms

The following tools and techniques will be used to monitor and control Project EASI/ED.

3.4.1 Progress Reporting

Each major participant in the Project EASI/ED will provide a monthly progress report addressing the elements listed below.

- Status of activities planned for the previous month;
- For activities that are behind schedule, the reason for the delay, corrective action(s), impact of the delay, and estimated completion date;
- Performance metrics, if applicable;
- Activities planned for the upcoming month;
- Special resource requirements for the upcoming months, including support to reviews, design sessions, etc.; and
- Open issues.

Progress reports will be provided in writing to Project Management. Reports will be submitted by:

- Project EASI Core Team Management
- Project EASI/ED Integrator
- Project EASI/ED Developer(s)
- Other, as specified by Project Management.

3.4.2 Formal Reviews

Formal reviews will be used throughout the system life cycle to provide senior management visibility to EASI/ED implementation progress, and to provide a forum for resolving questions and issues associated with the effort. Formal reviews planned for Project EASI implementation are described in subsection 2.4. In addition to these reviews, the Project EASI Core Team and EASI/ED Project Management will periodically brief the Project EASI Steering Committee regarding project progress and issues. These briefings will be presented when requested by the Project Sponsor, when requested by a member of the Project EASI Steering Committee, or as deemed appropriate by managers involved in EASI/ED.

3.4.3 Informal Reviews

Informal peer reviews will be conducted throughout the system life cycle. During the definition phase, these reviews focused on the technical content of high-level process and data models constructed to reflect the current systems and Project EASI. During the design phase, peer reviews will be used to assess the quality, completeness, and accuracy of design documents. During the construction phase, peer reviews will be used to validate activities related to software construction and system acquisition activities.

Peer reviews will be performed by representatives of the EASI/ED integrator, other development or support contractors, and the Project EASI Core Team. The integrator will schedule each peer review, will identify staff required to attend, and will ensure that materials to be reviewed are provided to participants in advance of the review.

3.4.4 Implementation Team Meetings

Project Management will convene a weekly team meeting to discuss, at a minimum, the following facets of the project.

- Status of work planned for the preceding week;
- Activities planned for the current week;
- Corrective actions and revised schedule for completion of work that is delayed;
- Community outreach activities;
- Special resource requirements; and
- Outstanding issues.

At a minimum, this meeting will include representatives from Project Management, Project EASI Core Team Management, and the Project EASI integrator.

4. TECHNICAL PROCESS

This Section identifies and briefly describes tools, methods, standards, and technical processes applicable to Project EASI/ED. Information is presented in the subsections identified below.

- Subsection 4.1 – Methods, Tools, and Techniques
- Subsection 4.2 – Applicable Standards
- Subsection 4.3 – Procedure for Developing and Modifying Work Products
- Subsection 4.4 – Documentation Philosophy
- Subsection 4.5 – Project Documentation Requirements
- Subsection 4.6 – Documentation Formats
- Subsection 4.7 – Project Support Functions

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4.1 Methods, Tools, Techniques

Methods, tools, and techniques used for Project EASI/ED will vary depending upon life cycle phase, service provider, implementation option, specific segment of functionality being addressed, the results of prototype and pilot projects, and other factors. This subsection identifies project management tools, techniques, and methods used for EASI/ED. To the extent possible at this time, tools, techniques, and methods also are identified for subsequent phases. The *Project EASI/ED COE* provides guidance regarding the standards with which any tool selected for EASI/ED implementation must comply. As EASI/ED implementation contracts are awarded, the *EASI/ED PMP* should be updated to reflect specific selections.

4.1.1 Management Methods, Tools, and Techniques

Performance Metrics. Performance metrics are quantitative measures used to assess and monitor progress on a specific task. For each life cycle phase, a limited set of key metrics will be used where they best can be applied to track performance. Metric selection will be influenced by specific tools and techniques used for each incremental development effort. At the beginning of each life cycle phase or in conjunction with ED decisions to procure implementation support services, the EASI/ED integrator will identify and define performance metrics for the upcoming work. These metrics will be submitted to EASI/ED Project Management approval, and will be documented in Appendix C of the *EASI PMP* when it is next revised. For each metric, a name, description, and graph representing the total value and planned progress toward completion will be included. Each month, responsible organizations will report progress toward completion and will compare actual progress to planned. Organizations will explain the reason for variances of 5 percent or more and will define appropriate corrective actions to bring performance back on target.

