



***Student Credit Management***  
*Common Services for Borrowers*

**Business Architecture Blueprint**

**December 23, 2002**

**Version 3.0**



## Table of Contents

1	Business Architecture Blueprint Introduction.....	9
2	Human Performance Architecture .....	12
2.1	Purpose .....	12
2.2	Phased Approach.....	13
2.2.1	Phase 1: Incremental Changes .....	13
2.2.2	Phase 2: Reorganization .....	13
2.2.3	Phase 3: Alternative Models .....	14
2.3	Understanding the Strategic Intent.....	14
2.4	Defining Key Questions.....	15
2.5	Developing Operational and Design Principles.....	16
2.6	Human Performance Architecture Summary.....	16
3	Culture Architecture.....	17
3.1	Definition of Culture .....	17
3.2	Approach for Culture Architecture.....	17
3.3	Today’s Culture .....	17
3.4	Future Culture.....	18
3.4.1	Benefits of Future Culture .....	18
4	Organization Architecture.....	19
4.1	Approach for Organization Architecture.....	19
4.2	Develop Organization Design Principles.....	19
4.3	Performing Organizational Continuum Analysis.....	20
4.3.1	Dispersion.....	20
4.3.2	Structure .....	20
4.3.3	Control and Standardization .....	21
4.3.4	Decision-making.....	21
4.3.5	Information.....	21
4.4	Assess Organization Strategy Options.....	22
4.4.1	Organization Design Option 1 – Product Focused.....	22
4.4.2	Organization Design Option 2 – Market Segmentation (Customer Focus) .....	22
4.4.3	Organization Design Option 3 – Functional.....	23
5	Competency Architecture.....	24
5.1	Competency Architecture Approach.....	24
5.2	Competency Definition – Target Organizational Competencies.....	24
5.2.1	Risk Management.....	25
5.2.2	Performance Management.....	25
5.2.3	Data Management .....	25
5.2.4	Transaction Processing.....	26
5.2.5	Information Fulfillment.....	26
6	Process Architecture.....	26
6.1	Process Definition.....	26
6.1.1	Manage Data.....	27
6.1.2	Process Transactions.....	28
6.1.3	Fulfill Information .....	30
6.1.4	Manage Performance.....	32
6.1.5	Manage Risk.....	33



- 6.2 Process Relationship Diagram..... 35
  - 6.2.1 Business Capabilities and the Operating Model..... 35
  - 6.2.2 Functional Requirements ..... 36
- 7 Application Software Architecture ..... 38
  - 7.1 Subject Area Data Model..... 38
    - 7.1.1 Entity Attributes ..... 39
    - 7.1.2 Entity Definitions ..... 40
  - 7.2 User Types..... 41
  - 7.3 Application/Data Distribution Approach..... 43
    - 7.3.1 Opportunity 1: Payment Processing..... 45
      - Phase 1 ..... 46
        - 7.3.1.1.1 Phase Description..... 46
        - 7.3.1.1.2 To-Be Application Distribution..... 46
        - 7.3.1.1.3 To-Be Data Distribution..... 46
      - Phase 2 ..... 46
        - 7.3.1.1.4 Phase Description..... 46
      - Phase 3 ..... 46
        - 7.3.1.1.5 Phase Description..... 46
    - 7.3.2 Opportunity 3: Correspondence ..... 47
      - Phase 1 ..... 47
        - 7.3.2.1.1 Phase Description..... 47
        - 7.3.2.1.2 To-Be Application Distribution..... 47
        - 7.3.2.1.3 To-Be Data Distribution..... 48
      - Phase 2 ..... 48
        - 7.3.2.1.4 Phase Description..... 48
      - Phase 3 ..... 48
        - 7.3.2.1.5 Phase Description..... 48
    - 7.3.3 Opportunity 4: National Directory of New Hires (NDNH) Data Match ..... 49
      - Phase 1 ..... 49
        - 7.3.3.1.1 Phase Description..... 49
        - 7.3.3.1.2 To-Be Application Distribution..... 50
        - 7.3.3.1.3 To-Be Data Distribution..... 50
      - Phase 2 ..... 50
        - 7.3.3.1.4 Phase Description..... 50
      - Phase 3 ..... 50
        - 7.3.3.1.5 Phase Description..... 50
    - 7.3.4 Opportunity 5: Imaging..... 51
      - Phase 1 ..... 51
        - 7.3.4.1.1 Phase Description..... 51
        - 7.3.4.1.2 To-Be Application Distribution..... 52
        - 7.3.4.1.3 To-Be Data Distribution..... 52
      - Phase 2 ..... 52
        - 7.3.4.1.4 Phase Description..... 52
      - Phase 3 ..... 52
        - 7.3.4.1.5 Phase Description..... 52
    - 7.3.5 Opportunity 7: Capture Additional Borrower Information..... 54
      - Phase 1 ..... 54



7.3.5.1.1	Phase Description.....	54
7.3.5.1.2	To-Be Application Distribution.....	55
7.3.5.1.3	To-Be Data Distribution.....	55
Phase 2	.....	55
7.3.5.1.4	Phase Description.....	55
Phase 3	.....	55
7.3.5.1.5	Phase Description.....	55
7.3.6	Opportunity 8: Loan Consolidation.....	56
Phase 1	.....	57
7.3.6.1.1	Phase Description.....	57
7.3.6.1.2	To-Be Application Distribution.....	57
7.3.6.1.3	To-Be Data Distribution.....	57
Phase 2	.....	57
7.3.6.1.4	Phase Description.....	57
Phase 3	.....	57
7.3.6.1.5	Phase Description.....	57
7.3.7	Opportunity 10: Credit Management Data Mart Reporting Capabilities.....	58
Phase 1	.....	60
7.3.7.1.1	Phase Description.....	60
7.3.7.1.2	To-Be Credit Management Data Mart Application Distribution.....	60
7.3.7.1.3	To-Be Credit Management Data Mart Data Distribution.....	61
Phase 2	.....	61
7.3.7.1.4	Phase Description.....	61
Phase 3	.....	61
7.3.7.1.5	Phase Description.....	61
7.3.8	Opportunity 11: Risk Management.....	62
Phase 1	.....	63
7.3.8.1.1	Phase Description.....	63
7.3.8.1.2	To-Be Application Distribution.....	63
7.3.8.1.3	To-Be Data Distribution.....	63
Phase 2	.....	63
7.3.8.1.4	Phase Description.....	63
Phase 3	.....	63
7.3.8.1.5	Phase Description.....	63
7.3.9	Opportunity 12: Document Warehousing and Retention.....	64
Phase 1	.....	64
7.3.9.1.1	Phase Description.....	64
7.3.9.1.2	To-Be Application Distribution.....	64
7.3.9.1.3	To-Be Data Distribution.....	65
Phase 2	.....	65
7.3.9.1.4	Phase Description.....	65
Phase 3	.....	65
7.3.9.1.5	Phase Description.....	65
7.3.10	Opportunity 15: Electronic Refunds.....	66
Phase 1	.....	66
7.3.10.1.1	Phase Description.....	66
7.3.10.1.2	To-Be Application Distribution.....	66



7.3.10.1.3	To-Be Data Distribution.....	66
Phase 2	.....	66
7.3.10.1.4	Phase Description.....	66
Phase 3	.....	66
7.3.10.1.5	Phase Description.....	66
7.3.11	Opportunity 16: Integrated Web Site.....	67
Phase 1	.....	67
7.3.11.1.1	Phase Description.....	67
7.3.11.1.2	To-Be Application Distribution.....	67
7.3.11.1.3	To-Be Data Distribution.....	67
Phase 2	.....	67
7.3.11.1.4	Phase Description.....	67
Phase 3	.....	67
7.3.11.1.5	Phase Description.....	67
7.3.12	Opportunity 18: Borrower Comment Access.....	68
Phase 1	.....	68
7.3.12.1.1	Phase Description.....	68
7.3.12.1.2	To-Be Application Distribution.....	68
7.3.12.1.3	To-Be Data Distribution.....	68
Phase 2	.....	68
7.3.12.1.4	Phase Description.....	68
Phase 3	.....	69
7.3.12.1.5	Phase Description.....	69
7.4	Application Software Definition.....	70
7.4.1	Opportunity 1: Payment Processing.....	71
Requirements	.....	71
7.4.1.1.1	Phase 1.....	71
7.4.1.1.2	Phase 2.....	71
7.4.1.1.3	Phase 3.....	71
Application Software Relationship Diagram	.....	72
Phase 1 and 2 Cost Drivers	.....	73
Assumptions (Cost Driver and Other)	.....	74
7.4.2	Opportunity 3: Correspondence.....	75
Requirements	.....	75
7.4.2.1.1	Phase 1.....	75
7.4.2.1.2	Phase 2.....	75
7.4.2.1.3	Phase 3.....	76
Application Software Relationship Diagram	.....	77
Phase 1 and 2 Cost Drivers	.....	78
Assumptions (Cost Driver and Other)	.....	79
7.4.3	Opportunity 4: National Directory of New Hires Data Match.....	80
Requirements	.....	80
7.4.3.1.1	Phase 1.....	80
7.4.3.1.2	Phase 2.....	81
7.4.3.1.3	Phase 3.....	81
Application Software Relationship Diagram	.....	82
Phase 1 and 2 Cost Drivers	.....	85



Assumptions (Cost Driver and Other) .....	86
7.4.4 Opportunity 5: Imaging.....	87
Requirements.....	87
7.4.4.1.1 Phase 1 .....	87
7.4.4.1.2 Phase 2 .....	87
7.4.4.1.3 Phase 3 .....	87
Application Software Relationship Diagram .....	88
Phase 1 and 2 Cost Drivers .....	92
Assumptions (Cost Driver and Other) .....	93
7.4.5 Opportunity 7: Capture Additional Borrower Information.....	94
Requirements.....	94
7.4.5.1.1 Phase 1 .....	94
7.4.5.1.2 Phase 2 .....	94
7.4.5.1.3 Phase 3 .....	94
Application Software Relationship Diagram .....	95
Phase 1 and 2 Cost Drivers .....	99
Assumptions (Cost Driver and Other) .....	100
7.4.6 Opportunity 8: Loan Consolidation.....	101
Requirements.....	101
7.4.6.1.1 Phase 1 .....	101
7.4.6.1.2 Phase 2 .....	101
7.4.6.1.3 Phase 3 .....	101
Application Software Relationship Diagram .....	102
Phase 1 and 2 Cost Drivers .....	106
Assumptions (Cost Driver and Other) .....	106
7.4.7 Opportunity 10: Credit Management Data Mart Reporting Capabilities .....	108
Requirements.....	108
7.4.7.1.1 Phase 1 .....	108
7.4.7.1.2 Phase 2 .....	108
7.4.7.1.3 Phase 3 .....	109
Application Software Relationship Diagram .....	110
Phase 1 and 2 Cost Drivers .....	112
Assumptions (Cost Driver and Other) .....	113
7.4.8 Opportunity 11: Risk Management .....	116
Requirements.....	116
7.4.8.1.1 Phase 1 .....	116
7.4.8.1.2 Phase 2 .....	116
7.4.8.1.3 Phase 3 .....	116
Application Software Relationship Diagram .....	117
Phase 1 and 2 Cost Drivers .....	119
Assumptions (Cost Driver and Other) .....	119
7.4.9 Opportunity 12: Document Warehousing and Retention .....	121
Requirements.....	121
7.4.9.1.1 Phase 1 .....	121
7.4.9.1.2 Phase 2 .....	121
7.4.9.1.3 Phase 3 .....	121
Application Software Relationship Diagram .....	122



Phase 1 and 2 Cost Drivers .....	123
Assumptions (Cost Driver and Other) .....	123
7.4.10 Opportunity 15: Electronic Refunds .....	124
Requirements .....	124
7.4.10.1.1 Phase 1 .....	124
7.4.10.1.2 Phase 2 .....	124
7.4.10.1.3 Phase 3 .....	124
Application Software Relationship Diagram .....	125
Phase 1 and 2 Cost Drivers .....	127
Assumptions (Cost Driver and Other) .....	127
7.4.11 Opportunity 16: Integrated Web Site .....	128
Requirements .....	128
7.4.11.1.1 Phase 1 .....	128
7.4.11.1.2 Phase 2 .....	128
7.4.11.1.3 Phase 3 .....	128
Application Software Relationship Diagram .....	129
Phase 1 and 2 Cost Drivers .....	130
Assumptions (Cost Driver and Other) .....	130
7.4.12 Opportunity 18: Borrower Comment Access .....	131
Requirements .....	131
7.4.12.1.1 Phase 1 .....	131
7.4.12.1.2 Phase 2 .....	131
7.4.12.1.3 Phase 3 .....	131
Application Software Relationship Diagram .....	132
Phase 1 and 2 Cost Drivers .....	134
Assumptions (Cost Driver and Other) .....	134
7.5 Other Opportunities .....	136
8 Equipment and Facilities Architecture .....	138
8.1 Opportunity 5: Imaging .....	139
8.1.1 Equipment Definition .....	139
8.1.2 Equipment Relationship Diagram .....	139
8.2 Opportunity 7: Capture Additional Borrower Information .....	140
8.2.1 Equipment Definition .....	140
8.2.2 Equipment Relationship Diagram .....	141
8.3 Opportunity 8: Loan Consolidation .....	142
8.3.1 Equipment Definition .....	142
8.3.2 Equipment Relationship Diagram .....	142
8.4 Opportunity 10 and 11: Credit Management Data Mart Reporting Capabilities and Risk Management .....	143
8.4.1 Equipment Definition .....	143
8.4.2 Equipment Relationship Diagram .....	144
8.5 Opportunity 12: Electronic Refunds .....	145
8.5.1 Equipment Definition .....	145
8.5.2 Equipment Relationship Diagram .....	145
8.6 Opportunity 16 and 18: Integrated Web Site and Borrower Comment Access .....	145
8.6 Opportunity 16 and 18: Integrated Web Site and Borrower Comment Access .....	146
8.6.1 Equipment Definition .....	146



8.6.2 Equipment Relationship Diagram ..... 147

**List of Tables**

Table 1 - CSB Phased Approach..... 13  
Table 2 - Strategic Objectives and Guiding Principles/Decision Criteria..... 16  
Table 3 - Entity Definitions ..... 40  
Table 4 - User Types..... 41  
Table 5 - Correspondence To-Be Application Distribution Approach..... 47  
Table 6 - Correspondence To-Be Data Distribution Approach..... 48  
Table 7 - NDNH Data Match To-Be Application Distribution Approach ..... 50  
Table 8 - NDNH Data Match To-Be Data Distribution Approach..... 50  
Table 9 - Imaging To-Be Application Distribution..... 52  
Table 10 - Imaging To-Be Data Distribution ..... 52  
Table 11 - Capture Additional Borrower Information To-Be Application Distribution ..... 55  
Table 12 - Capture Additional Borrower Information To-Be Data Distribution..... 55  
Table 13 - Loan Consolidation To-Be Application Distribution..... 57  
Table 14 - Loan Consolidation To-Be Data Distribution ..... 57  
Table 15 - CMDM To-Be Application Distribution ..... 60  
Table 16 - CMDM To-Be Data Distribution..... 61  
Table 17 - Risk Management To-Be Application Distribution ..... 63  
Table 18 - Risk Management To-Be Application Distribution..... 63  
Table 19 - Document Warehousing and Retention To-Be Application Distribution..... 64  
Table 20 - Document Warehousing and Retention To-Be Data Distribution ..... 65  
Table 21 - Payment Processing Cost Drivers..... 73  
Table 22 - Correspondence Cost Drivers ..... 78  
Table 23 - NDNH Cost Drivers ..... 85  
Table 24 - Imaging Cost Drivers ..... 92  
Table 25 - Capture Additional Borrower Information Cost Drivers..... 99  
Table 26 - Loan Consolidation Cost Drivers..... 106  
Table 27 - CMDM Cost Drivers..... 112  
Table 28 - Risk Management Cost Drivers..... 119  
Table 29 - Document Warehousing and Retention Cost Drivers..... 123  
Table 30 - Electronic Refunds Cost Drivers..... 127  
Table 31 - Integrated Web Site Cost Drivers ..... 130  
Table 32 - Borrower Comment Access Cost Drivers ..... 134  
Table 33 - Other Opportunities ..... 136  
Table 34 - Opportunities with no Equipment and Facilities Architecture component during Phase 1.. 138  
Table 35 - Imaging Equipment Definition ..... 139  
Table 36 - Capture Additional Borrower Information Equipment Definition ..... 140  
Table 37 - Loan Consolidation Equipment Definition ..... 142  
Table 38 - CMDM and Risk Management Equipment Definition..... 143  
Table 39 - Electronic Refunds Equipment Definition..... 145  
Table 40 - Integrated Web Site and Borrower Comment Access Equipment Definition ..... 146

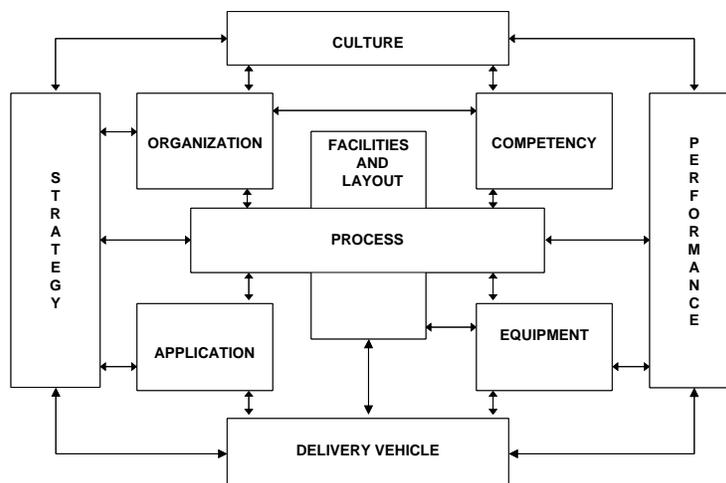


## 1 Business Architecture Blueprint Introduction

This deliverable was prepared for Common Services for Borrowers (TO 99) based on assumptions about the ongoing operational environment of Student Credit Management. If, in the future the operational environment changes, there may be opportunities to revise the approach and achieve the vision for common services for borrowers more effectively. Wherever possible the analysis ideas and concepts in this deliverable should be used in the updated approach.

Business architecture defines the future structure of Common Services for Borrowers (CSB) in terms of its business integration elements and their interrelationships. The Business Architecture Blueprint outlines the business integration elements required to realize the value of CSB. Building upon the CSB vision and the capabilities defined in the Conceptual Design, the Business Architecture Blueprint describes the people, process, and technology elements required to achieve the CSB vision.

**Figure 1 – CSB Business Architecture Blueprint**



- **Strategy** – The purpose of CSB. It defines the value created by CSB.
- **Culture** – The behaviors, values and norms of CSB; what motivates people to do their work
- **Competency** – The knowledge, skills and abilities that drive CSB. Competencies considered critical to CSB are termed core competencies.
- **Organization** – The organization structure and roles and responsibilities that shape day-to-day business transactions
- **Process** – The activities, tasks and workflows that define how business transactions work – managing, core and enabling processes
- **Application** – The business software that supports CSB processes
- **Delivery Vehicle** – The computing platform and operation services that support CSB processes
- **Equipment** – The hardware, machinery and tools that support CSB processes
- **Facilities and Layout** – The location, buildings, and properties that used by CSB to perform regular business activities

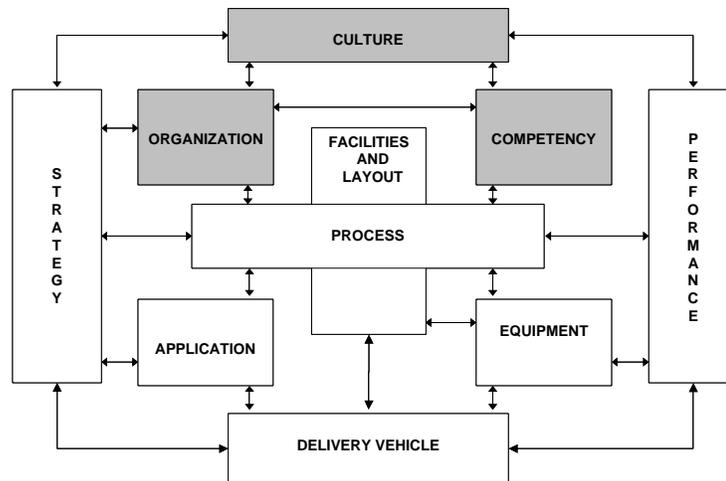


- **Performance** - How value is tracked

The Business Architecture Blueprint can be further simplified by breaking it down into three primary sections: people, process, and technology.

The first section of the Blueprint focuses on the people aspects of CSB:

**Figure 2 – People Components of the Business Architecture**



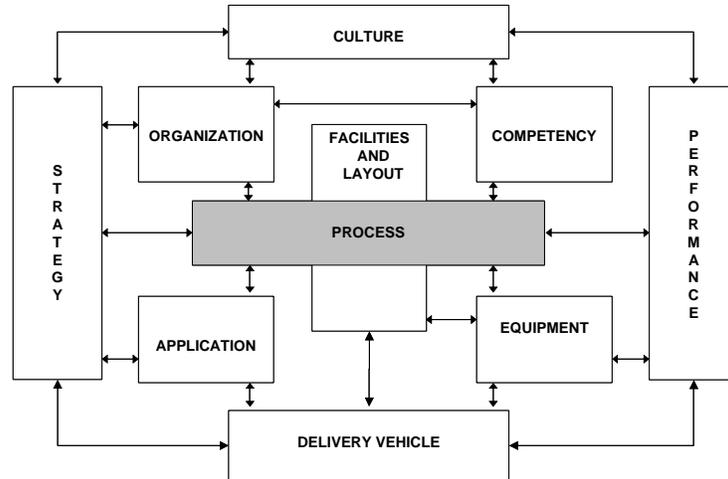
- The **Culture Architecture** section describes the values and behaviors desired for the future CSB and outlines an approach for transforming CSB to the future culture.
- The **Organization Architecture** section outlines the approach for transforming to a new organizational model. Organization strategy options are presented along with the advantages and disadvantages of each.
- The **Competency Architecture** section discusses the knowledge, skills and abilities required to achieve the CSB vision. Competencies associated with the capabilities for CSB are outlined along with specific skills associated with each of these competencies.

In describing the people architecture, the first section revisits the CSB strategy as the foundation for the Business Architecture Blueprint. Phase 1 is limited to incremental organizational changes, thus the primary focus of these sections is to outline the approach and considerations for transforming the culture and organization to achieve the CSB strategic goals in future phases.



The second section of the Blueprint builds upon the capabilities discussed in the Conceptual Design to further define the processes that make up CSB:

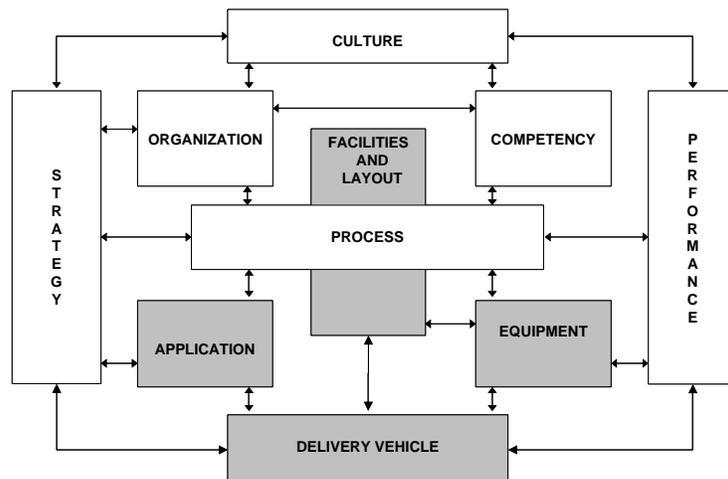
**Figure 3 – Process Components of the Business Architecture**



- The **Subject Area Data Model** describes the key information that is shared across CSB. This section defines the common vocabulary to be used across CSB.
- The **Process Definition** section provides a description of the core processes for CSB

The third section of the Blueprint focuses on the technology aspects of CSB and is organized along the opportunities identified by the CSB Action Teams:

**Figure 4 – Technology Components of the Business Architecture**





- The **Application Software Architecture** section describes all aspects of the business architecture capabilities implemented via opportunities. These opportunities specifically illustrate the high-level placement of applications and data required to support the business architecture. Furthermore, for each identified opportunity, this section describes the requirements necessary to meet the definition of the business capabilities. Each opportunity is then further segmented into identifiable work for each of the three identified phases of CSB. The **Business Component Scope Model** section then identifies the business component cost drivers necessary to complete the opportunities.
- The **Equipment Architecture** section lists all the equipment or equipment categories selected to operate the business architecture. Tailored diagrams show interactions between different types of equipment within the business architecture. This section also identifies the facilities supporting business architecture operations specifically listing the essential workspace characteristics necessary to support the business practices.

The Business Architecture Blueprint is a model for planning, analyzing, designing and improving CSB with the goal of delivering predictable, quality outputs. The complexity of integrating people, process, technology and strategy requires initially working through these issues at a high level. Additionally, with a phased approach to implementing CSB, the Business Architecture Blueprint focuses primarily on Phase 1 activities, with more conceptual information for Phases 2 and 3. The intent is to revisit the Blueprint during each Phase and update the Blueprint as the requirements and design for the next phase are detailed out.

## 2 Human Performance Architecture

### 2.1 Purpose

The Human Performance Architecture outlines the organizational and people components within the CSB Business Architecture. The following human performance elements are part of the CSB Business Architecture Blueprint:

- **Culture Architecture:** defines values, norms and behaviors
- **Organization Architecture:** defines how the business is structured and organized
- **Competency Architecture:** defines knowledge, skills and abilities

The following sections outline the approach for developing the Human Performance Architecture, providing specific detail on the Phase 1 activities for the three architectures – culture, organization and competency. The following sections present a holistic view of the Human Performance Architecture, however individual Phase 1 opportunities will be highlighted where appropriate.

The above architectures support one another and must be fully developed and integrated to meet the strategies of CSB. To define these architectures, it is critical to understand the value proposition of CSB, to define key questions to be addressed, to define operating/design principles, and to determine where CSB lines up on the organizational continuums.



## 2.2 Phased Approach

The strategy for sequencing the implementation of each CSB capability was based upon a prioritization process. This process supported the Strategic Objectives established by the CSB Core Team. Based upon the priority assigned, opportunities were placed into distinct phases of work. The phases support an incremental implementation of the CSB solution, allowing for the optimal management of resources, change, constraints, and risk.

Phase one focuses on quick hit initiatives, while laying the foundation for a more integrated technical solution. Phase two focuses on process reengineering and implementing the core technical CSB solution. Finally, phase three focuses on completing the fully integrated CSB solution to achieve SCM's end state vision.

**Table 1 - CSB Phased Approach**

Phase	Contract Efficiency (1)	Process Efficiency (2)	Organizational Transformation (3)	Technical Solution (4)
1	High	Tactical	<b>As Needed by (1) &amp; (2)</b>	Limited/Foundation
2	Consolidate	Reengineering	<b>Reorganization</b>	Core Solution
3	Performance Based	New Capabilities	<b>Alternative Models</b>	Full Integrated Solution

### 2.2.1 Phase 1: Incremental Changes

Phase 1 is depicted by incremental changes to the current organizational architecture as driven by the contract and tactical process efficiencies. Organizational changes will result from the implementation of the High Priority Quick Hits as well as the implementation of other High Priority Opportunities identified by the Action Teams. Potential organizational changes include the following:

- Centralization of contract management function for Student Credit Management
- Sharing of legal proceeding resources between Collections and Repayment
- Outsourcing of bankruptcy function in Repayment

Minimal changes to the culture architecture and competency architecture will occur during Phase 1. However, future cultural attributes and desired competencies will be defined during Phase 1.

### 2.2.2 Phase 2: Reorganization

Phase 2 is depicted by broader organizational changes driven by process reengineering, potential consolidation of contracts, and implementation of core technical solutions. This includes broader and more far reaching organizational changes than Phase 1. Potential activities performed during Phase 2 include the following:

- **Culture Architecture:** Implement culture change program (e.g., measurement, communication, leadership development)
- **Organization Architecture:** Implement organizational changes resulting from process reengineering



- **Competency Architecture:** Assess current skills against desired competencies to develop performance enhancement program

The above activities are illustrative in nature. Further definition of Phase 2 will take place during Phase 1.

### 2.2.3 Phase 3: Alternative Models

Phase 3 results in achievement of the end state vision, the recommended organizational strategy. This end state vision may change as the CSB effort matures, but will remain grounded in the strategic intent of operational efficiency. The SCM organization will be realigned to achieve the CSB vision and strategic objectives. Some potential Phase 3 activities include:

- **Culture Architecture:** Implement performance management program to reinforce desired values and behaviors
- **Organization Architecture:** Officially reorganize to new organizational model aligned to CSB strategic intent of operational efficiency
- **Competency Architecture:** Implement performance enhancement program (including training) to address skill gaps in existing organization and base recruiting on CSB competencies

The above activities are illustrative in nature. Further definition of Phase 3 will take place during Phase 1 and 2.

## 2.3 Understanding the Strategic Intent

Understanding the CSB strategic intent is a critical first step to define the human performance architecture. There is no best solution for the Human Performance Architecture. Rather, the Human Performance Architecture should align with an organization's strategy to achieve the one of the following value propositions:

- **Operational Excellence:** "Best Cost"
- **Product Leadership:** "Best Product"
- **Customer Intimacy:** "Best Solution"

Each of these value propositions requires different types of processes, skills, behaviors, values, and structures. Additionally, each requires a different set of performance measures and subsequently a performance management program that reinforces the kinds of behaviors required to realize the value proposition. It is critical to first understand the strategic intent of CSB to create the most effective human performance architecture.

Over the past few months, the CSB Core Team defined the strategic objectives and guiding principles for the CSB effort, providing insight into the value proposition of CSB. While all value propositions are important to the success of CSB, emerging from the work completed by the Core Team was a value proposition most closely related to Operational Excellence. This is evident in the vision of CSB:

***To improve the management of student aid obligations through efficient use of timely and accurate information, common functions, and shared data.***



Words such as *efficient*, *common*, and *shared* articulate the desire for a CSB that is operationally efficient. Customer Intimacy is also evident as described by *timely and accurate information*. However, the overarching aspiration for CSB is operational efficiency.

Further, the intent of CSB, as outlined in the Project Charter, demonstrates the goal to be operationally efficient, as well as the secondary intent of improved services for borrowers:

- **Eliminate redundancy** of common functions within Student Credit Management
- Increase return on IT investments by ensuring that software development and maintenance projects are **planned and executed in an effective, efficient, and coordinated manner**
- Establish a **consistent view** of customer and portfolio
- **Improve speed and consistency** of processing
- **Improve satisfaction level** of clients from delivering the **right business results** the **right way**
- **Reduce data hand-offs** between systems
- **Provide consistent communications** to borrowers and other entities through Websites, data, and correspondence.
- Increase **automation** of Student Credit Management functions
- **Common Access** to **shared information**
- Solid **risk management** plan
- **Flexibility** to accommodate portfolio growth and requirements

The CSB Core Team also identified five strategic objectives which focus on becoming operationally efficient, improving the management of the portfolio and modernizing/integrating systems. The CSB strategic objectives are as follows:

- **Optimize Portfolio Management** – Management of the risk associated with student aid obligations
- **Integration of Systems and Data** – Ensuring data integrity for a clean audit and improve consistency of data across systems
- **Realize Operational Efficiencies** – Generating costs savings and removing redundancies
- **Improved Tools for Servicing Borrowers** – Removing duplicated communications among programs, sharing tools for delinquency and keeping the borrower “whole”
- **Create Adaptability and Flexibility in the Systems** – Allowing systems to be able to respond to changing mandates and requirements in an expedited and smoother fashion

## 2.4 Defining Key Questions

Addressing key questions throughout the design process is instrumental to any Human Performance Architecture initiative. Key questions frame the overall picture of the Human Performance Architecture. Sections 2 through 4 will provide answers to the following questions:

- What are the desired values and behaviors of CSB?
- How should the organization be structured?
  - Process
  - Function



- Product
- Customer segment
- Geography
- Will the organization be:
  - Centralized or decentralized?
  - Strict hierarchy or flexible?
  - Vertical or flat?
  - Low degree or high degree of coordination?
- What are the key skills are required for CSB?

**2.5 Developing Operational and Design Principles**

Operating principles help to ensure that development and implementation activities are coordinated and aligned to a common goal. Operating principles serve as part of the decision criteria that guide the development and implementation of the Human Performance Architecture. The operating principles serve as the overall roadmap of Student Credit Management’s change journey toward meeting strategic objectives. Previously, as depicted in Table 2, the CSB Core Team defined the guiding principles.

**Table 2 - Strategic Objectives and Guiding Principles/Decision Criteria**

CSB Strategic Objective	Associated Guiding Principles
Optimize Portfolio Management	<input type="checkbox"/> Identify and monitor cross-portfolio attributes impacting risk <input type="checkbox"/> Be able to <i>inform</i> public policy with a total view <input type="checkbox"/> Clean audits/High Risk List removal
Integrate of Systems and Data	<input type="checkbox"/> Natural progression of Consistent Answers/CRM4FSA <input type="checkbox"/> Optimize use of common data structures
Realize Operational Efficiencies	<input type="checkbox"/> Performance measures in place – assessed, managed, effective (an evolutionary process) <input type="checkbox"/> Cost savings <input type="checkbox"/> Better results → VALUE (better return on \$ invested)
Improved Tools for Servicing Borrowers	<input type="checkbox"/> Anticipate customer needs <input type="checkbox"/> Easy to understand information <input type="checkbox"/> Provide correct answers
Create Adaptability and Flexibility in the Systems	<input type="checkbox"/> Be able to handle <i>any</i> type of student aid obligation

**2.6 Human Performance Architecture Summary**

Understanding the strategic intent, defining key questions, and developing operating principles are the first steps in designing the appropriate human performance architecture. The three components of the human performance architecture (culture, organization, and competency) must be collectively



addressed. First, the culture architecture must be examined, including the inherent values and norms of the CSB organization.

### 3 Culture Architecture

The Culture Architecture describes actions, artifacts, and values for the CSB organization. In this section, a high level definition of culture is provided, the current FSA culture is presented and evaluated, and the SCM culture is further defined. Additionally, specific culture elements and attributes are described and the necessary actions to implement culture change are outlined.

#### 3.1 Definition of Culture

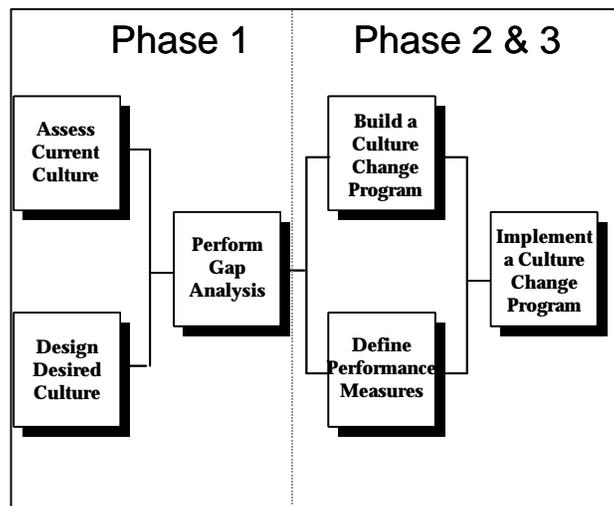
Culture is defined as a set of beliefs, behaviors, and assumptions that are attained over a period of time by an organization. Beliefs, behaviors, and assumptions drive the work habits of the individuals within an organization. These elements in turn affect business performance that lies at the heart of an organization's culture. The members of an organization have a cohesive relationship that defines their way of thinking, feeling, and reacting. A well-defined culture provides an organization with motivated people, satisfied customers, and balanced growth.

#### 3.2 Approach for Culture Architecture

As depicted in Figure 5, the approach for designing and implementing the culture architecture includes the following activities:

- **Phase 1:** Assess the Current Culture, Design Desired Culture, and Perform Gap Analysis
- **Phases 2 & 3:** Build a Culture Change Program, Define Performance Measures, and Implement a Culture Change Program

Figure 5: Culture Architecture Approach



#### 3.3 Today's Culture

Traditionally, federal government agencies are characterized as being bureaucratic, hierarchical in decision-making, and focused on policy and regulation. As a government agency, the Department of



Education and subsequently the Office of Federal Student Aid (FSA) are inherently aligned to these characteristics given the nature of their business.

FSA was established as a Performance Based Organization in October 1998. One of the tenets of becoming a Performance Based Organization was a dramatic shift in the culture of the organization, moving from risk averse to risk taking and focusing on exceeding customer expectations by replicating many of the private sector's best practices. Additionally, FSA was given flexibility from federal acquisition and human resources regulations in exchange for greater accountability against specific performance goals (reduced unit cost, improved customer, and employee satisfaction). Since 1998, the culture of FSA has gradually shifted away from the culture often associated with federal agencies.

Student Credit Management's current culture is driven by multiple systems and multiple contracts resulting in a "stovepiped" organization and cultural mentality. In fact, CSB is an effort to create contract and process efficiencies enabling the ability to transform to a performance based culture. In Phase 1, the current culture will be assessed along the following cultural dimensions:

- Decision making
- Teamwork
- Organizational alignment
- Communication/information dissemination
- Accountability/responsibility
- Service delivery
- Change orientation
- Goal alignment
- Relationships
- Customer service philosophy

### **3.4 Future Culture**

Ultimately, the CSB culture forges a common bond between Student Credit Management's processes, structure, and people. Shaped by the CSB Vision, Strategic Objectives, and Guiding Principles, the future culture revolves around an organization that is defined by the following elements:

- Team oriented
- Process focused
- Bound by consistency
- Empowered people

During Phase 1, the desired culture will be designed. The end result will be a roadmap that outlines potential beliefs, behaviors, and assumptions for CSB.

#### **3.4.1 Benefits of Future Culture**

The future culture of CSB provides numerous benefits to SCM. Although the alignment to the future culture will not instantly occur, SCM will gradually be able to visibly identify changes in the beliefs, behaviors, and assumptions of the individuals that make up SCM. As a result of adopting the CSB future culture, the following benefits will be observed:

- Increased Operational Efficiency (e.g., process and contract efficiencies)
- Enhanced Organizational Performance (e.g., holistic view of customer versus stovepiped view)
- Increased Customer-Oriented Focus (e.g., anticipation of customer needs versus reactive)



## 4 Organization Architecture

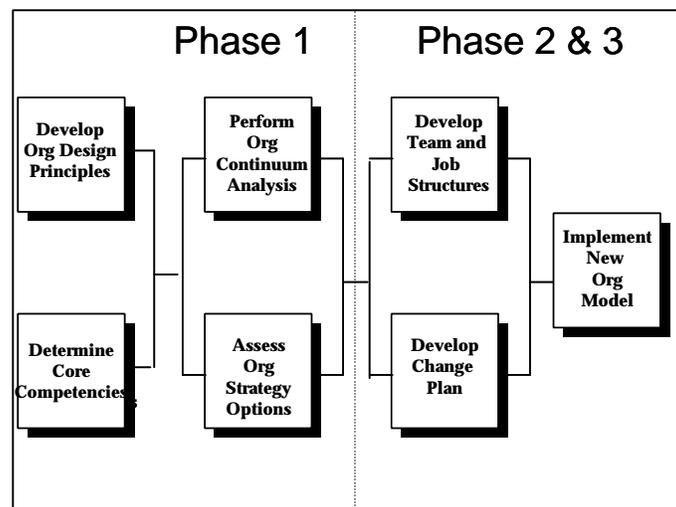
The Organization Architecture describes the key elements and strategy for the CSB organization. In this section, organization design principles are described, multiple alternatives for the CSB organization are presented and evaluated, and a CSB organization design/structure is recommended. In addition, an organization strategy is recommended and a phased approach for organization transformation is outlined.

### 4.1 Approach for Organization Architecture

As depicted in Figure 6, the approach for designing and implementing the organization architecture includes the following activities:

- **Phase 1:** Develop Organization Design Principles, Determine Core Competencies, Assess Organization Strategy Options, and Implement Tactical Organization Changes
- **Phases 2 & 3:** Develop Team and Job Structures, Develop Change Plan, and Implement New Organizational Model

**Figure 6: Organization Architecture Approach**



### 4.2 Develop Organization Design Principles

Organization design principles are specific to a business unit/functional area and drive organization designs (e.g., vertical vs. horizontal, decision making, roles, teams vs. individuals), whereas the guiding principles previously discussed answer the key values that establish the boundaries and focus areas for the entire organization. Listed below are some example design principles that may have application to CSB:

- Design roles to meet strategic business needs
- Most core processes will be outsourced
- Share information
- Fewer sites in action
- Proactive manner of operating
- Be able to handle any type of student aid obligation



- Create standard policies and procedures
- Ensure employees have tools and resources to meet customer needs
- Align team/individual responsibility, accountability, and authority
- Focus on quality customer service and productivity
- Build a cost-effective and flexible organization that can grow into the future (facilitate for today, but create for tomorrow)
- Create jobs that “people want to do”

During Phase 1, these organization design principles will be expanded upon by the SCM leadership and will drive the organization design.

By understanding the strategic intent and defining organization design principles, Student Credit Management leadership is able to objectively evaluate organizational strategy/structure alternatives. Prior to assessing organization strategy options, organizational continuums should be examined.

### **4.3 Performing Organizational Continuum Analysis**

Organizational continuums are tools to assess the organization’s current and target states during the initial stages of design. Current and target states are identified along the following continuums:

- **Dispersion:** Centralized versus decentralized
- **Structure:** Vertical versus flat
- **Control and Standardization:** Strict hierarchy versus flexible
- **Decision-Making:** Controlled decisions versus empowered decisions
- **Information Sharing:** Information as power versus Information is shared

#### 4.3.1 Dispersion

The dispersion continuum analyzes autonomy at various levels within CSB. It identifies how resources are organized and where they are located.