Risk Management Database. An EASI/ED Risk Management Database has been developed in Microsoft Access. The EASI/ED integrator will maintain this database and will use it as a tool to monitor risk status, expected impact, likelihood of occurrence, mitigating techniques applied, and resolution. See subsection 3.3 for further information on risk management.

Issue Tracking Database. An EASI/ED Issue Tracking Database has been developed in Microsoft Access. A copy of this database is available on a microcomputer in the Project EASI War Room at ED. The EASI/ED integrator will maintain this database and will use it as a tool to record issues, their anticipated impact, the organization responsible for resolving the issue, and current status. Project Management and the Project EASI Core Team will use the Issue Tracking Database to monitor issue resolution and to help identify problem areas within the project. A summary of open issues will be periodically reviewed at regularly conducted project status meetings.

Software Tools. EASI/ED managers will use a master schedule developed in Microsoft Project to track and monitor EASI/ED activities. At this point, the EASI/ED master schedule comprises those activities suggested in the *EASI/ED Transition Strategy*. As contracts are awarded for tasks within that high-level schedule, more detailed work plans should be incorporated into the master schedule to ensure coordination of activities across multiple providers.

Project EASI Web Page. The Project EASI Web Page is maintained on the World Wide Web as a way to share information regarding the Project EASI vision, plans, and progress. This Web page is also used to publish all EASI/ED work products as they become final.

4.1.2 Concept Phase

During the concept phase, the team used the Information Engineering (IE) methodology – an integrated set of formal techniques used to guide planning, analysis, and design of information systems used for enterprise solutions. The Composer by IEF Computer-Aided Software Engineering (CASE) tool was used to support this methodology.

4.1.3 Definition Phase

During the definition phase, the following tools were used to support analysis.

Requirements Traceability Matrix (RTM). The EASI/ED integrator constructed an RTM in Microsoft Access at the beginning of the definition phase to document EASI/ED requirements as reflected in the *Project EASI Concept Document* and to document existing requirements as reflected in the current Title IV systems. These requirements were then analyzed and mapped to a set of target requirements for EASI/ED that are used as the basis of all subsequent definition and design activities. The RTM will be used throughout the EASI/ED life cycle to track each requirement through design, construction, and testing products and in related documentation.

CASE Tools. BPwin and ERwin CASE tools were used to document high-level process models and conceptual data models for the current ED systems, for segments of external systems touched by ED implementation activities, and for Project EASI/ED. As the *Project EASI/ED BARD* was completed, these models were transferred to Composer as a logical data model and an activity hierarchy diagram. Subsequent changes to data and process requirements are reflected in the Composer model. (Note: Since EASI/ED began, Sterling Software has renamed Composer as Cool:GEN. The Sterling Software Cool product suite, of which Cool:GEN is a piece, will be used as applicable through the remainder of the development cycle, at ED's direction.)

4.1.3 Design Phase

CASE Tools. ED has directed that the Sterling Software Cool tool suite be used during the design phase for EASI/ED. Other CASE tools may be identified as specific tasks are awarded for design work.

Prototypes and Pilots. Judicious use of prototypes and pilots to prove technical concepts and to validate requirements are recommended for the design phase.

4.2 Applicable Standards

EASI/ED is governed by the following standards.

- US Department of Commerce, *Federal Information Processing Standards (FIPS) Publication (PUB) 183, Integration Definition for Functional Modeling (IDEFO)*, date unavailable.
- US Department of Commerce, *FIPS PUB 184, Integration Definition for Information Modeling (DEFIX)*, date unavailable.
- US Department of Education, Information Resources Group, *System Life Cycle Management Manual*, September 16, 1994.
- US Department of Education, Chief Information Officer, *Enterprise Architecture* (to be developed).
- US Department of Education, *Project EASI/ED Common Operating Environment*, July 10, 1998.

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4.3 Procedure for Developing and Modifying Work Products

This subsection documents the procedure used to develop and modify EASI/ED work products.

1. **Initiation.** An initial meeting will be held with the work product author(s) and management team members to discuss work product development, to review guidelines governing the work product, and to establish dates for interim reviews during the development cycle.
2. **Produce Annotated Outline.** The first product for each author is a proposed annotated outline for the work product. Members of the management team will meet with the author to discuss the outline and to confirm (a) a shared understanding of the product's purpose and (b) that an appropriate level of detail is planned for the document (i.e., scope, depth, content).
3. **Conduct Interim Reviews.** An interim review schedule tailored to each work product is established in Step 1. Interim reviews may be structured around specific sections of the work product for which data is available early or for drafts of an entire work product developed to increasing levels of completeness. Members of the technical and management teams will perform the interim reviews. Reviewers are responsible for ensuring that each work product is progressing adequately toward timely completion, that the content is of the quality and depth desired, and that any issues associated with work product content are identified early in the schedule.
4. **Peer Review.** Approximately 10 working days prior to the delivery date, a complete version of each work product will be subject to a peer review. Peer reviewers are selected based upon their expertise in a specific subject covered by the work product or based upon their overall management responsibility for the project. A formal peer review meeting will be held so that the author and all reviewers can jointly discuss the comments and agree upon any changes to the work product.
5. **Incorporate Changes.** Following each review, including the peer review, the work product author(s) will revise the work product to reflect reviewers' comments. A final version of the work product will be completed subsequent to peer review.
6. **Deliver Product to ED.** Once a draft work product is complete, it will be delivered to ED for review. ED staff and other reviewers appointed by ED will review the product and will provide comments. Authors will incorporate these comments in the work product. The final version of the product will be returned to ED to be placed under configuration control by the EASI/ED configuration manager.

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4.4 Documentation Philosophy

The guiding philosophy for documentation of EASI/ED encompasses the points below.

- Documentation will not be developed as a paper drill; only necessary documents will be developed.
- EASI/ED Project Management is the sole authority regarding whether a particular document is necessary and regarding the depth and scope of documents that are produced.
- A common sense approach to documentation will be followed to ensure that documents do not duplicate each other.
- To the maximum degree possible, documentation will be delivered, coordinated, and publicized in electronic format.
- Whenever possible and appropriate, CASE tool output will be used in lieu of part or all of a document.

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4.5 Project Documentation Requirements

This subsection presents project documentation requirements for each life cycle phase. Requirements stated in ED's *System Life Cycle Management Manual* were tailored to minimize the cost and time associated with iterative development of deliverables across multiple life cycle phases and with development of a large number of deliverables. Where possible, multiple deliverables recommended by the *System Life Cycle Management Manual* are combined into a single deliverable for EASI/ED implementation. A matrix that correlates *System Life Cycle Management Manual* documentation requirements to proposed EASI/ED implementation documentation is presented in Appendix B.

The exhibits listed below summarize project documentation requirements for each life cycle phase.

- Exhibit 4-1 - Concept Phase Documentation
- Exhibit 4-2 - Definition Phase Documentation
- Exhibit 4-3 - Design Phase Documentation
- Exhibit 4-4 - Construction Phase Documentation
- Exhibit 4-5 - Test Phase Documentation
- Exhibit 4-6 - Implementation Phase Documentation

Each exhibit identifies documents to be created or updated during that life cycle phase, activity supported, briefly describes each document, names the responsible organization, provides the due date, and states the document's current status. Although the "responsible organization" reflects the entity responsible for delivering the document, these products will be the result of cooperative efforts and input from many staff associated with EASI/ED. Specific delivery dates cannot yet be established for many documents; delivery times are therefore described in relationship to life cycle phase or to milestone events.

Documentation requirements for the operation phase are not yet identified. Typically, during this phase the system performance is periodically evaluated, recommendations are made regarding replacement or enhancements, and documentation used for software maintenance and development is maintained.

Community-based development activities related to EASI/ED will be expected to produce similar types of documentation to that identified for ED's EASI/ED implementation.

At the beginning of each life cycle phase all project documentation from the previous phases will be reviewed to ensure accuracy, completeness, and currency. The *EASI/ED PMP* will be updated at the beginning of each life cycle phase. Other documentation will be reviewed no less than once each fiscal year on a schedule agreed upon with ED Project Management, and will be updated if ED deems this necessary.

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4.6 Documentation Formats

Prior to the beginning of each life cycle phase, Project Management, with support from the integrator, will review the suggested documentation to assess whether each document is required and to determine the scope and depth of each document to be developed. For each required document, a format will be defined based upon existing standards, to the maximum degree possible. Candidate standards include ED guidelines, FIPS PUBS, and standards developed by other agencies or organizations. Formats will be tailored to suit EASI/ED requirements, to reflect Project Management determinations regarding scope and depth, and to conform with the guiding documentation philosophy (see subsection 4.3).

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4.7 Project Support Functions

4.7.1 Configuration Management

Configuration management is a discipline that provides for consistent identification of system components (software configuration items, hardware configuration items, documentation) and controls changes to these components throughout the system life. EASI/ED configuration management is governed by the *Project EASI/ED Configuration Management Plan*.