On one end of the continuum there is **Centralized** with the characteristics of:

- High degree of standardization
- High need for consistency
- Economies of scale realized

On the other end of the spectrum is **Decentralized** with the characteristics of:

- Offers are tailored to local needs
- High degree of standardization not required
- Economies of scale not a requirement
- Focus on market – local knowledge required

#### 4.3.2 Structure

The structure continuum describes how resources are arranged to form an organization. It addresses the depth and breadth of the CSB organization.

On one end of the continuum there is **Vertical** with the characteristics of:



- Very clear chain of command and reporting relationships
- Final decision making authority resides at the top of the organization
- Vertical growth opportunities

On the other end of the spectrum is **Flat** with the characteristics of:

- Customer issues handled individually (low standardization)
- Empowerment
- Horizontal job/people growth opportunities

#### 4.3.3 Control and Standardization

The control and standardization continuum describes the hierarchy of an organization.

On one end of the continuum there is **strict hierarchy** with the characteristics of:

- High degree of control
- High degree of standardization
- Typical structure of large companies

On the other end of the spectrum is **flexible** with the characteristics of:

- Flexible
- Adaptive
- High level of empowerment
- Typical structure of small companies

#### 4.3.4 Decision-making

The decision-making continuum describes how and where the organization provides accountability for decisions.

On one end of the continuum there are **controlled decisions** with the characteristics of:

- Decisions are made at the top
- Decision making is autocratic

On the other end of the spectrum are **empowered decisions** with the characteristics of:

- Decision making is participatory with input and involvement from employees
- Decision making is consensus driven

#### 4.3.5 Information

The information continuum describes the manner in which information is or is not shared.

On one end of the continuum there is **information is power** with the characteristics of:

- Information is not shared

On the other end of the spectrum is **information is shared** with the characteristics of:

- Information is widely shared



During Phase 1, these organizational continuums will be examined to determine where SCM currently exists on the continuums and where the desired position is on the continuums. Through this examination of organization continuums, insight will be provided as to the appropriate organizational strategy.

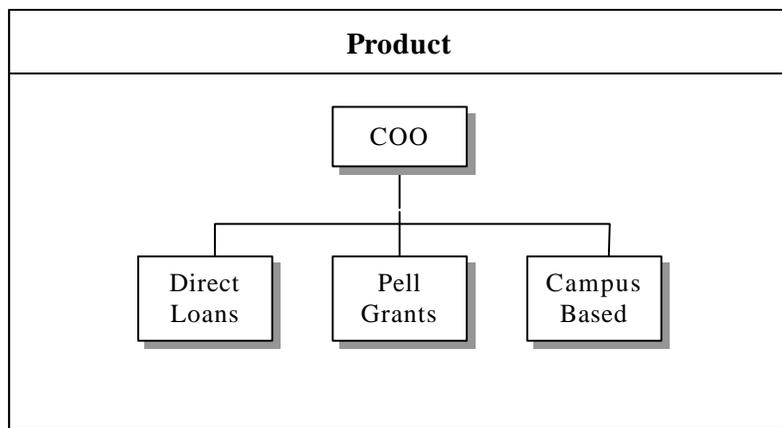
#### 4.4 Assess Organization Strategy Options

The organization strategy for CSB is driven by the strategic intent, guiding and design principles and location on the organizational continuums. During Phase 1, SCM will explore organization design options to determine the organization strategy that will best enable the CSB initiative to realize its goals. Listed below are three generic organization strategies along with advantages and disadvantages of each.

##### 4.4.1 Organization Design Option 1 – Product Focused

A product-focused organization is structured around the products delivered by the company. Companies that want to be product innovators by understanding customer trends and needs and delivering new products to the market first benefit from this organization strategy. These are companies that want to be product leaders.

**Figure 7: Illustrative Product Based Organizations**



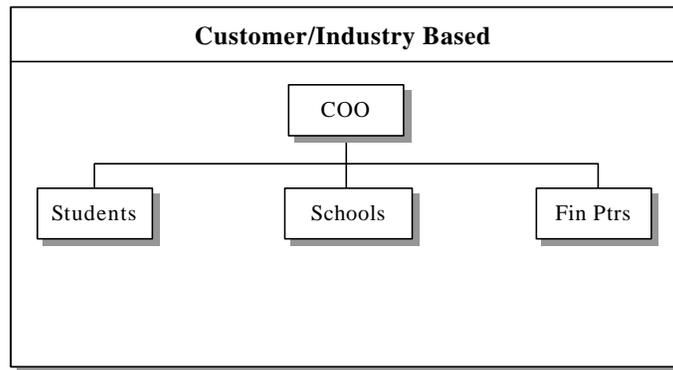
- Advantages
  - Enables organization to measure and monitor productivity more easily
  - Allows for product cost tracking
  - Can promote more of a customer-focus
- Disadvantages
  - Multiple points of contacts if customer needs multiple products
  - Creates more cost
  - Promotes duplication of business activities

##### 4.4.2 Organization Design Option 2 – Market Segmentation (Customer Focus)

Market segmentation organizations put the customer first, thus adopt an organizational strategy that is structured around their market segments.



**Figure 8: Illustrative Customer Based Organization**

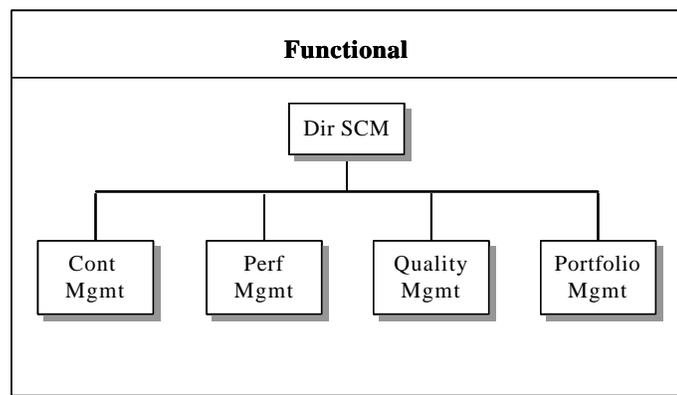


- Advantages
  - Increases customer focus
  - Creates one-stop shopping for customers
  - Increases ability to track costs by customer segment
- Disadvantages of this structure
  - Creates duplication of business activities
  - Increases costs

#### 4.4.3 Organization Design Option 3 – Functional

Functional organizations can be found in small companies or divisions or larger companies. Functional organization designs are most useful when the company has common/similar products and a few channels of distribution.

**Figure 9: Illustrative Functional Organization**



- Advantages
  - Elimination of organizational “silos”
  - Complements centralized control
  - Encourages consistent standards
  - Expedites information flow
  - Creates efficiencies through economies of scale
  - Clarity of roles and relationships



- Disadvantages
  - Requires change in culture
  - Requires rethinking of traditional career paths

## 5 Competency Architecture

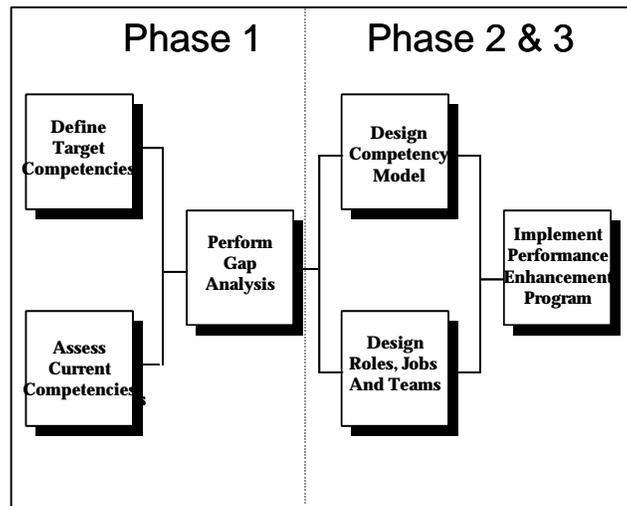
The Competency Architecture describes how to structure, manage, and develop workforce skills, behaviors, and knowledge across business capabilities in order to execute the organization’s strategy. In this section, organizational competencies for CSB are defined and described. Additionally, the relationship between the competencies is explored.

### 5.1 Competency Architecture Approach

As depicted in Figure 10, the approach for developing the competency architecture includes the following activities:

- **Phase 1:** Define target organizational competencies, assess current competencies, and perform gap analysis
- **Phases 2 & 3:** Design competency model, design roles, jobs and teams, and implement performance enhancement program

**Figure 10: Competency Architecture Approach**



### 5.2 Competency Definition – Target Organizational Competencies

Competencies are defined as the knowledge, skills, and abilities that an organization’s people must possess to perform business capabilities effectively. Competencies support an organization’s business strategies and guiding principles. The Strategic Objectives and Guiding principles of CSB work cohesively to help define the competencies of SCM and these elements will help SCM realize significant business benefits from investing the time and effort to define and manage workforce competencies.

The competencies outlined below are tied to the Business Capabilities that shape CSB. Skills and behaviors associated with each competency will be described in further detail.



### 5.2.1 Risk Management

Risk Management involves the management and recovery of outstanding balances in the portfolio. The specific behaviors and skills needed to ensure that this business capability is fulfilled are the following:

- Applying and understand the value of risk modeling to prevent and reduce defaults
- Designing risk models that provide data for analysis on performance of the FSA loan portfolio
- Preparing results of analysis for use by SCM and FSA senior management
- Performing trending analysis to identify high risk attributes of borrowers
- Conducting action planning to determine steps that can be taken to prevent and reduce the number of delinquencies and defaults

### 5.2.2 Performance Management

Performance Management involves the identification, selection, and oversight of outsourcing partners. This capability also intends to establish strategic priorities, inform operational decision-making, and provide continuous improvement. The specific behaviors and skills needed to ensure that this business capability is fulfilled are the following:

- Applying contract management techniques in accordance with federal and departmental contract management concepts, regulations, and procedures to align all Student Channel contracted activities with FSA's contract management vision
- Developing, maintaining, and strengthening relationships with contractors and vendors by communicating and promoting FSA's goals and objectives
- Developing, managing, and monitoring memoranda of understanding with vendors and third party providers to expedite contract management processes
- Partnering with vendors to track and lower operating costs associated with Students Channel technology and processes.
- Managing contract progress by monitoring vendor/contractor adherence to contract standards, requirements, and expected outcomes
- Developing continuous improvement plans based on quality assurance and monitoring of performance
- Managing human resources to ensure that the right people with the right skills are in the right jobs
- Participating in the strategic planning process and identifying measures of success

### 5.2.3 Data Management

Data Management involves the visibility and sharing of portfolio data. This function is primarily outsourced so the majority of skills and behaviors required for this capability are associated with the contractor workforce. Thus, the primary FSA skills and behaviors associated with data management are located in the performance management capability. Some suggested behaviors and skills needed specifically related to the FSA workforce and this business capability is fulfilled are as follows:

- Ensuring that standard and ad-hoc reports meet the needs of Student Credit Management leadership



- Serving as system security officer to ensure that all systems associated with CSB meet Federal, Departmental and FSA security standards

#### 5.2.4 Transaction Processing

Transaction Processing involves the back office processing of the portfolio. This function is primarily outsourced so skills and behaviors associated with this capability are associated with the contractor workforce. Thus, the FSA skills and behaviors associated with transaction processing are located in the performance management capability.

#### 5.2.5 Information Fulfillment

Information Fulfillment involves the delivery of products, tools, and information to borrowers in the portfolio. This function is primarily outsourced so the majority of skills and behaviors required for this capability are associated with the contractor workforce. Thus, the primary FSA skills and behaviors associated with information fulfillment are located in the performance management capability. Some suggested behaviors and skills needed specifically related to the FSA workforce and this business capability is fulfilled are as follows:

- Responding to control mail in an accurate and timely manner
- Providing consistent, accurate, and timely answers to borrowers' queries through various mediums including letters, emails, and telephone calls
- Conducting outreach to borrowers through phone calls, emails, and letters

During Phase 1, the target organizational competencies will be further detailed to validate the organizational competencies and identify skills and behaviors associated with each competency. Additionally, the current organizational competencies will be assessed to determine the gap between the current and target competencies.

## 6 Process Architecture

The Process Architecture defines the processes that will be needed to support the capabilities within the Student Credit Management (SCM) business architecture. The operating model for SCM contains operational capabilities, management and oversight capabilities, and enabling capabilities. The processes that support the operations and management and oversight are outlined below.

### 6.1 Process Definition

The Process Definition provides a picture of each process to be further detailed in the Delivery Phase. The definition includes a description, schematic, business events, activities, inputs/outputs, performance objectives and measures, and any other factors that significantly affect the process. The Process Definition also describes any existing capabilities that are related to the defined process.

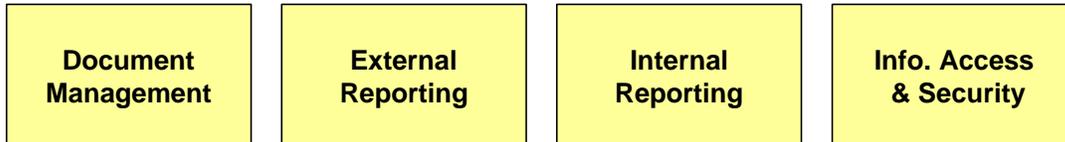


### 6.1.1 Manage Data

#### Description

This process provides visibility to essential program data, as well as a vehicle for the sharing and reporting of this data.

#### Schematic



#### Business Events and Activities

- Image, Store and Retrieve Documents
- Process Incoming Mail
- Generate Ad Hoc Reports
- Generate Regular Scheduled Reports
- Distribute Reports internally and externally
- Set-up new users to access information (data and documentation)
- Maintenance of user profiles for access to information

#### Inputs / Outputs

##### Inputs

- Ad Hoc Report Request
- System Trigger for Report
- Incoming Mail/New Document
- Document Request
- System User update request

##### Outputs

- Ad Hoc Report
- System-generated Report
- New Stored Document

#### Performance

##### Objectives (potential)

- Timely receipt of reports (both ad hoc and system-generated)

##### Measures (potential)

- % Report Delivery Date = promise date

#### Existing Capability



Data Management and Maintenance is currently performed by the Servicing, Consolidation and DMCS systems. All systems contain their own imaging, document management, and reporting products and functions.

### Other Factors

#### *Policies*

- Security requirements for personnel access to data, reports, and documentation (ex: images)
- Retention policies for customer data

#### *Risks*

- Any risks associated with this process will be identified and defined during the Requirements and Design phase

#### *Constraints*

- Capacity and time constraints associated with utilizing the Credit Management Data Mart (CMDM) for the storage of and reporting on Servicing and Collections data

#### *Value*

- Implementing Data Management as a business capability and process that crosses all of Student Credit Management will provide FSA leadership the ability to have a holistic view of their portfolio

## 6.1.2 Process Transactions

### Description

This process represents the back-office transactions that are executed against the portfolio.

### Schematic



### Business Events and Activities

- Consolidate Loans
- Perform Credit Checks
- Process Payments
- Process Refunds



- Process Overpayments/Underpayments
- Update FMS
- Update FMSS/GAPS
- Perform Reconciliation
- Book Loans
- Update Borrower Demographic Information
- Process Adjustments and Cancellations
- Process Deferments and Forbearances
- Process Discharges
- ICR Processing
- Select Repayment Plans
- Select Billing and Payment Methods

### **Inputs / Outputs**

#### *Inputs*

- Consolidation Application
- Discharge Application
- Deferment Application
- Forbearance Application
- Borrower Payment

#### *Outputs*

- New Loan
- Subsequent Disbursement
- Approved Deferment
- Approved Forbearance
- Discharged Loan

### **Performance**

#### *Objectives (potential)*

- Improved turnaround on transaction processing

#### *Measures (potential)*

- Specific measures per transaction (booking, consolidation, discharge, deferment, forbearance, etc.)

### **Existing Capability**

Each of the SCM systems (Servicing, Consolidation, DMCS) has its own back-end system responsible for all online and batch transaction processing



## Other Factors

### *Policies*

- OMB form approval
- Reauthorization
- New Legislation, Policies, Regulations, Requirements

### *Risks*

- Any risks associated with this process will be identified and defined during the Requirements and Design phase

### *Constraints*

- Any constraints to this process will be identified and defined during the Requirements and Design phase

### *Value*

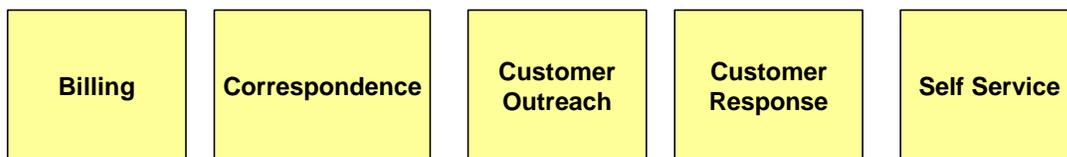
- The goal of the Transaction Processing capability is to reduce the amount of manual processing required to maintain accounts within the portfolio

## 6.1.3 Fulfill Information

### **Description**

This process represents the delivery of products, tools and information to borrowers in the portfolio and other FSA customers.

### **Schematic**



### **Business Events and Activities**

- Calculate monthly payment amount
- Generate and Mail/email bills
- Generate and Mail/email Account Statements (ex: annual statement, 1098-E, 1099-C)
- Generate and Mail/email Letters
- Respond to customer inquiries and issues
- Borrower Self-Service activities



## **Inputs / Outputs**

### *Inputs*

- Phone call from borrower
- Correspondence from borrower
- Borrower issue
- Internet transactions/requests
- Initiation of cohort appeal

### *Outputs*

- Congressional Response
- Resolved (escalated) issue
- Bill to borrower
- Statement to borrower
- Correspondence to borrower
- Phone call to borrower
- Cohort default information to schools

## **Performance**

### *Objectives (potential)*

- Swift response to borrower issues (congressionals, escalated issues)

### *Measures (potential)*

- Turnaround time from receipt of issue to customer response...For example, turnaround on issue response no greater than 5 working days

## **Existing Capability**

Each of the SCM systems (Servicing, Consolidation, DMCS) has its own products and contractors responsible for information fulfillment to borrowers. There are three (3) different web sites operated and maintained by the SCM organizations. In addition, there are nine (9) different fulfillment centers responsible for the printing and mailing of all SCM correspondence.

## **Other Factors**

### *Policies*

- Guidance for response to Congressionals/Control Mail

### *Risks*

- Any risks associated with this process will be identified and defined during the Requirements and Design phase.

### *Constraints*

- Any constraints to this process will be identified and defined during the Requirements and Design phase.



*Value*

- The goal of the Information Fulfillment capability is to deliver the right answer to the right customer at the right time.

#### 6.1.4 Manage Performance

##### **Description**

This process promotes the establishing of priorities, the informing of operational decision-making and continuous improvement. This process also encompasses the identification, selection and oversight of outsourcing partners.

##### **Schematic**



##### **Business Events and Activities**

- Train employees
- Employee feedback
- Knowledge management
- Issue Statements of Work and Requests for Proposal
- Establish contracts and interagency agreements
- Monitor contract performance
- Create Program Plans
- Create success criteria for change initiatives
- Appropriately segment borrowers across SCM portfolio
- Implement quality assurance procedures

##### **Inputs / Outputs**

###### *Inputs*

- New Legislation, Policy, Directives, Requirements
- Invoices

###### *Outputs*

- Statements of Work (SOWs)/Requests For Proposal (RFPs)
- Strategic Program Plan
- Awarded Contracts
- Employee Training
- Employee Evaluations
- Operating Partner (Contractor) Evaluations/Satisfaction Surveys
- Vendor and Interagency Agreements



## Performance

### *Objectives (potential)*

- All performance-based contracts

### *Measures (potential)*

- Payments based upon results (specific to the agreement, function, contract, etc.)

## Existing Capability

The Repayment, Consolidation, and Collections organizations all currently perform and/or manage various activities associated with FSA personnel, Contractors, and Quality Assurance.

## Other Factors

### *Policies*

- Legislation, Reauthorization, etc.

### *Risks*

- Any risks associated with this process will be identified and defined during the Requirements and Design phase

### *Constraints*

- Any policies surrounding the acquisition and management of operating partners, contractors, and/or vendors

### *Value*

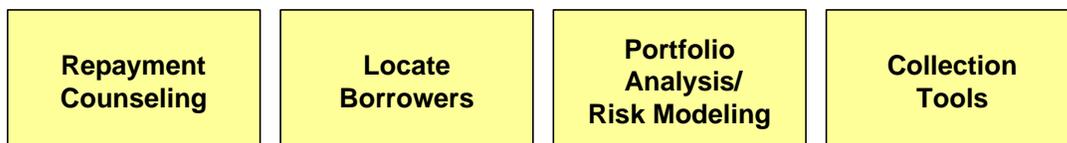
- The performance management process empowers SCM to focus upon their core management and oversight responsibilities. Through performance management, SCM will better be able to link the performance of their strategic plan, employees, operating partners, contractors, vendors, and quality control activities to the budget allocated to each.

## 6.1.5 Manage Risk

### Description

This process provides the ability to have a holistic view of the SCM portfolio, as well as a strategy for the collection and recovery of outstanding balances.

### Schematic





## **Business Events and Activities**

- Counsel Borrowers (Exit, Entrance, Grace)
- Perform Due Diligence on Past Due Borrowers (Delinquent, Default)
- Skip Trace borrowers with bad addresses or returned mail
- Extract and Analyze Data on Borrowers
- Create action plans to manage the risk associated with student aid obligations
- Utilize regulated collection tools
- Transfer borrower accounts to other entities to assist with Collections

## **Inputs / Outputs**

### *Inputs*

- Borrower Demographics
- Borrower Repayment Selections
- Returned Mail postcards from USPS

### *Outputs*

- Skip Trace requests
- High Risk borrower attributes
- Disclosures
- Exit Counseling Packages/Kits
- Action Plans to reduce delinquency and avert default

## **Performance**

### *Objectives (potential)*

- To receive a clean audit
- Removal from the “High Risk” list

### *Measures (potential)*

- Same as above objectives

## **Existing Capability**

Although both Collections and Servicing attempt to manage risk through their due diligence efforts, loan counseling initiatives, and utilization of collection tools, no formal risk management plan is in place for Student Credit Management.

## **Other Factors**

### *Policies*

- Due diligence requirements
- Guidelines and regulations for use of the NDNH, IRS, USPS, Credit Bureaus, Federal Collection Tools, AWG



*Risks*

- Inability to recover student aid obligations

*Constraints*

- Unable to deny borrowers federal student aid despite demonstration of “high risk” attributes

*Value*

- Ability to create and execute a Risk Management Plan for the Student Credit Management portfolio

## **6.2 Process Relationship Diagram**

The Process Relationship Diagram shows the interaction between processes within the business architecture. The processes, specifically the business capabilities, which make up the business architecture of SCM, demonstrate all of the core functionality of the Repayment, Consolidation, and Collections organizations. The functional requirements of SCM are complex and far reaching. They represent the numerous business events and information occurring, generated, and shared throughout SCM. The following picture depicts the core capabilities of the SCM organization.

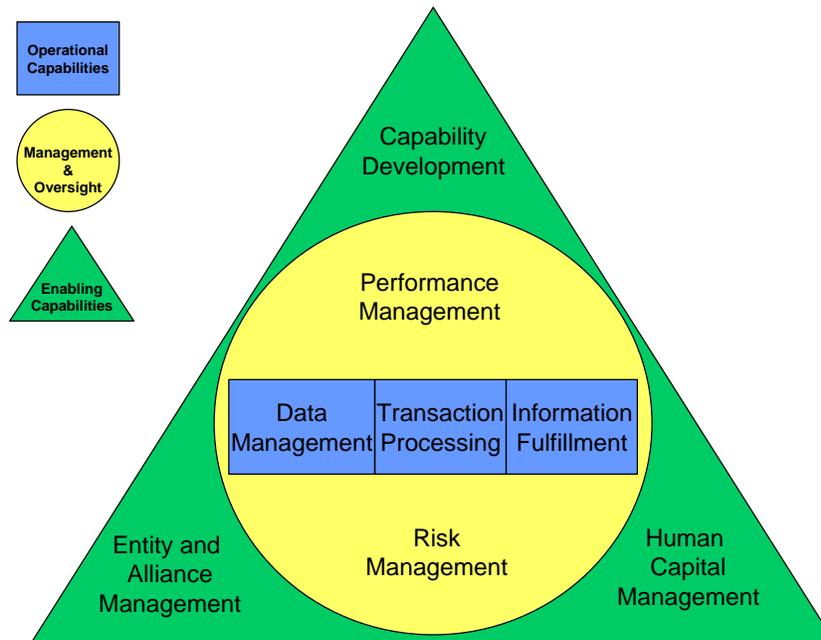
### **6.2.1 Business Capabilities and the Operating Model**

The core capabilities together create the operating model for Common Services for Borrowers (CSB) and SCM. The eight (8) core capabilities fall into three (3) major categories, representing the core people, process, and technology responsibilities of SCM personnel. The categories of capabilities are as follows:

- **Operational Capabilities**
  - *Definition*
    - Capabilities that support the system processing and infrastructure
  - *SCM Capabilities*
    - Data Management, Transaction Processing, Information Fulfillment



**Figure 11: Business and Capabilities Operating Model**



- **Management & Oversight**
  - *Definition*
    - Capabilities that support the supervision, accountability, portfolio, and planning requirements
  - *SCM Capabilities*
    - Performance Management, Risk Management
- **Enabling Capabilities**
  - *Definition*
    - Capabilities that make possible the development and maintenance of other capabilities
  - *SCM Capabilities*
    - Human Capital Management, Capability Development, Entity and Alliance Management

### 6.2.2 Functional Requirements

The *Operational* and *Management & Oversight* business capabilities both consist of a distinct set of functional requirements. The requirements represent the activities and processes that must be executed in support of the capability. The requirements support the operating objectives of CSB and SCM. The requirements, at a high level, reflect the interactions and dependencies between the different business capabilities.



The following diagram demonstrates the functional requirements of each of the business capabilities.

**Figure 12: Functional Requirements for Each Business Capability**

Common Services for Borrowers (CSB) Capabilities and Functional Requirements							
Operational Capabilities			Management & Oversight		Enabling Capabilities		
Data Management	Transaction Processing	Information Fulfillment	Performance Management	Risk Management	Human Capital Management	Capability Development	Entity and Alliance Management
Document Management	Consolidate Loans	Billing	Resource Management	Repayment Counseling	<i>Tools that can be leveraged to meet the CSB functional requirements</i>		
External Reporting	Receive and Process Payments	Correspondence	Contract Management	Locate Borrowers			
Internal Reporting	Funds Processing	Customer Outreach	Future Planning/Visioning	Portfolio Analysis/Risk Modeling			
Information Access & Security	Account Set-up and Maintenance	Customer Response	Portfolio Management	Collection Tools			
	Process Forms	Self-Service	Quality				



## 7 Application Software Architecture

The Application Software Architecture describes the technical components of the CSB Business Architecture. The following sections encompass the components of the Application Software Architecture:

- **Subject Area Data Model** – Defines the common vocabulary, particularly within the data, to be used across CSB
- **User Types** – Describes segments of users and characteristics associated with each segment
- **Application/Data Distribution Approach** – Describes where applications are run, where development, execution and operation environments are needed, and where data will be stored, accessed and maintained
- **Application Software Definition** – Outlines high level requirements; provides a graphical representation of the functional aspects of each opportunity as well as a data and process distribution approach; identifies cost drivers for each opportunity; and details the assumptions used associated with each opportunity that were used to drive to solutions

The Application/Data Distribution Approach and Application Software Definition are organized around the key opportunities to be implemented during Phase 1. Detailed information is provided for Phase 1 with higher-level information provided for future phases.

At the end of this Application Software Architecture section phase work definitions are provided for opportunities that do not have a technical component.

### 7.1 Subject Area Data Model

This section describes the key information that is shared across the entire business architecture.



## 7.1.1 Entity Attributes

Figure 13 - Entity Attributes

<b>Person (Borrower, Student, Spouse, Parent)</b> <b>Person Basic Information</b> SSN Name Drivers License Mailing Address State of Residence Phone (Home, Work, Cell, other) Email Address (Added to Defaulted borrowers) Date of Birth/Age Marital Information	<b>Enrollment</b> Student SSN (link to Person/Student) School OPE ID (link to School) Attendance Dates Attendance (FT/PT/NA) Degree Pursued Grade Level High School Graduate (Y/N) Aid Request Information (Grants/Loans/WS) Anticipated Date of Graduation Student Enrollment Status Enrollment Effective Date	<b>Direct Loan</b> <b>Award Basic Information</b> Award Year Award ID Award Type Award Amount Award Creation Date Origination Fee Interest Rebate % P-Note Indicator <b>Award Eligibility Information</b> Loan Default/Grant Overpmt Indicator <b>Disbursement (for Award)</b> Disbursement Number Disbursement Sequence Number Disbursement Date Disbursement Amount Payment Trigger Flag <b>Adjustment (to Disbursement)</b> Adjustment Number Adjustment Date Adjustment Amount	<b>Direct Loan (continued)</b> <b>Loan Status &amp; Balances</b> Loan Status (Repay, Delinquent, Default) Principle Outstanding Interest Outstanding Total Disbursed Total Payments Made Number of Payments Made Date of Last Payment <b>Delinquency</b> Number Days Delinquent Notification Sent Y/N Notification Date <b>Defaulted</b> Number Days in Default Notification Sent Y/N Notification Date Default Status Date <b>Loan Certification</b> Payoff Principle Payoff Interest Payoff Collection Costs Payoff Date <b>DL Payment</b> Payment ID Payment Date Payment Type Payment Amount Payment Applied to Principle Payment Applied to Interest <b>Partner Payments</b> Transaction ID Transaction Type (payment, refund) Partner Information Fund Code Transaction Date Transaction Amount	<b>FFEL Loan</b> <b>Loan Setup</b> FFEL Loan ID FFEL Loan Type FFEL Loan Date Principle Interest Rate Repayment Option Origination Fee Rate Origination Fee Type <b>Loan Status &amp; Balances</b> FFEL Loan Status Principle Outstanding Interest Outstanding Total Disbursed Total Payments Made Number of Payments Made Date of Last Payment <b>Defaulted/Assigned</b> Debt ID Number Days in Default Notification Sent Y/N Notification Date Debt Received Date Debt Current Balance Debt Interest Rate <b>Loan Certification</b> Payoff Principal Payoff Interest Payoff Collection Costs Payoff Date <b>Account Images</b> Image Date Image Type (Correspondence, Discharge, etc.) Image Status	
<b>NDNH Data Match</b> SSN Name Home Mailing Address Work Mailing Address AGI Days Delinquent	<b>CMDM</b> Direct Loan Servicing Demographics Direct Loan Servicing Financials Defaulted Borrower Demographics Defaulted Borrower Financials	<b>Risk Management Model</b> Portfolio Analysis CMDM Reports Performance Measures Action Plans	<b>Collection Agency (PCA)</b> <b>PCA Basic Information</b> PCA ID PCA Name PCA Address PCA Type PCA Phone <b>PCA Contact(s)</b> Contact ID Contact Type Contact Address Contact Name Contact Phone Contact Email	<b>Loan Consolidation Request (Application)</b> Application ID Application Received Date Borrower SSN Borrower Address Spouse SSN Application Type Application Status Loan ID(s) Loan Amount(s) Lender Name(s)	<b>System User Info</b> System UserID User Name User Type User Address User Phone



7.1.2 Entity Definitions

**Table 3 - Entity Definitions**

<b>Key Business Entity</b>	<b>Definitions</b>
PERSON (Borrower, Student, Spouse, Parent)	Person demographic information is maintained by Student Credit Management (SCM). This is being standardized to include e-mail addresses for defaulted loans and cell phone numbers for all loans.
NDNH DATA MATCH	The Health and Human Services (HHS) National Directory of New Hires (NDNH) can be used to locate borrowers who have defaulted and have an Adjusted Gross Income (AGI) of greater than \$16,000.
LOAN CONSOLIDATION REQUEST (Application)	DL and FFEL data during the Consolidation process, prior to Booking at Servicing (e.g. Balances, Interest Percentage, Rebate Percentage, etc.). Direct Loan-to-Direct Loan Consolidation refers to consolidation applications consisting solely of Direct underlying loans.
SYSTEM USER – School (Fin Aid Admin, servicer, etc.)	School User authentication and system privileges.
SYSTEM USER – Financial Partner (lender, servicer, GA, PCA)	Financial Partner authentication and system privileges.
SYSTEM USER – FSA workforce	FSA Workforce authentication and system privileges.
ENROLLMENT	Student enrollment data that is stored within SCM.
CMDM	The Credit Management Data Mart (CMDM) stores program information for non-defaulted Direct Loans. This will be expanded to account for all of Student Credit Management. The current data model consists of demographic information and the most recent 13 months of detailed financial data. Prior months can be accessed from archives. Current Credit Management Data Mart reports include Accounting, Repayment and Delinquency Statistics, Payment Allocation, Weekly Project Status Report, and others. New reports will be added as the data included in Credit Management Data Mart is expanded.
RISK MANAGEMENT MODEL	The Student Credit Management Risk Management Model includes selected trending models and metrics obtained from Credit Management Data Mart (CMDM) and other sources. Action Plans are established from the results of the model.
COLLECTION AGENCY	Collection Agency demographic data (e.g. PCA Id, Name, Type, Contacts).



Key Business Entity	Definitions
DIRECT LOAN	Student Credit Management maintains all Direct Loan data once a loan books to servicing (e.g. Disbursements, Payments, Status, Entitlements). Student Credit Management also maintains all images that are created once a loan books to servicing.
DL PAYMENT	Direct Loan Payment data during the repayment process, default process is maintained historically.
PARTNER PAYMENTS	Payments between Financial Partners and FSA, including both manual and electronic payments and an archived history.
FFEL LOAN	FFEL Loan data after loan is labeled as incurable, and it is assigned to the Department of Education. Student Credit Management maintains all data once the loan is transferred. Student Credit Management also maintains all images that are created after the loan is transferred.

## 7.2 User Types

This section identifies characteristics exhibited by the users of the application software.

**Table 4 - User Types**

Opportunity	User Group	Characteristics
Payment Processing	No User Group Changes in Phase 1	<ul style="list-style-type: none"> <li>N/A</li> </ul>
Legal Proceeding Resources	No User Group Changes in Phase 1	<ul style="list-style-type: none"> <li>N/A</li> </ul>
Correspondence	Correspondence Development	<ul style="list-style-type: none"> <li>Access needed to modify correspondence templates at fulfillment centers</li> </ul>
NDNH Data Match	Direct Loan Service Center Skip Trace	<ul style="list-style-type: none"> <li>Access granted to demographic updates received from NDNH for input into system of record</li> </ul>
	Collections Skip Trace	<ul style="list-style-type: none"> <li>Access granted to demographic updates received from NDNH for input into system of record</li> </ul>
Imaging	FSA Personnel	<ul style="list-style-type: none"> <li>Access granted to support escalated issues and quality control</li> </ul>
	Operating Partner Personnel	<ul style="list-style-type: none"> <li>Access granted for improved operations</li> </ul>
Central Contract Management	No User Group Changes in Phase 1	<ul style="list-style-type: none"> <li>N/A</li> </ul>



Opportunity	User Group	Characteristics
Capture Additional Borrower Information	Direct Loan Service Center	<ul style="list-style-type: none"> <li>Ability to update system of record with complete and accurate borrower demographic information</li> <li>Need to access complete and accurate borrower demographic information in order to properly service loans</li> </ul>
	Public Inquiry Contract	<ul style="list-style-type: none"> <li>Ability to update system of record with complete and accurate borrower demographic information</li> <li>Need to access complete and accurate borrower demographic information in order to collect outstanding debts</li> </ul>
	Private Collection Agencies	<ul style="list-style-type: none"> <li>Need to access complete and accurate borrower demographic information in order to collect outstanding debts</li> </ul>
Loan Consolidation	Direct Loan-to-Direct Loan Consolidation Team	<ul style="list-style-type: none"> <li>Part of the Direct Loan Servicing Center</li> <li>Receive and process phone Direct Loan-to-Direct Loan consolidation applications</li> <li>Receive and process paper Direct Loan-to-Direct Loan consolidation applications</li> <li>Interface with Loan Consolidation staff</li> <li>Respond to customer inquiry regarding Direct Loan-to-Direct Loan consolidation</li> </ul>
Share USPS Skip Tracing Services	No User Group Changes in Phase 1	<ul style="list-style-type: none"> <li>N/A</li> </ul>
Credit Management Data Mart Reporting Capabilities	Web Users	<ul style="list-style-type: none"> <li>Execute existing reports via the internet</li> </ul>
	Extended Web Users	<ul style="list-style-type: none"> <li>Execute existing reports via the internet</li> <li>Create new reports using existing data mart objects via the Internet (Web Based Ad-hoc Query Tool)</li> </ul>



Opportunity	User Group	Characteristics
	Power Users	<ul style="list-style-type: none"> <li>Execute existing reports via the internet</li> <li>Create new reports using existing data mart objects via the Internet (Web Based Ad-hoc Query Tool)</li> <li>Create new reports using new data mart objects via the Microstrategy Desktop Application</li> </ul>
Risk Management	SCM Management	<ul style="list-style-type: none"> <li>Need ability to access key reports and metrics</li> <li>Establish and execute action plans based on results of Risk Management Modeling</li> </ul>
Document Warehousing and Retention	No User Group Changes in Phase 1	<ul style="list-style-type: none"> <li>N/A</li> </ul>
Electronic Refunds	No User Group Changes in Phase 1	<ul style="list-style-type: none"> <li>N/A</li> </ul>
Bankruptcy Unit	No User Group Changes in Phase 1	<ul style="list-style-type: none"> <li>N/A</li> </ul>
Leverage GA Best Practices	No User Group Changes in Phase 1	<ul style="list-style-type: none"> <li>N/A</li> </ul>

### 7.3 Application/Data Distribution Approach

The Application and Data Distribution Approach provides a high level description of the placement of applications along with the data required to support the CSB Business Architecture. This information will be used as the foundation for a common approach for the delivery team to implement CSB solutions.

This section is organized around the opportunities identified and prioritized by the CSB Core Team. For each opportunity that has a Phase 1 component the following information will be highlighted:

- **For Phase 1:**
  - A **Phase Description** detailing the components of the particular phase
  - An **Application Distribution Approach** describing where the applications run and are managed and where the development, execution and operation environments are needed to support the opportunity
  - A **Data Distribution Approach** describes the locations where data will be stored, accessed, maintained and managed with respect to physical geography or organizational units within SCM
- **For Phases 2 and 3:**
  - A **Phase Description** detailing the components of the particular phase



The Application Distribution Approach and Data Distribution Approach outline the complexity involved in implementation of the Phase 1 opportunities.



### 7.3.1 Opportunity 1: Payment Processing

#### **Opportunity Description**

Through analysis of the current “as is” process flows for Repayment, Consolidation, and Collections during the initial stages of the CSB effort, the CSB team discovered that there is a need to realign and modify the current reimbursement practice for FDSL P Payment Center operations and maintenance (i.e., DLSS Deliverable 15 – Process Payments).

Modifications to the current reimbursement practice for FDSL P Payment Center operations and maintenance (i.e., DLSS Deliverable 15 – Process Payments) will result in FSA only being charged for a fixed percentage of payments that actually need manual intervention and/or special handling rather than for all payments regardless of whether manual intervention is necessary or not.

An analysis of the “as is” environment for Repayment focused on the current activities around processing payments. In order to reengineer the core business process to align with the strategic objectives, the Action Team for Financial Transactions examined process, contract efficiencies, and technology application. In the current environment, FSA reimburses the Direct Loan Payment Center contractor for manual payment processing based on the total volume of payments processed into the Direct Loan system of record. This practice does not take into account the fact that the lockbox contractor automatically processes the majority without manual intervention. In order to achieve transformation of the current environment where FSA, the Action Team recommended a restructuring of the pricing standard for the Direct Loan Payment Center. The pricing structure should be based on a fixed percentage of payments that actually need manual processing. This adjustment aligns with the strategic objective to realize operational efficiencies.

#### **Description of Existing Capability**

The current deliverable description for DLSS Deliverable 15 – Process Payments reads as follows:

“The contractor shall operate and maintain the Federal Direct Student Loan Program (FDSL P) Payment Center to process payments received from borrowers. This includes depositing payments to the Federal Reserve Bank, the processing of payments requiring special handling and the research of unidentified payments.”

The current unit definition is defined as one payment received.

Currently, only a small percentage of all payments currently processed need manual intervention by a Customer Service Representative (CSR) at the Direct Loan Servicing Center (DLSC). The remainder of all payments are processed automatically through the Bank of America lockbox and then batch processed overnight to post to the individual borrower accounts.

#### **Current Integration Partner Initiatives**

None Identified.



### **Phase 1**

#### 7.3.1.1.1 Phase Description

There is presently no identified technological component to this phase.

#### 7.3.1.1.2 To-Be Application Distribution

There is presently no identified technological component to this phase.

#### 7.3.1.1.3 To-Be Data Distribution

There is presently no identified technological component to this phase.

### **Phase 2**

#### 7.3.1.1.4 Phase Description

1. Integrate Servicing's current lockbox capabilities with new Collections lockbox capabilities to form a singular, Treasury – approved lockbox entity for both Servicing and Collections.

### **Phase 3**

#### 7.3.1.1.5 Phase Description

1. Integrate Exception Payment Processing into a single entity.



### 7.3.2 Opportunity 3: Correspondence

#### Opportunity Description

This opportunity explores using outside vendors and consolidation of services/functions of individual fulfillment centers into one coherent fulfillment strategy.