4.7.2 Quality Assurance

Quality assurance and quality control (QA/QC) are used to ensure that a consistently high level of quality is maintained in all facets of a project or organization. QA/QC will play an important role in EASI/ED success since many different organizations are expected to participate in implementation. A QA/QC organization should be formed to provide overarching review of EASI/ED products and processes, to establish QA/QC standards and processes, and to help train participating staff and contractors in appropriate QA/QC methods.

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5. WORK PACKAGES, SCHEDULE, AND BUDGET

This Section presents planning information for EASI/ED, including resources, schedule, and activity descriptions. Much of the content for this Section is incorporated by reference to the *Project EASI/ED Transition Strategy* and is not presented in this document. This approach is consistent with the prescribed EASI/ED documentation philosophy and is intended to facilitate easy update of both the *Transition Strategy* and the *EASI/ED PMP* as management makes decisions regarding the project's future.

Information is presented in the subsections named below.

- Subsection 5.1 – Work Packages
- Subsection 5.2 – Dependencies
- Subsection 5.3 – Resource Requirements
- Subsection 5.4 – Budget and Resource Allocation
- Subsection 5.5 – Schedule

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5.1 Transition Worksheets

A work package represents the activities, tasks, and work products associated with a discrete element of EASI/ED. Transition worksheets are used to describe EASI/ED work packages. Actual worksheets are presented in the *Project EASI/ED Transition Strategy*. This subsection describes the presentation and use of transition worksheets.

Within the *Transition Strategy*, Section 4, transition worksheets are divided into seven subsections representing the major phases and facets of EASI/ED implementation.

- System-wide Activities
- Organization Change
- Phase I (Financial Services and Aid Application)
- Phase II (PMOS)
- Phase III (Aid Origination and Disbursement, and Repayment)
- Phase IV (Decision Support)
- Prototypes, Pilots, and Interim Improvements

At the beginning of each subsection is a brief summary of the projects that comprise that element or phase. This is followed by one or more transition worksheets, each of which describes a single EASI/ED project. A project comprises all activities required for its completion – from the earliest planning for acquisition of services through implementation of functionality. The transition worksheets use a consistent set of elements to describe each project.

- **Project Name** – short descriptive title.
- **Project Number** – a unique alphanumeric designator to facilitate easy reference to the project.
 - ◆ System-Wide Activities: SYS-001, SYS-002, SYS-00N
 - ◆ Organization Change: OC-001, OC-002, OC-00N
 - ◆ Phase I (Financial Services and Aid Application): I-001, I-002, I-00N
 - ◆ Phase II (PMOS): II-001, II-002, II-00N
 - ◆ Phase III (Aid Origination and Disbursement and Repayment): III-001, III-002, III-00N
 - ◆ Phase IV (Decision Support): IV-001, IV-002, IV-00N
 - ◆ Prototypes, Pilots, and Interim Improvements: PPI-001, PPI-002, PPI-00N
- **Project Purpose** – briefly describes the project goal(s).
- **Project Duration** – states the estimated elapsed time to execute the project from start to finish.
- **Key Dates** – shows the expected start and stop dates for major activities comprising the project.
- **Assumptions** – lists any assumptions specific to schedule definition for the project and any exceptions to the assumptions listed in the *Transition Strategy*, Section 2.

- **Key Relationships** – identifies the principal dependencies among the project and other projects or major activities.
- **Major Activities** – briefly describes the nature of work to be performed for each major activity necessary to complete the project. These major activities correlate to the fourth level in the Microsoft Project transition schedule. The responsible organization and supporting organization(s) for each activity are also identified.
- **Decision Factors** – identifies considerations that could alter the time or approach taken to completing the project, as well as issues related to project planning, execution, or completion. This information is provided to help managers responsible for implementing EASI/ED understand some of the variables associated with the project schedule, and to make informed decisions at the time the project is initiated.

Four layers of testing have been applied to reflect key checkpoints for each phases of the transition. The purpose of testing is to identify and correct errors prior to implementation. The four layers begin with the testing of units of an application within a subsystem and build up to the testing of an entire phase of the transition. The four layers are:

- System testing – Assesses each application within a Project EASI/ED subsystem to ensure that all the components of an application interface properly and that the application provides the functionality as expected.
- Subsystem integration testing – Focuses on the interfaces between applications to ensure the delivery of complete business functionality and system performance across application boundaries and across technology platforms.
- User acceptance testing – Provides the users an opportunity to test each Project EASI/ED subsystem and gain confidence that the subsystem performs as expected.
- Phase integration and testing – Focuses on the interfaces between subsystems. Ensures that all components of a phase are integrated to provide a complete release of business functionality and meet performance expectations.