Phase work includes:

- Electronic fulfillment
- A Correspondence Business Partner – using Postal Service functions for fulfillment
- Consolidation of fulfillment centers
- Letter file merging (across systems) to maximize postage discount
- Build upon existing formats (ex: XSTREAM) to create a common letter format and/or common tool for creating letters.

#### Description of Existing Capability

Currently, the three (3) systems making up Student Credit Management (SCM) – Loan Consolidation, Loan Servicing, and Debt Collections – utilize nine (9) different fulfillment centers for their mailing needs.

#### Current Integration Partner Initiatives

This project may have implications on CRM4FSA.

#### Phase 1

##### 7.3.2.1.1 Phase Description

1. Utilize a Correspondence Business Partner for selected mailings either across all of SCM, or just within Loan Servicing.

##### 7.3.2.1.2 To-Be Application Distribution

**Table 5 - Correspondence To-Be Application Distribution Approach**

Program Application	Rockville, MD	DLSC (NY, CA)	Greenville, TX	Columbus, GA	Montgomery, AL	Meriden, CT
DLSS	Y - Legacy					
DMCS						Y
LO/LC						Y
CMDM						
COD						
DL Data Mart						
FMS						



7.3.2.1.3 To-Be Data Distribution

**Table 6 - Correspondence To-Be Data Distribution Approach**

Data Element	DLSS Rockville, MD	DLSC (NY, CA)	LO/LC Meriden, CT	DMCS Meriden, CT	CMDM Meriden, CT	COD Meriden, CT	DL Data Mart (Rockville, MD)	FMS Meriden, CT
DLSS – Fulfillment Data	Y							
DMCS – Fulfillment Data								Y
LO/LC – Fulfillment Data								Y

**Phase 2**

7.3.2.1.4 Phase Description

1. Transition additional mailings to a Correspondence Business Partner.
2. Utilize the Electronic Correspondence (EC) product within Direct Loan Servicing to mail eligible Loan consolidation and Debt Collections correspondence.
3. Reduce number of existing fulfillment centers by 1 or 2.
4. Analyze SCM correspondence to determine how look and feel can be standardized.

**Phase 3**

7.3.2.1.5 Phase Description

1. Implement a virtual fulfillment center, with a single vendor and X number of centers fulfilling all SCM correspondence.
2. Create and modify all SCM correspondence using a common letter generator.



### 7.3.3 Opportunity 4: National Directory of New Hires (NDNH) Data Match

#### **Opportunity Description**

FSA cannot receive payments on loans unless they are able to locate and communicate with each borrower. The ability to communicate with borrowers is paramount in preventing delinquencies and defaults.

Currently, Collections performs the National Directory of New Hires (NDNH) data match four times during the year for all of the borrowers in the Collections portfolio. Collections is allowed to use any information they receive for those borrowers that are defaulted and have an Adjusted Gross Income (AGI) of greater than \$16,000. This process is extremely successful for the Collections portfolio. For Phase 1 of the CSB effort, it is recommended that a pilot be conducted to extend this process to those defaulted borrowers within Repayment who have not yet been turned over to Collections. This pilot will encompass two of the four scheduled National Directory of New Hires matches for 2003, including March 31<sup>st</sup> and June 30<sup>th</sup>.

The initial hypotheses for the pilot are that Repayment will have an increased capacity to reach borrowers before they are turned over to Collections and therefore reduce the cohort default rate for Repayment. In addition, this opportunity will assist borrowers in avoiding assignment to Collections, which will allow them to avoid increased involuntary collections efforts such as Administrative Wage Garnishment (AWG), Treasury Offset Program (TOP), Federal Defaulters Program (FDP), etc. Even more important, however, is that Collections will be given a head start in locating those borrowers that are likely to be assigned to them since Collections will be provided with more accurate information regarding borrower demographic and employment data at the time these borrowers are assigned (361 days delinquent).

#### **Description of Existing Capability**

Repayment has often found it difficult to contact borrowers who are in late stages of delinquency or who have just entered into default status because they do not have accurate contact information. As a result, these borrowers are eventually assigned to Collections. By obtaining and using employment and address information for borrowers who have defaulted on their Direct Loans through matching with the existing National Directory of New Hires program currently in place in Collections, Repayment may be able to contact borrowers and alert them to their status and avert assignment.

#### **Current Integration Partner Initiatives**

This project may have implications on CRM4FSA.

#### **Phase 1**

##### 7.3.3.1.1 Phase Description

1. Take a sample of defaulted borrowers in Servicing (240-360 days delinquent) and submit that information to Collections for processing with their other borrowers to National Directory of New Hires.



2. The turnaround time, benefits to Servicing, and benefits to Collections will be analyzed to assess this opportunity's viability.
3. Update Servicing with National Directory of New Hires information. This process will be manually performed by Servicing's Skip Trace department. Skip Trace will take the results from National Directory of New Hires and utilize their own validation processes to determine which contact information is most accurate.

#### 7.3.3.1.2 To-Be Application Distribution

**Table 7 - NDNH Data Match To-Be Application Distribution Approach**

Program Application	Rockville, MD	DLSC (NY, CA)	Greenville, TX	Columbus, GA	Montgomery, AL	Meriden, CT
DLSS	Y					
DMCS						Y
LO/LC						
CMDM						
COD						
DL Data Mart						
FMS						

#### 7.3.3.1.3 To-Be Data Distribution

**Table 8 - NDNH Data Match To-Be Data Distribution Approach**

Data Element	DLSS Rockville, MD	DLSC (NY, CA)	LO/LC Meriden, CT	DMCS Meriden, CT	CMDM Meriden, CT	COD Meriden, CT	DL Data Mart (Rockville, MD)	FMS Meriden, CT
DLSS - Delinquency Data	Y							
DMCS - Account Data								Y

### Phase 2

#### 7.3.3.1.4 Phase Description

1. Create a fully automated process that will send defaulted borrower information to Collections and update DLSS with Servicing results. This Phase is wholly contingent upon decisions made from the pilot.

### Phase 3

#### 7.3.3.1.5 Phase Description

There is no Phase 3 component for this opportunity.



### 7.3.4 Opportunity 5: Imaging

#### **Opportunity Description**

The focus of this opportunity is to provide access to Loan Origination images to all FSA personnel and contractors who need them and realize operational efficiencies for image access and transfers. Modifications to the current default transfer procedures (i.e., DLSS Deliverable 18 – Transfer Loans to DCS/Other Servicing Contractors, DLSS Deliverable 172 – Promissory Note Retrieval) and expanding the number of FSA personnel with access to the LO Image retrieval solution (Collections Task Order 76) will result in faster access to promissory note data, quicker load of defaulted borrowers into the Collections system, and appropriate charges and reduction of repetitive imaging and document management functions relating to default.

The ultimate objective of this opportunity is to create a universal image retrieval solution that allows access to Servicing, Collections, and Consolidation images to all ED personnel and appropriate contractors. A universal image retrieval solution also provides flexibility and adaptability to any initiatives related to centralizing mail handling and imaging.

#### **Description of Existing Capability**

During the initial stages of the CSB effort the Imaging and Document Management Action Team reviewed various opportunities available for integration and reengineering within the current environment. The team examined the current procedures across the Consolidation, Collections, and Servicing business areas and identified various functions where imaging and document management synergies could be realized. Through the examination of the as is process flow for Servicing, the CSB team discovered that all three business areas utilize promissory note information maintained by the Loan Originator. Further reviews discovered that the Collections team, through the implementation of Task Order 76, had direct access to all Direct Loan promissory notes (Origination and Consolidation) through the Loan Origination web based imaging application. In addition, the team identified that even though the Collections team already has access to the promissory note information, the Servicing team sends duplicate copies to Collections with all defaulted transfers. In essence, Direct Loan Servicing request copies of the Promissory note from Direct Loan Consolidation. Upon receipt of the documentation, Servicing re-images the document and transfers it to Collections. The Collections team examines the imaged data, enters good images and borrower information into their system, and holds acceptance of any defaulted transfer without a readable copy of the promissory note. The Collections Team works with the Direct Loan Servicer in order to correct this type of situation.

#### **Current Integration Partner Initiatives**

This project may have implications on the Consistent Data initiative.

#### **Phase 1**

##### 7.3.4.1.1 Phase Description

1. Currently, Loan Origination has a Web-based application to access Student Account images. The system is accessed by Collections personnel via a single username and password. The focus of Phase 1 is to ensure that all necessary FSA Personnel and contractors be given usernames and passwords to access this system.



2. Additionally, Servicing will discontinue the process of sending account images to Collections. Requests for Servicing images will be made on an as needed basis and will be made accessible in future phases.
3. Ultimately, a multi-phased effort will result in a fully integrated imaging solution for the Servicing, Collections, and Consolidation departments. This solution will allow for the viewing of images from all three groups via a single user interface.

#### 7.3.4.1.2 To-Be Application Distribution

**Table 9 - Imaging To-Be Application Distribution**

Program Application	Rockville, MD	DLSC (NY, CA)	Greenville, TX	Columbus, GA	Montgomery, AL	Meriden, CT
DLSS						
DMCS						
LO/LC						Y- Convera RetrievalWare Application Servers
CMDM						
COD						
DL Data Mart						
FMS						

#### 7.3.4.1.3 To-Be Data Distribution

**Table 10 - Imaging To-Be Data Distribution**

Data Element	DLSS Rockville, MD	DLSC (NY, CA)	LO/LC Montgomery, AL	DMCS Meriden, CT	CMDM Meriden, CT	COD Meriden, CT	DL Data Mart (Rockville, MD)	FMS Meriden, CT
LO Images			Y					
Consolidation images			Y					

### Phase 2

#### 7.3.4.1.4 Phase Description

1. Investigate Servicing and Collections image retrieval systems and determine a solution to making these images available throughout ED. (Possibly, through one web based application).
2. Add increased security capability to Phase 1 implementation.

### Phase 3

#### 7.3.4.1.5 Phase Description



1. Develop an application (or alter an existing application) to interface with Servicing, Collections, and Consolidation imaging systems to provide seamless access to all images.



### 7.3.5 Opportunity 7: Capture Additional Borrower Information

#### **Opportunity Description**

This opportunity is designed to create additional vehicles for tracking customer demographics. With the addition of the e-mail and cell phone telephone numbers, FSA will maintain a more complete characterization of key borrower demographics that would aid in the servicing of borrower debts.

Furthermore, with this opportunity, a complete review of the existing data information is necessary to determine what data no longer needs to be captured.

#### **Description of Existing Capability**

Loan Origination provides the Direct Loan Servicing System with email addresses during its data feed. Servicing stores this information as well as collects updates to email through one of several ways:

- Via Direct Phone contact with the Borrower
- Via the Web through borrowers updating their demographic information
- Via the VRU if the borrower leaves information on the Conversant

Servicing does not collect or indicate whether a cell phone number is available in the borrower demographics. Collections collect neither the cell phone telephone numbers nor email addresses.

When a borrower becomes delinquent enough to be transferred to the Collections function, Collections does not have the ability to load email addresses. Furthermore, when an account is rehabbed or transferred back to Servicing from Collections any updates that Collections may have made to the account are not transferred back to the Servicing System.

Presently the interface from Collections to Servicing is done via a spreadsheet.

#### **Current Integration Partner Initiatives**

This project may have implications on CRM4FSA.

#### **Phase 1**

##### 7.3.5.1.1 Phase Description

1. Modify Servicing (Siebel and Legacy and Web) to account for cell phones
2. Modify Collections to account for cell phone numbers and email addresses
3. Modify procedures and training to gather new information
4. Modify interface from Servicing to Collections for transfers of accounts (DCS transfer)
5. Modify interface from Collections to Servicing for Rehabbed accounts
6. Make Modification to Servicing VRU script to ask for updated cell numbers



7.3.5.1.2 To-Be Application Distribution

**Table 11 - Capture Additional Borrower Information To-Be Application Distribution**

Program Application	Rockville, MD	DLSC (NY, CA)	Greenville, TX	Columbus, GA	Montgomery, AL	Meriden, CT
DLSS	Y – Legacy, Web, VRU, Siebel					
DMCS						Y – Legacy and VRU (at PIC)
LO/LC						Y
CMDM						
COD						Y
DL Data Mart						
FMS						Y

7.3.5.1.3 To-Be Data Distribution

**Table 12 - Capture Additional Borrower Information To-Be Data Distribution**

Data Element	DLSS Rockville, MD	DLSC (NY, CA)	LO/LC Meriden, CT	DMCS Meriden, CT	CMDM Meriden, CT	COD Meriden, CT	DL Data Mart (Rockville, MD)	FMS Meriden, CT
Cell Phone Numbers	Y			Y				Y
E-Mail Addresses	Y			Y				Y

**Phase 2**

7.3.5.1.4 Phase Description

1. Modify Collections data forms to include cell phone and email
2. Modify Imaging process to populate data fields with cell phone and email
3. Perform an analysis of existing data to ensure data validity and completeness
4. Develop automatic interface from Collections to Servicing for rehabbed accounts

**Phase 3**

7.3.5.1.5 Phase Description

1. Update borrower forms to ask for new types of information (and remove old outdated information)
2. Develop interfaces with other external sources storing this information.
3. Remove/Archive non-useful data



### 7.3.6 Opportunity 8: Loan Consolidation

#### **Opportunity Description**

Direct Loan-to-Direct Loan Consolidation is the business process where only Direct Loans are consolidated. Currently, these loans are handled like any other consolidated loan process. It is possible to have the Direct Loan Servicing System (DLSS) take over the Direct Loan-to-Direct Loan Consolidation process at a much-reduced unit cost. This process can also be expanded to allow Direct Loan-to-Direct Loan consolidation via the Web. This CSB effort is a step towards merging the Consolidation and Servicing functions.

This CSB opportunity will bring benefits to SCM by helping optimize the portfolio management of Consolidation by making Direct Loans only consolidations faster and less expensive. Another of the benefits is the consolidation of data amongst systems. Transferring the Direct Loan-to-Direct Loan Consolidation to Servicing will help create operational efficiencies by reducing costs. The time to consolidate could be significantly reduced.

This opportunity is part of the business process integration and reengineering core solution because it will impact the Consolidations and Servicing business areas by simplifying and reducing steps in the consolidation process for those borrowers who are only consolidating Direct Loans. It is also part of the contract transformation and value pricing core solution because it will enable the integration of the data between the two systems thereby allowing for the reduction of costs in services and aligning it to the overall strategic and success criteria.

In order to implement this opportunity in Phase 1 of the CSB effort, there needs to be an update on the existing code in DLSS to turn on the existing Direct Loan-to-Direct Loan consolidation capability. Since this code has not been used since 1999, it is likely that several updates will need to be made in order to make this code compatible with the rest of the DLSS. One necessary update will be to include the capability to handle PLUS loan Direct Loan-to-Direct Loan consolidations, which were not possible when this code was originally implemented in 1999. There is also a need to update the LC website with a toll free number that directs the borrower to the Direct Loan Servicing Center where the Direct Loan-to-Direct Loan Consolidation will be handled. The CSRs at the DLSC will need to be trained on this new functionality. There is also a need to alter the data structure to support the new information and perform analysis to evaluate the capacity to handle the increased data and call volume.

#### **Description of Existing Capability**

Direct Loan-to-Direct Loan Consolidations are currently handled by the Consolidation Department and are processed like any other consolidation. Consolidation CSRs process these requests via the Consolidation Database, which interacts with the Direct Loan Servicing System (DLSS). The time to consolidate these loans can be significantly reduced.

#### **Current Integration Partner Initiatives**

This project may have implications on CRM4FSA. As the web solution is implemented in future phases, there may be implications for any Portals initiative as well.



**Phase 1**

7.3.6.1.1 Phase Description

1. Update existing code in DLSS to turn on consolidation capability and update code to handle PLUS loans.
2. Update the LC Servicing websites with a toll free number that accesses Servicing to perform Direct Loan-to-Direct Loan Consolidations.

7.3.6.1.2 To-Be Application Distribution

**Table 13 - Loan Consolidation To-Be Application Distribution**

Program Application	Rockville, MD	DLSC (NY, CA)	Greenville, TX	Columbus, GA	Montgomery, AL	Meriden, CT
DLSS	Y					
Direct Lending Web site	Y					
LC web site					Y	

7.3.6.1.3 To-Be Data Distribution

**Table 14 - Loan Consolidation To-Be Data Distribution**

Data Element	DLSS Rockville, MD	DLSC (NY, CA)	LO/LC Meriden, CT	DMCS Meriden, CT	CMDM Meriden, CT	COD Meriden, CT	DL Data Mart (Rockville, MD)	FMS Meriden, CT
Direct Loan Account information	Y							

**Phase 2**

7.3.6.1.4 Phase Description

1. Develop web capability for borrowers to perform Direct Loan-to-Direct Loan Consolidation

**Phase 3**

7.3.6.1.5 Phase Description

1. Integrate Consolidation and Servicing functions



### 7.3.7 Opportunity 10: Credit Management Data Mart Reporting Capabilities

#### **Opportunity Description**

Credit Management Data Mart Reporting as a solution is made up of two separate opportunities identified by the action teams: Encourage Analysis/Continuous Improvement/Statistical Analysis Across SCM and Develop a Management Information System as the Foundation for Portfolio Management.

This opportunity is broken into three phases:

- Phase 1
  - Augment the Credit Management Data Mart with Collections data up to the data conversion
  - Develop new Credit Management Data Mart reports for Collections data
- Phase 2
  - Complete the Phase 1 Data Conversion
  - Fully analyze reporting requirements
  - Enhance Credit Management Data Mart reporting to include both Servicing and Collections
- Phase 3
  - Update data and reports as necessary to support other opportunities (i.e. Delinquency Reporting via Risk Management)

The scope of this opportunity is to reduce the redundancy in data storage and retrieval systems and to come another step closer to a centralized data storage and retrieval system. The specific opportunity is to ensure SCM manages their portfolio with appropriate information across the multiple business units. The implementation of this opportunity will eliminate redundancy in data storage and retrieval systems as well as generate cost savings realized in maintaining one data system.

#### **Description of Existing Capability**

Credit Management Data Mart was created to provide CFO and Student Credit Management with a tool to report on detailed financial transaction data. The Credit Management Data Mart tool uses Informatica for the Extract Translate and Load function (ETL), Microstrategy for reporting and analysis, and Oracle to run the database engine.

Credit Management Data Mart's objectives were to create a tool that is:

- A Web based interface
- Has the ability to quickly generate new reports
- Ad-hoc query capability is enabled
- Provide SCM and other organizations with a tool to complete comprehensive reporting of financial transaction data

Currently only DLSS uses the facilities of the Credit Management Data Mart, because there is no data feed from Collections. As such, this current status effectively prevents collaborative portfolio and trend analysis and management of Collections data and of SCM financial obligations as a whole. In addition,



staff time is required for ongoing requests for miscellaneous ad-hoc reports and vendor queries based on continuous needs of portfolio managers.

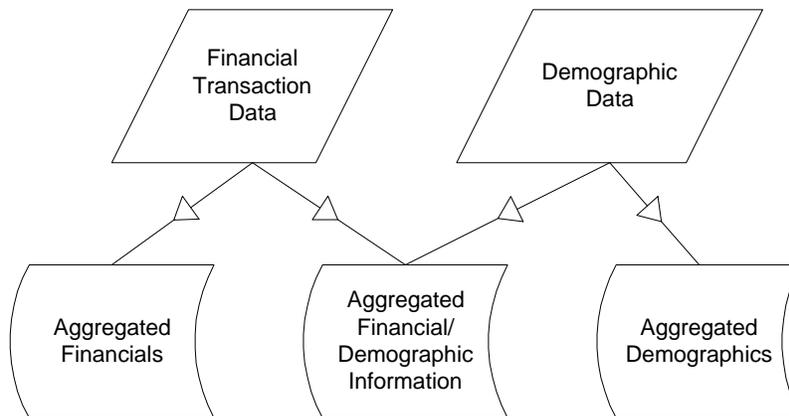
Other current program issues include:

- Data retrieval and analysis of information from current databases is made difficult because current interface applications are not always customer friendly
- Lack of SCM staff training in data access and analysis impacts the accessibility and validity of data and reports
- MIS applications require familiarity with programming to perform key functions
- External and internal customers and partners provide portfolio data, contract deliverable reports, and ad hoc reports to DMCS, LS, LC, and vendors at various points in time
- Staff has varying degrees of access to data and reports related directly to their areas of responsibility. This is because the information resides in different locations, is managed by outside contractors, utilizes incompatible reporting formats, and relies upon different data access codes.

Credit Management Data Mart Data:

- Two primary categories of fact information within the data mart: financial transactions and demographic information
- Credit Management Data Mart will maintain a rolling 13 months of detail level financial data. Aggregating the data will provide multiple reports for various time based financial transactions. The following diagram illustrates this aggregation concept.

**Figure 14: CMDM Aggregation Concept**



Credit Management Data Mart Reporting:

- Most reporting from Credit Management Data Mart is monthly
- The Detail archived data (financial or demographic) can be retrieved by loading the data back to the Data Mart
- Types of Reports Available:
  - Accounting Reports
    - FMS Reconciliation Report – Transaction Summary (FMS 600 Report)
    - Detail Transaction Listing by GL Account
    - Treasury Report of Receivables (TROR)
  - Credit Management Reports



- Repayment and Delinquency Statistics
- Portfolio Analysis
- Payment Allocation
- Weekly Project Status Report (Financial Statistics)
- DLSS Reconciliation Report

Credit Management Data Mart Reporting Opportunities:

- Specific DLSS GL Account balances with detail financial transactions posted per GL account per institution and all other FMS accounting segments
- Detail financial transactions by Loan ID and month end DLSS loan balances by loan ID. Thus providing reporting on loan balances and financial transaction by attributes such as:
  - Loan Type
  - Loan Status
  - Repayment Plans
  - Consolidation Type
  - Delinquency Categories (30, 60, 90, 180...days)
  - CRC Code
  - Other loan level attributes defined in the Credit Management Data Mart Data Dictionary

Direct Loan was used as a baseline for volume estimates:

- 90 Million records a month coming out of FMS
- Data includes:
  - IF010
  - IF020
  - G-Records
  - Manual adjustments associated with program

**Current Integration Partner Initiatives**

This project may have implications on CRM4FSA and Consistent Data, and the Single Student Identifier.

**Phase 1**

7.3.7.1.1 Phase Description

1. Augment the Credit Management Data Mart with Collections data
  - a. Expand Credit Management Data Mart to include Collections data
2. Develop new Credit Management Data Mart reports for Collections data
  - a. Perform Reporting analysis of existing Collections MIS reports
  - b. Create/Modify Credit Management Data Mart reports as necessary
    - i. Remove Duplicate Collections MIS reports

7.3.7.1.2 To-Be Credit Management Data Mart Application Distribution

**Table 15 - CMDM To-Be Application Distribution**

Program Application	Rockville, MD	DLSC (NY, CA)	Greenville, TX	Columbus, GA	Montgomery, AL	Meriden, CT
DLSS	Y- Legacy*					



DMCS								Y
LO/LC								
CMDM								Y
COD								
DL Data Mart								
FMS								Y

\* Existing Direct Loan Legacy System (CRPAS1 and CRPAS2)

### 7.3.7.1.3 To-Be Credit Management Data Mart Data Distribution

**Table 16 - CMDM To-Be Data Distribution**

Data Element	DLSS Rockville, MD	DLSC (NY, CA)	LO/LC Meriden, CT	DMCS Meriden, CT	CMDM Meriden, CT	COD Meriden, CT	DL Data Mart (Rockville, MD)	FMS Meriden, CT
DLSS-Demographic	Y-Legacy*				Y			
DMCS-Demographic				Y	Y			
Financial (both DLSS and DMCS)					Y			Y

\* Existing Direct Loan Legacy System (does not include interface to eServicing – Siebel)

## Phase 2

### 7.3.7.1.4 Phase Description

1. Enable SCM with reporting.
  - a. Fully analyze reporting requirements
  - b. Enhance Credit Management Data Mart reporting to include both Servicing and Collections
  - c. Convert Collections information into Credit Management Data Mart

## Phase 3

### 7.3.7.1.5 Phase Description

1. Update data and reports as necessary to support other opportunities (i.e. Delinquency Reporting via Risk Management)



### 7.3.8 Opportunity 11: Risk Management

#### **Opportunity Description**

Through the process of data mining, data modeling and sharing data across divisions, new approaches for borrower collections can occur. Credit Management Data Mart can be used to research and to gather the ‘cell’, or ‘target’ populations of borrowers to trend behavior by using statistical analysis to uncover opportunities for improvement and reduce fraud waste and abuse. As a result of these mining activities, it is anticipated that the overall delinquency portfolio performance can be improved.

This opportunity involves identifying high risk groups that warrant enhanced counseling and providing the extra attention required to help this group of borrowers avoid delinquency and default. The opportunity exists to enhance loan and finance counseling throughout and after attending school.

Risk Management incorporates the following opportunities identified by the Action Teams:

- Develop and implement risk management model
- Counsel high risk groups
- Leverage insight about customers to tailor services/optimize collections
- Late stage delinquency assistance

#### **Description of Existing Capability**

Credit Management Data Mart was created to provide CFO and Student Credit Management with a tool to report on detailed financial transaction data. The Credit Management Data Mart tool uses Microstrategy for reporting and analysis. One of the Credit Management Data Mart’s objectives was to create a tool to provide SCM and other organizations with a tool to complete comprehensive reporting of financial transaction data.

Currently only DLSS uses the facilities of the Credit Management Data Mart, because there is no data feed from Collections. As such, this current status effectively prevents collaborative portfolio and trend analysis and management of Collections data and of SCM financial obligations as a whole.

Credit Management Data Mart Reporting Information:

- Most reporting from Credit Management Data Mart is monthly
- The Detail archived data (financial or demographic) can be retrieved by loading the data back to the Data Mart
- Types of Reports Available:
  - Accounting Reports
    - FMS Reconciliation Report – Transaction Summary (FMS 600 Report)
    - Detail Transaction Listing by GL Account
    - Treasury Report of Receivables (TROR)
  - Credit Management Reports
    - Repayment and Delinquency Statistics
    - Portfolio Analysis
    - Payment Allocation
    - Weekly Project Status Report (Financial Statistics)
    - DLSS Reconciliation Report



**Current Integration Partner Initiatives**

This project may have implications on CRM4FSA and Consistent Data, and the Single Student Identifier.

**Phase 1**

7.3.8.1.1 Phase Description

1. Create Trending Analysis Model for Servicing data already in Credit Management Data Mart.
2. Create basic reports based on Trending Analysis Model to notice trends associated with Servicing data.

7.3.8.1.2 To-Be Application Distribution

**Table 17 – Risk Management To-Be Application Distribution**

Program Application	Rockville, MD	DLSC (NY, CA)	Greenville, TX	Columbus, GA	Montgomery, AL	Meriden, CT
DLSS	Y					
DMCS						
LO/LC						
CMDM						Y
COD						
DL Data Mart						
FMS						Y

7.3.8.1.3 To-Be Data Distribution

**Table 18 - Risk Management To-Be Application Distribution**

Data Element	DLSS Rockville, MD	DLSC (NY, CA)	LO/LC Meriden, CT	DMCS Meriden, CT	CMDM Meriden, CT	COD Meriden, CT	DL Data Mart (Rockville, MD)	FMS Meriden, CT
DLSS – Demographic	Y				Y			
FMS – Financial					Y			Y

**Phase 2**

7.3.8.1.4 Phase Description

1. Expanding of Trending Analysis with new data elements added with Collections data going into Credit Management Data Mart.
  - a. Possibly adding additional data elements after the Trending Analysis

**Phase 3**

7.3.8.1.5 Phase Description

No identified work during this phase.



### 7.3.9 Opportunity 12: Document Warehousing and Retention

#### Opportunity Description

During the initial stages of the CSB effort, the Imaging and Document Management Action Team reviewed various opportunities available for integration and reengineering within the current environment. The team examined the current procedures across the Consolidation, Collections, and Servicing business areas and identified various functions where imaging and document management synergies could be realized.

The first step to consolidating these warehouse functions consists of transferring the promissory notes currently maintained by the Servicing department to another FSA warehouse. These Promissory Notes will be maintained along with other promissory note documents.

#### Description of Existing Capability

Through the examination of the three business areas as is process flows, the CSB team discovered that all three-business areas manage a warehousing function.

- The Collections team maintains a warehouse in Greenville, TX for the storage of defaulted borrows promissory notes and subrogation documents
- The Consolidation group maintains their hardcopy promissory note documents in Kentucky
- The Servicing team maintains in Utica, NY promissory note documents from the timeframe during which a single contractor managed Originations and Consolidations

#### Current Integration Partner Initiatives

This project may have implications on CRM4FSA and Consistent Data.

#### Phase 1

##### 7.3.9.1.1 Phase Description

1. Migrate Promissory notes out of Utica to Collections in Greenville, TX
2. Review Document Retention Policies

##### 7.3.9.1.2 To-Be Application Distribution

**Table 19 - Document Warehousing and Retention To-Be Application Distribution**

Program Application	Rockville, MD	DLSC (NY, CA)	Greenville, TX	Columbus, GA	Montgomery, AL	Meriden, CT
DLSS		Y				
DMCS			Y			
LO/LC						
CMDM						
COD						
DL Data Mart						
FMS						



7.3.9.1.3 To-Be Data Distribution

**Table 20 - Document Warehousing and Retention To-Be Data Distribution**

Data Element	DLSS Rockville, MD	DLSC (NY, CA)	LO/L C Meriden, CT	DMCS (Meriden, CT or Greenville, TX)	CMDM Meriden, CT	COD Meriden, CT	DL Data Mart (Rockville, MD)	FMS Meriden, CT
DLSS P-Notes				Y-TX				

**Phase 2**

7.3.9.1.4 Phase Description

1. Establish document retention standards and storage policies.

**Phase 3**

7.3.9.1.5 Phase Description

There are presently no defined activities during this phase.



### 7.3.10 Opportunity 15: Electronic Refunds

#### **Opportunity Description**

Currently, the individual systems within SCM have varied processes and methods in which payments and refunds are generated to borrowers, schools, and lenders. Borrowers, lenders, and schools often must wait weeks for their check to be mailed to them. Automating payments to lenders and schools and refunds for lenders, schools, and borrowers will create a more efficient and accurate method of transferring funds.

#### **Description of Existing Capability**

Currently, the DLSS does about 6,000 refunds every week. The majority of refunds go to individual borrowers. All refunds are paid by Treasury check.

#### **Current Integration Partner Initiatives**

There are currently no Integration Partner initiatives that impact this opportunity.

#### **Phase 1**

##### 7.3.10.1.1 Phase Description

1. There is no Phase 1 element for this opportunity

##### 7.3.10.1.2 To-Be Application Distribution

There is presently no identified technological component to this phase.

##### 7.3.10.1.3 To-Be Data Distribution

There is presently no identified technological component to this phase.

#### **Phase 2**

##### 7.3.10.1.4 Phase Description

1. Process electronic payments to a limited number of lenders and schools.
2. Generate electronic refunds to a limited number of lenders and schools.
3. Process electronic borrower refunds for borrowers whose bank account information is available.

#### **Phase 3**

##### 7.3.10.1.5 Phase Description

1. Expand electronic payments to lenders and schools.
2. Expand electronic refunds to lenders and schools.



### 7.3.11 Opportunity 16: Integrated Web Site

#### **Opportunity Description**

Currently the DLSS, LO/LC and Collections provide for their own unique web site. These web sites have varied capabilities and functions. This opportunity delivers an integrated web site housing all of the functions and capabilities.

Included in this opportunity are the operations, maintenance and upgrades of the web site functions (HW and SW).

#### **Description of Existing Capability**

As stated above, there is a spectrum of capabilities across FSA/SCM with respect to its web functionality. At one end of the spectrum is the Collections site that has no direct interface capability with site visitors. At the other end of the spectrum is the DLSS site that has Electronic Correspondence capabilities and is highly interactive.

#### **Current Integration Partner Initiatives**

Each of the three programs has their own web sites with varying release schedules and implementations. Also, there are several other Integration Partner initiatives dealing directly or indirectly with Web based functionality. CRM4FSA, Portals and COD would all have data implications within this opportunity.

#### **Phase 1**

##### 7.3.11.1.1 Phase Description

There is presently no identified technological component to this phase.

##### 7.3.11.1.2 To-Be Application Distribution

There is presently no identified technological component to this phase.

##### 7.3.11.1.3 To-Be Data Distribution

There is presently no identified technological component to this phase.

#### **Phase 2**

##### 7.3.11.1.4 Phase Description

1. Implement one web site for all SCM functions.

#### **Phase 3**

##### 7.3.11.1.5 Phase Description

1. Possible Web site enhancements.



### 7.3.12 Opportunity 18: Borrower Comment Access

#### **Opportunity Description**

The goal of this opportunity is to allow comprehensive visibility of Borrower Comment data that resides on the Servicing, Consolidation, and DMCS systems to all ED personnel and contractors that require them.

ED personnel will be able to have read only access to this Borrower Comment information through the web. ED personnel will have the ability to enter a borrower's Social Security number and view comment information from Servicing, Consolidation, and Collections.

In addition, a middleware abstraction layer will be used to interface with each of the respective systems. Adding this layer allows for flexibility and adaptability should any of the back end systems be modified or retired. Having a web interface allows for ease of access and can leverage the central authentication database strategy for all ED Personnel, which falls in line with future CSB initiatives. (See Opportunity 4: Imaging)

#### **Description of Existing Capability**

Currently, Repayment, Consolidation, and DMCS each maintain their own system for storing records of borrower contacts. With limited exceptions, one component's records are not directly retrievable by users in the other components. In addition, Collections contracts many of its accounts to private collection agencies (PCAs). The contact records kept by these PCAs are stored on separate systems and most are not passed to the DMCS, nor are they directly retrievable by most Collections staff (other than by each PCA's assigned contract monitor).

#### **Current Integration Partner Initiatives**

This project may have implications on CRM4FSA.

#### **Phase 1**

##### 7.3.12.1.1 Phase Description

There is presently no identified technological component to this phase.

##### 7.3.12.1.2 To-Be Application Distribution

There is presently no identified technological component to this phase.

##### 7.3.12.1.3 To-Be Data Distribution

There is presently no identified technological component to this phase.

#### **Phase 2**

##### 7.3.12.1.4 Phase Description

1. Create web-based application to allow FSA and Operating Partners to access to free form borrow comments across all systems.



### **Phase 3**

#### 7.3.12.1.5 Phase Description

1. Create a central authentication DB or leverage an existing initiative to provide a centralized point for authentication and Login Administration for all ED personnel.



## 7.4 Application Software Definition

The Application Software Definition defines the key characteristics of applications included in the CSB Business Architecture. The Application Software Architecture consists of four sections for each opportunity:

- **High-level requirements** – For each opportunity where an applicable technical solution exists, high level requirements are outlined
- **Application Relationship Diagram** – Illustrates the functional aspects, defines the boundaries and outlines a data and process distribution approach for each opportunity
- **Business Component Cost Drivers** – Provides the cost drivers associated with each opportunity including new components, reused components, legacy or packaged applications, and resources (e.g., Subject Matter Experts, Developers, Testers, etc.). Phase 1 cost drivers are associated with all aspects of completing the work (Requirements, Design, Build, Test, and Run) whereas Phase 2 cost drivers are only associated with the Requirements and Design components. Components of this section include:
  - **Overview**
  - **Business Component** – Name of the business component system in scope (e.g., DLSS, DMCS, FMS, Credit Management Data Mart, COD, etc.)
  - **Type** – the specific cost driver such as:
    - Business Analysts – Personnel analyzing business impacts and responses
    - Testers – Personnel performing various testing activities
    - Developers – Personnel performing development work
    - Contracts – Specific contracts that may need modification
    - Contractors – Specific contractors needed to implement the solution
    - Timeline – Existing FSA contract commitments that may exclude or prohibit any of the work required to complete phase work activities
    - Subject Matter Experts (SMEs) – Application specific experts required to implement the solution
    - Hardware – Machines, DASD, networks (e.g., routers, switches, etc.)
    - Telecommunications – lines and gear
    - Software – Operating systems, tools, applications, administration, etc.
    - Security – Plans, access, etc.
  - **Description** – Narrative of the business component’s purpose and scope
- **Assumptions** – Outlines the assumption used to drive to solutions for each phase of an opportunity



## 7.4.1 Opportunity 1: Payment Processing

### Requirements

#### 7.4.1.1.1 Phase 1

There is presently no identified technological component to this phase.

#### 7.4.1.1.2 Phase 2

1. Conduct a vendor selection for lockbox providers that can handle both Repayment and Collections payment volumes.
2. Create a secure file transfer protocol for the transmission of payment data from the lockbox to DMCS.
3. Modify DMCS to automatically process payment information received from lockbox.
  - a. Develop error handling processes
  - b. Generate reports
4. It may be necessary to repeat steps one and two for DLSS should the lockbox provider change from the one currently used for Servicing.

#### 7.4.1.1.3 Phase 3

1. Create centralized Exception Handling group for both Collections and Repayment. This group will need access to DLSS, DMCS, and DLC on each of their machines.



Application Software Relationship Diagram

Figure 15: Payment Processing - Current

Payment Processing  
As-Is

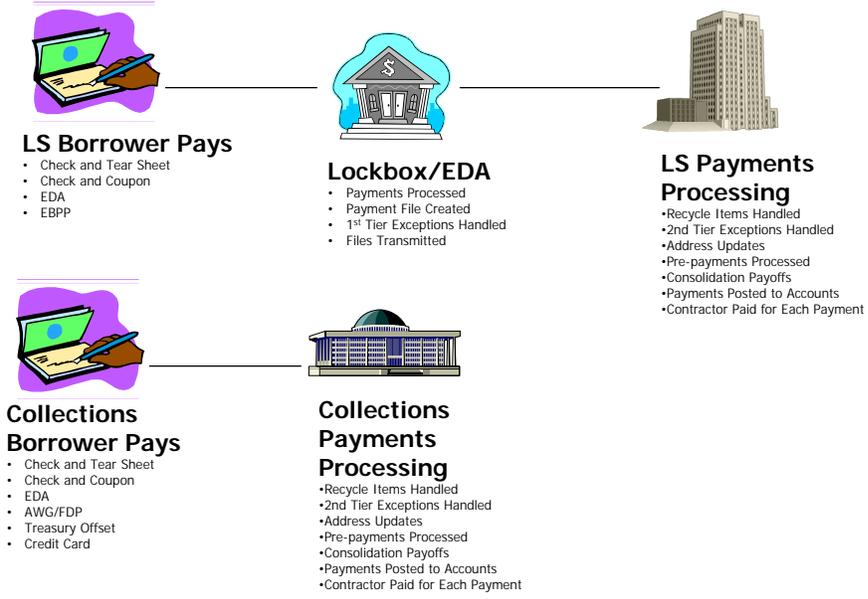
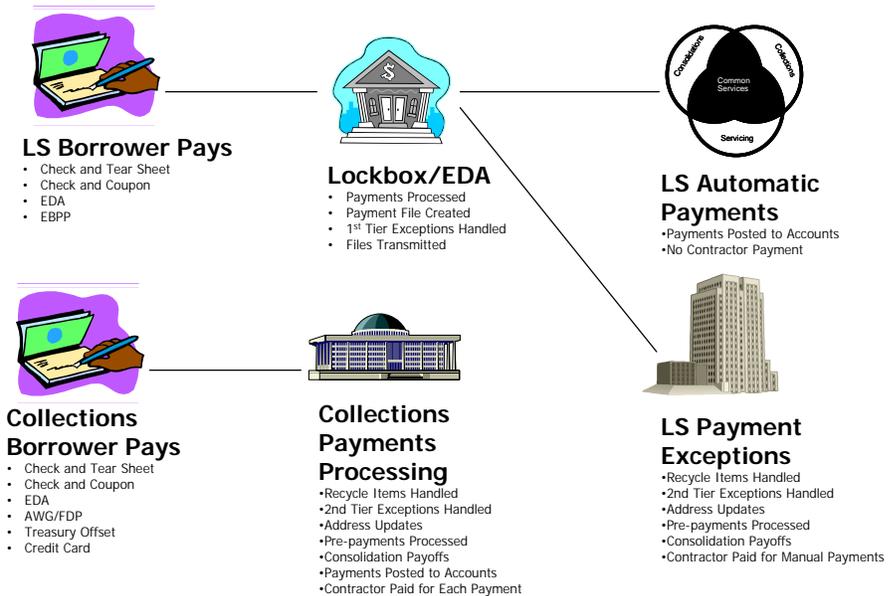


Figure 16: Payment Processing - Phase 1

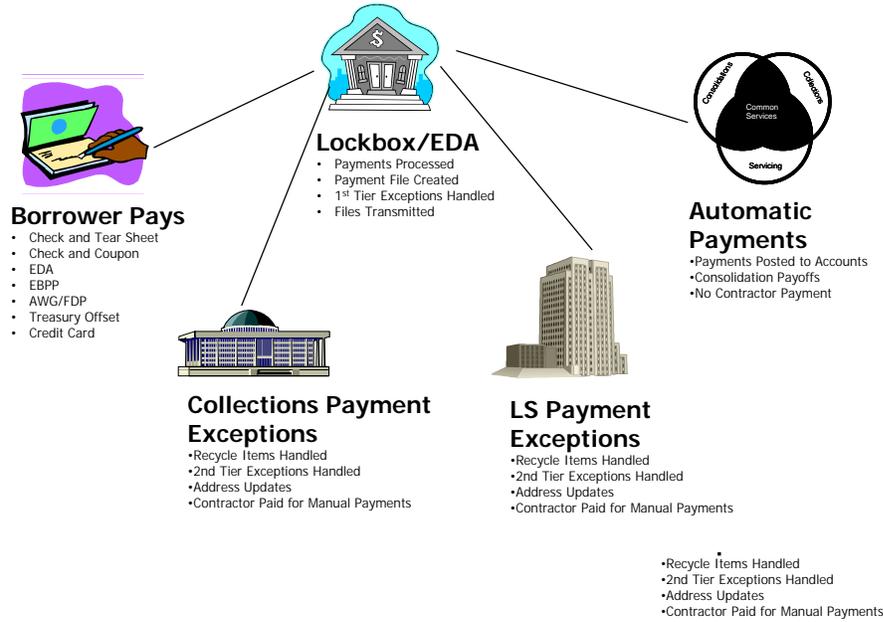
Payment Processing  
Phase 1





**Figure 17: Payment Processing - Phase 2**

Payment Processing  
Phase 2



**Figure 18: Payment Processing - Phase 3**

**Phase 1 and 2 Cost Drivers**

**Table 21 - Payment Processing Cost Drivers**

Business Opportunity	Business Component	Type	Description
Phase 2		Business Analysts	<ul style="list-style-type: none"> <li>• Vendor selection for lockbox providers that can handle Collections and Servicing payment volumes</li> </ul>
	DLSS, DMCS	Testers	<ul style="list-style-type: none"> <li>• Collections: Test new functionality for collections (and Servicing should a new vendor be selected)</li> </ul>
	DLSS, DMCS	Developers	<ul style="list-style-type: none"> <li>• Collections: Design and implement functionality for DMCS to receive and process lockbox flat file with payments (and Servicing should a new vendor be selected)</li> </ul>
		Contracts	None Identified
		Contractors	None Identified
		Timeline	None Identified
		Training	None Identified



Business Opportunity	Business Component	Type	Description
		SME	None Identified
		HW	None Identified
		Telecom	None Identified
		SW	None Identified
	DLSS, DMCS	Security	<ul style="list-style-type: none"> <li>Develop secure file transfer protocol from lockbox to Collections (and Servicing should a new vendor be selected)</li> </ul>

**Assumptions (Cost Driver and Other)**

**Phase 1 Assumptions**

None identified for this opportunity during this phase.