5.2 Dependencies

Dependencies among EASI/ED work packages are described on the transition worksheets presented in the *Project EASI/ED Transition Strategy*. In addition, dependencies are represented in tabular and graphical form in the project schedule, also presented in the *Transition Strategy*.

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5.3 Resource Requirements

EASI/ED resource requirements fall into five principal categories: staff, hardware, software, facilities, and travel. Each of these categories is discussed in the following subsections.

5.3.1 Staff

Staff for EASI/ED implementation will be drawn from the sources listed below.

- **Internal ED Staff** – senior managers and subject matter experts will be required to support requirements definition, design review, acceptance testing, transition planning, issue resolution, risk management, and overall review of EASI/ED implementation. Currently, three ED staff are assigned to Project EASI/ED full time. The remainder of staff will be asked to provide part-time support to the effort.
- **Government Consultants** - members of the Project EASI Core Team are employed by ED as consultants. Project EASI Core Team members will also be relied upon to support EASI/ED implementation by coordinating with the external community and participating in EASI/ED reviews and information gathering. As with ED staff, Project EASI Core Team members are available to support Project EASI implementation on a part-time basis only.
- **Community Members** - representatives of the external postsecondary education community are expected to play an important on EASI/ED. These individuals may participate in community-based developed teams or may support EASI/ED implementation by providing input and feedback regarding plans, requirements, and designs. As with ED staff and Project EASI Core Team members, community representatives are not available to the project full time.
- **Contractors** – EASI/ED implementation will make substantial use of contractor support to leverage the expertise of subject matter experts and to supplement skills of in-house staff.

Meaningful staffing projections for EASI/ED are not available at this time. The COO was recently appointed and in the near future will be making decisions regarding organization and roles, EASI/ED technical approach, and EASI/ED schedule. As these decisions are made, staffing projections can be generated. The *Project EASI/ED Transition Strategy* presents some information regarding the staffing levels used as a basis for the projected implementation schedule.

5.3.2 Hardware

EASI/ED hardware falls into three categories: (1) hardware used to support project management and integration; (2) EASI/ED system hardware; and (3) user hardware. At this time, there are no specific requirements for hardware. Microcomputers currently used to support EASI/ED work

are owned by ED and contractor organizations. As decisions are made regarding EASI/ED design and detailed technical architecture, hardware requirements should be updated here.

5.3.3 Software

The software tools listed below have been used to support EASI/ED work to date. Additional information regarding software that will be used in the design and construction phases is not yet available. The EASI/ED PMP should be updated as specific decisions are made regarding design and implementation of the system.

Tool/Suite	Application(s)	Life Cycle Phase
Composer by IEF	Information Strategy Planning Data and Process Requirements	Concept Definition
Cool Product Suite	(Candidate)	Design, Construction
ERwin/ERX Erwin/MRX Maintenance BPwin Bpwin/Maintenance RPTwin ModelMart Server	Data and process modeling	Definition
Access	Management databases and RTM	Definition, Design, Construction, Test, Implementation
Microsoft Office	Documentation	All phases

5.3.4 Facilities

Facilities are required at ED to host the Project EASI Core Team during monthly meetings and for special meetings upon demand, to host ED EASI/ED team members, and to host the EASI/ED integrator.

5.3.5 Travel

Substantial travel is anticipated during the design phase as meetings with representatives of the external postsecondary education community are required to refine requirements and to obtain additional detail to support system design. In addition, substantial community outreach will be required to ensure that the community is prepared for changes EASI/ED will cause. Specific estimates for travel during fiscal year 1999 or for the remainder of the project are not yet available. Once the COO is appointed and firm decisions are made regarding the future of EASI/ED, these projections can be made.

5.4 Budget and Resource Allocation

Projected budget requirements for EASI/ED are not yet available. As cost/benefit analyses are performed for discrete elements of the project and/or for EASI/ED overall, this information can be captured and documented in the *EASI/ED PMP*.

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5.5 Schedule

The *Project EASI Transition Strategy* contains the best current schedule for EASI/ED. As firm decisions are made regarding the project's future and as acquisitions occur for specific EASI/ED implementation activities, the *Transition Strategy* schedule can be updated with greater detail and modified to reflect real start and end dates. At that point, the schedule may be moved to the *EASI/ED PMP* so that managers have a single tool to use for tracking and managing the project. At any time during the project, the schedule should only be resident in one document – in accordance with the EASI/ED documentation philosophy.

A work breakdown structure for EASI/ED is presented as Exhibit 5-1.