**Phase 2 Assumptions**

1. Vendor selected for consolidated lockbox will be able to handle volumes created by both Servicing and Collections.

**Phase 3 Assumptions**

None identified for this opportunity during this phase.



## 7.4.2 Opportunity 3: Correspondence

### Requirements

#### 7.4.2.1.1 Phase 1

1. Utilize a Correspondence Business Partner for selected mailings either across all of SCM, or just within Loan Servicing.
  - a. Perform fulfillment analysis to determine ideal candidate mailing
  - b. Develop Interface between legacy system and UPS
  - c. Create/Modify Template for fulfillment stream
  - d. Create network pipe to connect legacy system and UPS
  - e. Review Security requirements with UPS and ED
  - f. Testing of Interface and Mail Stream
    - i. Perform QC check of mail output
  - g. Remove existing fulfillment job
  - h. Train Production staff on new product
  - i. Pilot new fulfillment stream
  - j. Create transition plan to bring up new product and retire old fulfillment stream

#### 7.4.2.1.2 Phase 2

1. Transition additional mailings to a Correspondence Business Partner.
  - a. Update Interface between legacy system and UPS
  - b. Create/Modify Template for fulfillment stream
  - c. Review Security requirements with UPS and ED
  - d. Testing of Interface and Mail Stream
    - i. Perform Quality check of mail output
  - e. Remove existing fulfillment job
  - f. Train Production staff on new mailing jobs
2. Utilize the Electronic Correspondence (EC) product within Direct Loan Servicing to mail eligible Loan Consolidation and Debt Collections correspondence.
  - a. Identify candidate mailings within LC and DMCS
  - b. Create Interface between EC and LC and DMCS
  - c. Evaluate how security will be impacted with additional user base
  - d. Perform HW/SW Analysis to determine if existing infrastructure can handle increased functionality
  - e. Perform Network Bandwidth Analysis to determine if existing network bandwidth can handle increase traffic
3. Reduce number of existing fulfillment centers by 1 or 2.
  - a. Perform fulfillment center analysis
  - b. Identify candidate fulfillment centers
  - c. Migrate existing functions of candidate fulfillment center to new centers
  - d. Retire candidate fulfillment centers
    - i. Migrate Government Furnished Material to other centers



#### 7.4.2.1.3 Phase 3

1. Implement a virtual fulfillment center, with a single vendor and X number of centers fulfilling all SCM correspondence.
  - a. Perform fulfillment center analysis
  - b. Identify fulfillment center transition strategy
  - c. Migrate existing functions of existing fulfillment centers to the new virtual center
  - d. Retire existing fulfillment centers
    - i. Migrate GFM to other center(s)
2. Create and modify all SCM correspondence using a common letter generator.
  - a. Perform SW vendor analysis of tools
    - i. Review license requirements
  - b. Purchase and test tools
  - c. Test new tool with existing fulfillment center capability
    - i. Test all relevant output streams



### Application Software Relationship Diagram

Figure 19: Correspondence - Current

#### Correspondence – As-Is

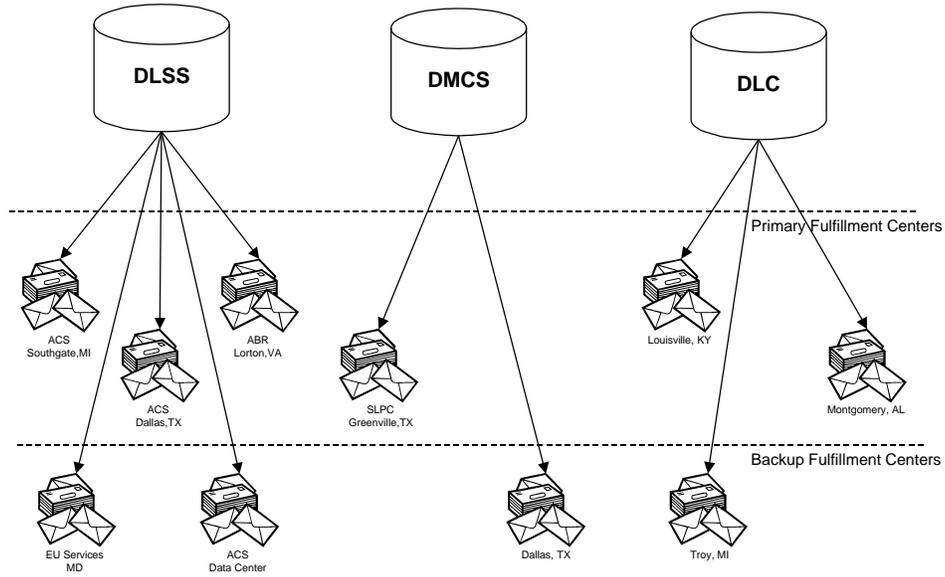
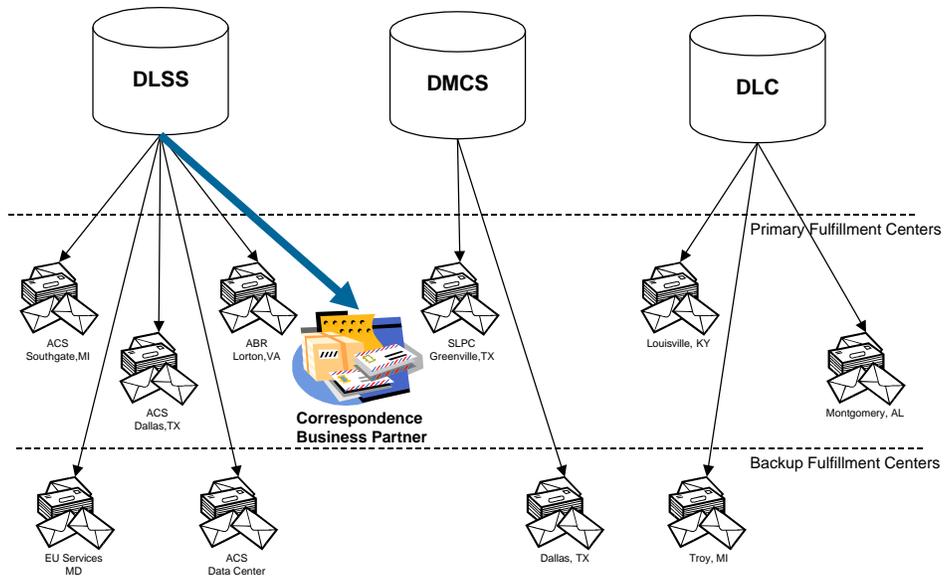


Figure 20: Correspondence - Phase 1

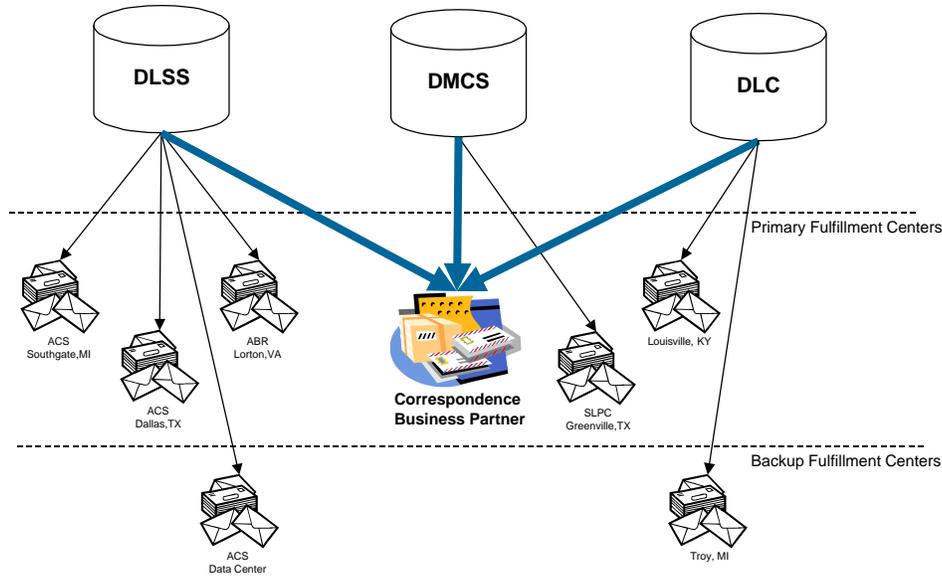
#### Correspondence – Phase 1





**Figure 21: Correspondence - Phase 2 and 3**

**Correspondence – Phase 2 and 3**



**Phase 1 and 2 Cost Drivers**

**Table 22 - Correspondence Cost Drivers**

Business Opportunity	Business Component	Type	Description
Phase 1	DLSS (SCM)	Business Analysts	• Need to determine candidate job streams
	DLSS (SCM)	Testers	• Need to test product
	DLSS (SCM), UPS	Developers	• Need to create new template and interface between DLSS and UPS
	UPS	Contracts	• Need to set up contract with UPS
	DLSS (SCM), UPS	Contractors	• Need to start working with UPS contractors
		Timeline	None Identified
	DLSS (SCM)	Training	• Training of production staff on new jobs/product
	UPS	SME	• Mail Innovations expert to assist in design and build
		HW	None Identified → see assumption
	DLSS (SCM)	Telecom	• Need to establish new link between DLSS and UPS
	UPS	SW	• Need to get new fulfillment SW from UPS for use by personnel → see assumption
Phase 2	Ed, UPS	Security	• Need to review security requirements with SCM and UPS
	SCM, UPS	Business Analysts	• Need to determine candidate job streams
	SCM	Testers	• Need to test product



Business Opportunity	Business Component	Type	Description
	SCM	Developers	• Need to create new templates
		Contracts	None Identified
		Contractors	None Identified
	SCM	Timeline	• Need to coordinate with updates to letter format changes
		Training	None Identified
	UPS	SME	• Mail Innovations expert to assist with design and build
		HW	None Identified
		Telecom	None Identified
		SW	None Identified
	SCM, UPS	Security	• Need to review security requirements with SCM and UPS

**Assumptions (Cost Driver and Other)**

**Phase 1 Assumptions**

1. Mail Innovations administration SW will come for free with setting up mail stream
2. DLSS has the equipment necessary to create a data T1 link to an outside vendor

**Phase 2 Assumptions**

None identified for this opportunity during this phase.

**Phase 3 Assumptions**

None identified for this opportunity during this phase.



### 7.4.3 Opportunity 4: National Directory of New Hires Data Match

#### Requirements

##### 7.4.3.1.1 Phase 1

1. Initial Pilot Hypotheses
  - a. Repayment will have an increased capacity to reach borrowers before they are turned over to Collections and reduce the cohort default rate for Repayment.
  - b. Collections will be given a head start in locating those borrowers that are likely to be assigned to them since Collections will be provided with more accurate information regarding borrower demographic and employment data at the time these borrowers are assigned.
2. Meet with FSA personnel from Repayment and Collections and perform a statistical analysis to determine the particular borrower population to include within the pilot, and outline the specific hypotheses to be proved, performance metrics to be measured, and overall success criteria.
3. Run a query in DLSS to return borrowers in Repayment that fit the criteria outlined within the statistical analysis phase.
4. Electronically send information to Collections in appropriate format.
5. Collections rolls up all borrower information and sends it to National Directory of New Hires for processing.
6. The National Directory of New Hires sends results back to Collections.
7. Collections queries results and electronically sends Servicing a file containing home and work address for accounts that have an AGI above 16K.
8. Results are loaded into an access database for Tier 1 analysis (as described below).
9. DLSC Skip Trace Department uses data and manually updates accounts.
10. Account updates are monitored for Tier 2 analysis (as described below).
11. Accounts are worked in Servicing using National Directory of New Hires information.
12. Remaining sample group transferred to Collections after 360 days of delinquency.
13. Collections services accounts using National Directory of New Hires data passed from Servicing.
14. Tier 3 Analysis measures performance of sample group in Servicing and the subsequent accounts serviced in Collections.
15. Repeat Process for second trial
16. Pilot Analysis
  - a. Tier 1: This analysis will consist of turnaround times from the time the data was sent from Servicing until the time the results were received from Collections. Metrics will also be gathered on the number accounts that have been passed to servicing (after AGI and error filtering occurs), the number of borrowers that have yet to default (270 days delinquent) upon reception of the data, and the number of accounts that are no longer delinquent.
  - b. Tier 2: This analysis will evaluate the number of sample accounts that are actually changed as a result of the National Directory of New Hires data. Metrics will also be



- gathered on the turnaround time for DLSC Skip trace department to manually update these accounts.
- c. Tier 3: This analysis will evaluate the performance of both Servicing and Collections based on the pilot. Metrics will be gathered on the number of accounts cured in Servicing based on new information provided by the National Directory of New Hires. The remaining accounts will be transferred to Collections as they become 360 days delinquent. At this point, the ability of Collections to rehabilitate loans based on receiving the National Directory of New Hires information directly from Servicing will be measured.
17. Conclusions
- a. Based on the analysis pilot data, conclusions are drawn and decisions are made on whether to automate this process and use it in the future.

#### 7.4.3.1.2 Phase 2

1. Create batch job in Servicing to generate a file in DLSS for borrowers that are 240 - 360 days delinquent and have bad address information.
2. Automate the transmission of this data to DCS at the appropriate time.
3. Collections rolls up all borrower information and sends it to the National Directory of New Hires for processing.
4. The National Directory of New Hires sends results back to Collections
5. Create batch job in Collections that sends Servicing pertinent results (home and work address) for borrowers with >\$16K AGI.
6. Send Servicing specific error file.
7. Servicing receives file and runs a batch job that updates addresses with a new flag noting that information came from the National Directory of New Hires.
8. Edits are made to handle updates for accounts that are no longer delinquent or not yet 270 days delinquent.

#### 7.4.3.1.3 Phase 3

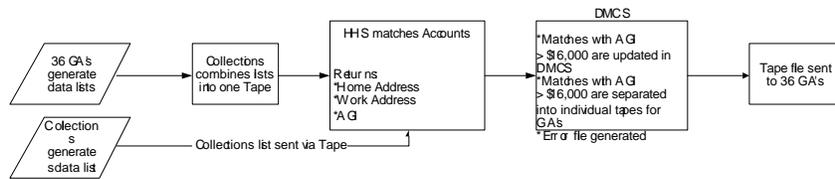
There is no Phase 3 component associated with this opportunity.



## Application Software Relationship Diagram

Figure 22: NDNH Data Match-Current

NDNH Data Match  
As Is





**Figure 23: NDNH Data Match-Phase 1**

NDNH Data Match  
Phase 1

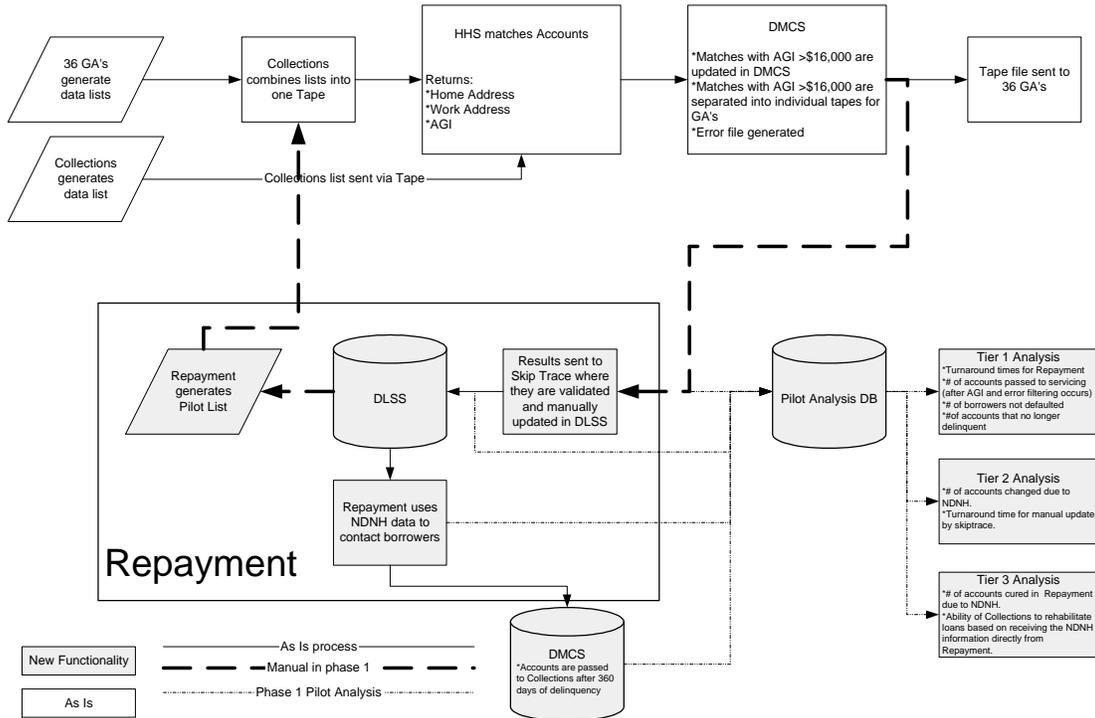
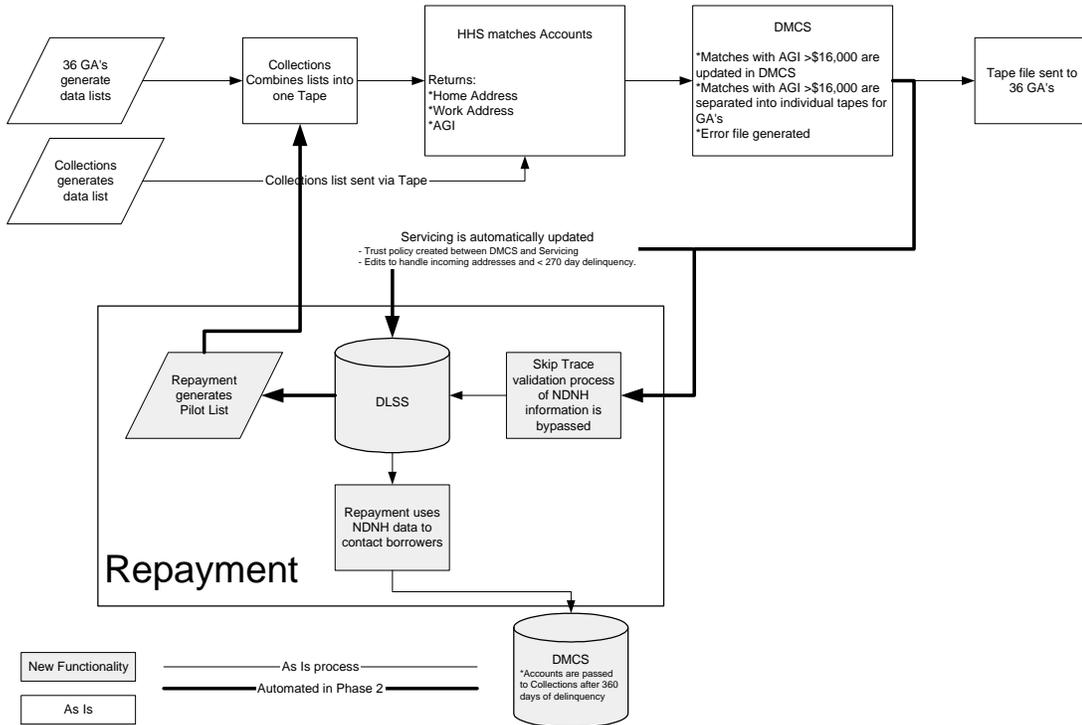




Figure 24: NDNH Data Match-Phase 2

### NDNH Data Match Phase 2





Phase 1 and 2 Cost Drivers

Table 23 - NDNH Cost Drivers

Business Opportunity	Business Component	Type	Description	
Phase 1	DLSS, DMCS	Business Analysts	<ul style="list-style-type: none"> <li>Select sample accounts for pilot, create access DB, load pilot data, and create reports</li> </ul>	
		Testers	None Identified	
	DLSS, DMCS	Developers		<ul style="list-style-type: none"> <li>Servicing - Run queries in servicing and forward information onto collections</li> <li>Collections - Combine lists and send to the National Directory of New Hires then send results back to Servicing</li> </ul>
			Contracts	None Identified
		Contractors	None Identified	
	DLSS, DMCS	Timeline		<ul style="list-style-type: none"> <li>Will be able to send 240 day old records due to 30-day turnaround. Should the process take less than 30 days, the information will not be acted until the borrower goes into default.</li> <li>Will need to incorporate pilot accounts into DMCS information for March 31<sup>st</sup> National Directory of New Hires process</li> <li>Will need to incorporate pilot accounts into DMCS information for June 30<sup>th</sup> National Directory of New Hires process</li> </ul>
			Training	None Identified
			SME	None Identified
			HW	None Identified
			Telecom	None Identified
			SW	None Identified
			Security	None Identified
	Phase 2		Business Analysts	None Identified
DLSS, DMCS		Testers	<ul style="list-style-type: none"> <li>Test end to end process for accuracy and timeliness</li> </ul>	
		Developers	<ul style="list-style-type: none"> <li>Servicing – Create batch process to send account info to DCS quarterly</li> <li>Collections – Automate the inclusion of Servicing data and send information back to servicing</li> <li>Servicing – Develop mechanism with edits for auto-update address info in DLSS</li> </ul>	
		Contracts	None Identified	
		Contractors	None Identified	
		Timeline	None Identified	
		Training	None Identified	
		SME	None Identified	
	HW	None Identified		



Business Opportunity	Business Component	Type	Description
		Telecom	None Identified
		SW	None Identified
		Security	None Identified

### Assumptions (Cost Driver and Other)

#### Phase 1 Assumptions

1. Not allowed to act on any borrower information before they are 270 days delinquent on the day the request is made to the National Directory of New Hires. Since the turnaround time is 30 days, the assumption is that the borrower will be delinquent by the time report is processed. Should the report return early, the account would not be acted on until the 270th day of delinquency.
2. Must interact with the National Directory of New Hires via DMCS quarterly process and this process does occur every quarter.
3. Borrowers with AGI's under \$16,000 will automatically be filtered out by DCS before being sent back to Servicing for updates.
4. The existing Skip Trace deliverable will be utilized to apply updates to borrower data that will result from the National Directory of New Hires pilot.

#### Phase 2 Assumptions

1. The outcome of the National Directory of New Hires pilot will support automating the process in Phase 2. Requirements and Design for Phase 2 will begin April 2003.
2. The same processes that GAs use to send and receive lists to and from Collections can be leveraged.

#### Phase 3 Assumptions

There is no Phase 3 component associated with this opportunity.



## 7.4.4 Opportunity 5: Imaging

### Requirements

#### 7.4.4.1.1 Phase 1

1. Determine increased scale of usage of LO's application.
2. Modify web infrastructure to accommodate this increased activity (if assumption # is not correct)
3. Create and administer login ID's.
  - Develop policies for administering security for new solution.
4. Review client desktop requirements.
5. Review network access/security policies (ports, fire walls, etc.).
6. Test access across user base
7. Distribute login ID's.

\*Steps 4 and 5 will need to be repeated for each location with different tech arch.

#### 7.4.4.1.2 Phase 2

##### 7.4.4.1.2.1 Investigate Servicing and Collections imaging process and determine a solution to making these images available throughout FSA. (Possibly, through one, web-based application)

1. Research the possibility of having Servicing imaging system (Panagon) interfacing with LO web application.
2. Research the possibility of Consolidation imaging application interfacing with LO web application.
3. Research the possibility of having direct access to Servicing and imaging applications.

##### 7.4.4.1.2.2 Add increased security capability to Phase 1 implementation

1. Create detail design for password expiration, lock out, and logging specifications.
2. Enable or develop capability according to design.
3. Modify user interfaces to coincide with new functionality.
4. Establish personnel to support and maintain functionality.
5. Communicate new functionality to users.

#### 7.4.4.1.3 Phase 3

1. Develop an application (or alter an existing application) to interface with Servicing, Collections, and Consolidation imaging systems to provide seamless access to all images.
2. Create a central authentication DB or leverage an existing initiative to provide a centralized point for authentication and Login Administration.
3. Test functionality of the new solution.



### Application Software Relationship Diagram

Figure 25: Imaging-Current

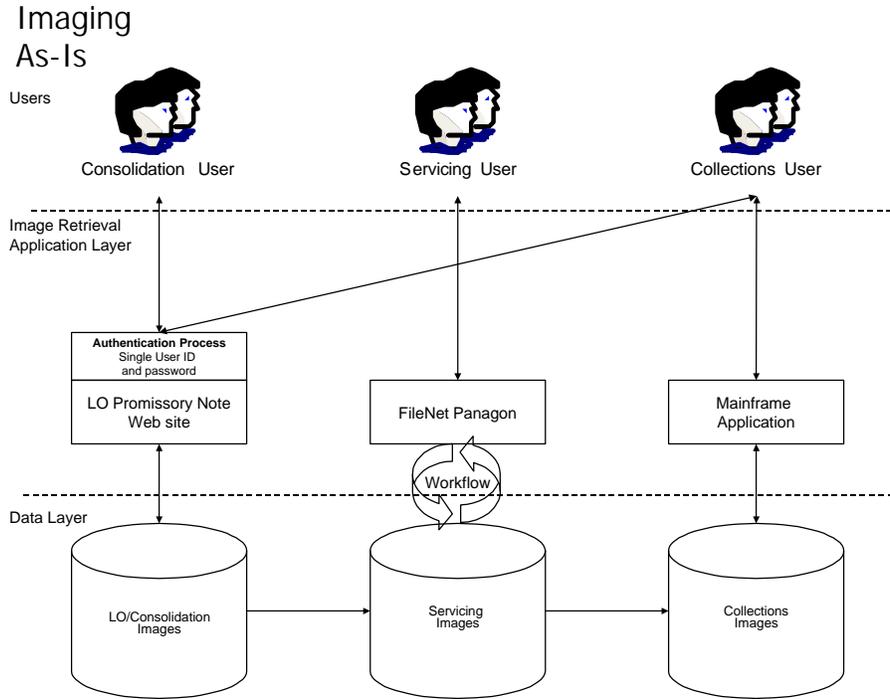


Figure 26: Imaging-Phase 1

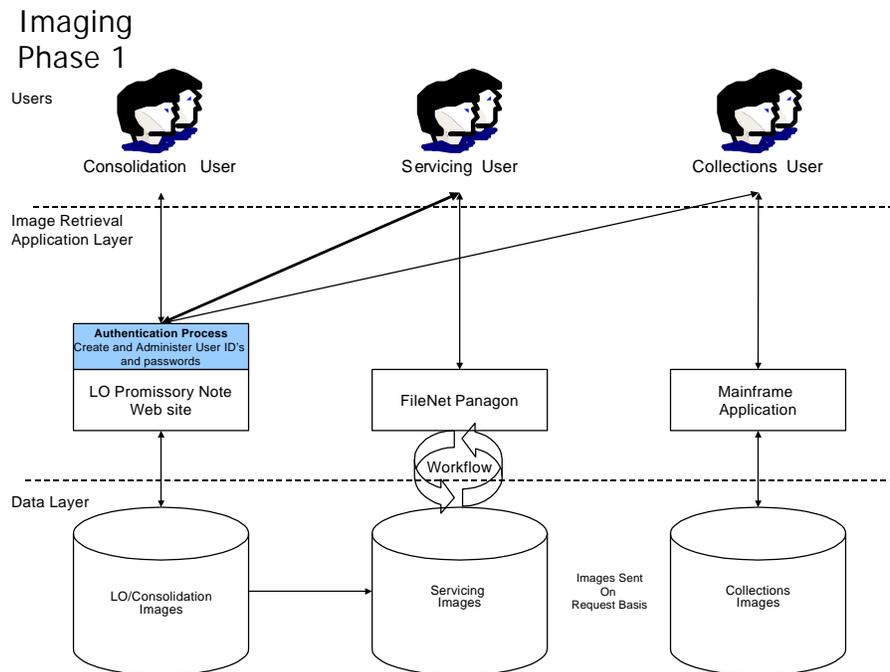




Figure 27: Imaging-Phase 2

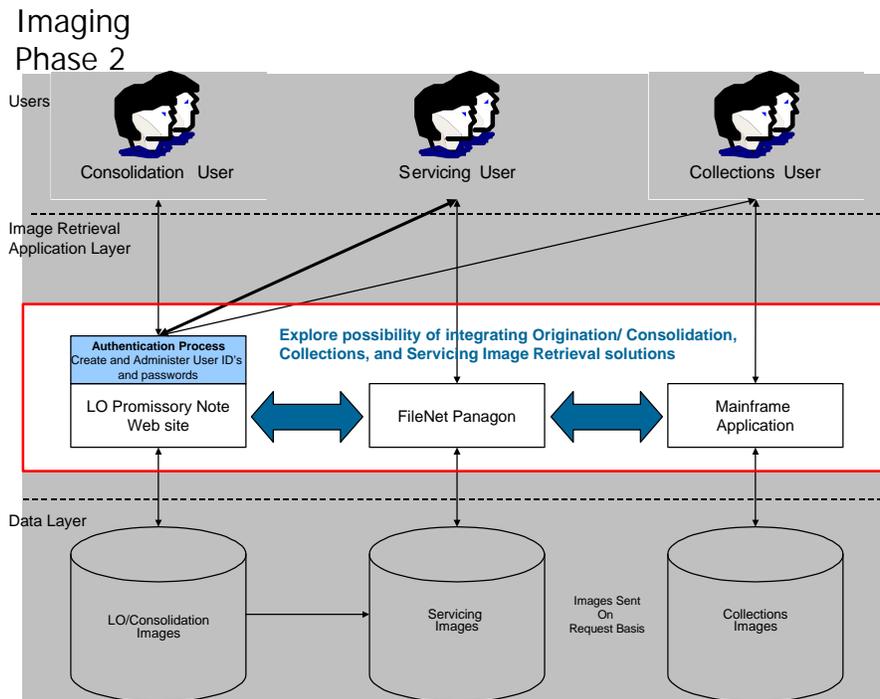
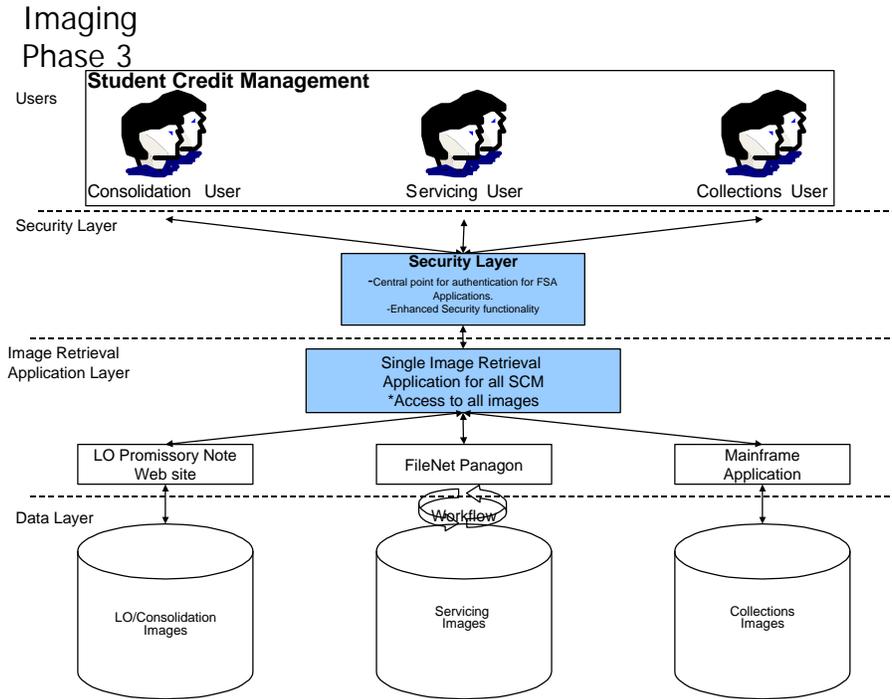


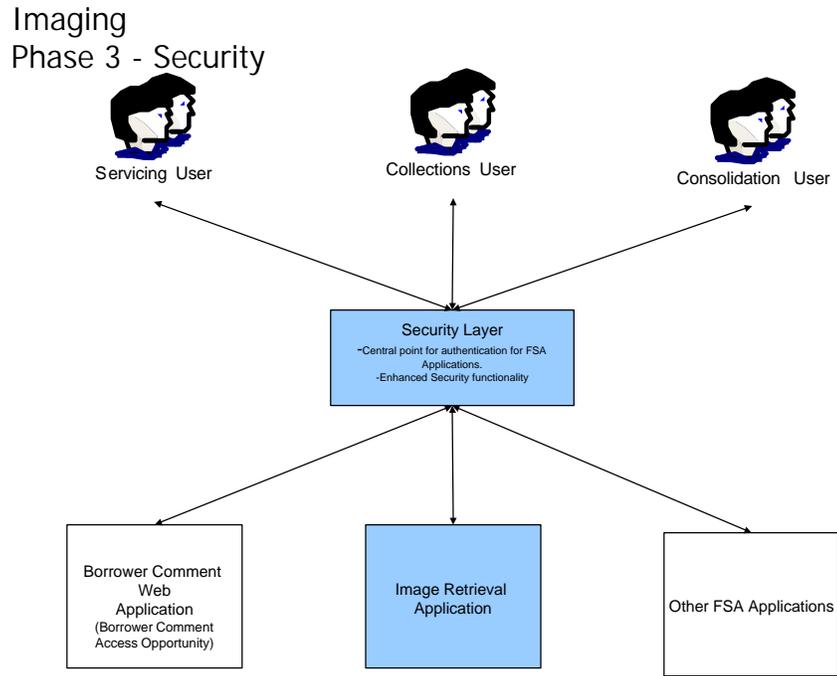


Figure 28: Imaging-Phase 3





**Figure 29: Imaging-Phase 3 Security**





**Phase 1 and 2 Cost Drivers**

**Table 24 - Imaging Cost Drivers**

Business Opportunity	Business Component	Type	Description
Phase 1		Business Analysts	None Identified
	LO, DLSS, DMCS, DLC	Testers	<ul style="list-style-type: none"> <li>Test access across user base.</li> </ul>
	LO	Developers	<ul style="list-style-type: none"> <li>Provide for access to web application across user base.</li> <li>Production Staff to create and administer user IDs</li> </ul>
		Contracts	None Identified
		Contractors	None Identified
		Timeline	None Identified
	DLSS, DMCS, DLC	Training	<ul style="list-style-type: none"> <li>Train personnel to access and use LO's application</li> </ul>
		SME	None Identified
		HW	None Identified
		Telecom	None Identified
		SW	None Identified
	LO, DLSS, DMCS, DLC	Security	<ul style="list-style-type: none"> <li>Identify appropriate personnel to have access to the system</li> <li>Administer login information to these individuals</li> </ul>
Phase 2		Business Analysts	None Identified
	LO, DLSS, DMCS, DLC	Testers	<ul style="list-style-type: none"> <li>Test access to all images across a user base</li> <li>Test enhanced security functions</li> </ul>
	DLSS, LO	Developers	<ul style="list-style-type: none"> <li>Investigate the possibility of accessing Collections and Servicing imaging solutions via a web based solution and develop a cost effective solution Implement new functionality.</li> <li>Develop solution to bolster network security via password expiration, lock out, and logging.</li> <li>Administrators for the network application access</li> </ul>
		Contracts	None Identified
		Contractors	None Identified
		Timeline	None Identified
		Training	None Identified
		SME	None Identified
		HW	None Identified
		Telecom	None Identified
	LO	SW	<ul style="list-style-type: none"> <li>Authentication/Administration software</li> </ul>
LO	Security	<ul style="list-style-type: none"> <li>Build upon existing security functionality</li> </ul>	



## Assumptions (Cost Driver and Other)

### Phase 1 Assumptions

1. Creating and tracking individual login ID's is the ideal security solution.
2. Increased bandwidth and web services will not be necessary based on the assumption that concurrent use of the application will only be increased slightly.
3. Imaging Workstations at the Servicing center have the bandwidth to retrieve images from the internet.
4. The security functionality that is already in place will be sufficient to handle the increased user base without any modifications to the security policies.
  - a. Any additional security development will require additional costs for development and review.

### Phase 2 Assumptions

1. The Panagon system being used by Servicing is not web based, but has the capability to be configured to interface with web based apps.
2. The Loan Origination web application can support or simply be modified to support these features.

### Phase 3 Assumptions

1. Loan Origination and Consolidation imaging interface uses the same web-based solution.
2. The Panagon imaging system for Servicing can be interfaced via a web-based mechanism.
3. An initiative to create a central authentication DB within ED or within Servicing, Collections, and Consolidation is being implemented. If there isn't such a DB, then there might be a large opportunity to implement one.



## 7.4.5 Opportunity 7: Capture Additional Borrower Information

### Requirements

#### 7.4.5.1.1 Phase 1

1. Modify Servicing Data Structure Components to include cell phone
  - a. Siebel
  - b. Legacy
  - c. Web User Interfaces
  - d. VRU
2. Modify Servicing interface(s) to include cell phone updates
  - a. Siebel
  - b. Legacy
  - c. Web User Interfaces
  - d. VRU
3. Modify Collections' Legacy User Interface to include e-mail and cell phones
4. Modify Collections' VRU to include cell phone updates
5. Modify Collections' Data Structure to include e-mail and cell phone numbers
6. Modify Servicing to Collections interface to include cell phone and e-mail updates
7. Test the new functionality at Servicing
8. Train Repayment Customer Service Representatives on new features of the interface (what to capture and what not to capture)
9. Test the new functionality at Collections
10. Train Collections' reps on new features on the interface

#### 7.4.5.1.2 Phase 2

1. Perform data analysis of existing data for effectiveness
2. Modify all data forms used by Collections for cell phone and email (i.e. Correspondence)
3. Modify all data forms used by Servicing for cell phone and email (i.e. Correspondence)
4. Modify interfaces into and out of systems to incorporate new data elements
5. Modify Collections Imaging Process to incorporate the new data elements
6. Modify Servicing's Imaging Process to incorporate the new data elements
7. Develop archiving strategy for old data
8. Modify/update procedures to maintain data consistency across systems
9. Test the new functionality

#### 7.4.5.1.3 Phase 3

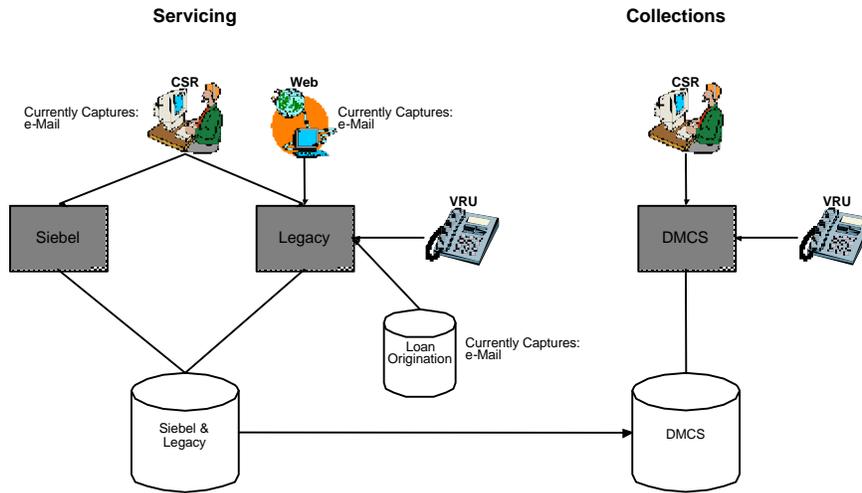
1. Modify Collections' forms to include new streamlined data fields based on Review from Phase 2
2. Develop interfaces with external systems to incorporate new data elements
3. Test all modified interfaces
4. Remove/Archive old data
5. Modify Data structures for eliminating old information and adding new information
6. Update batch procedures for elimination/addition of data elements



## Application Software Relationship Diagram

**Figure 30: Capture Additional Borrower Information-Current**

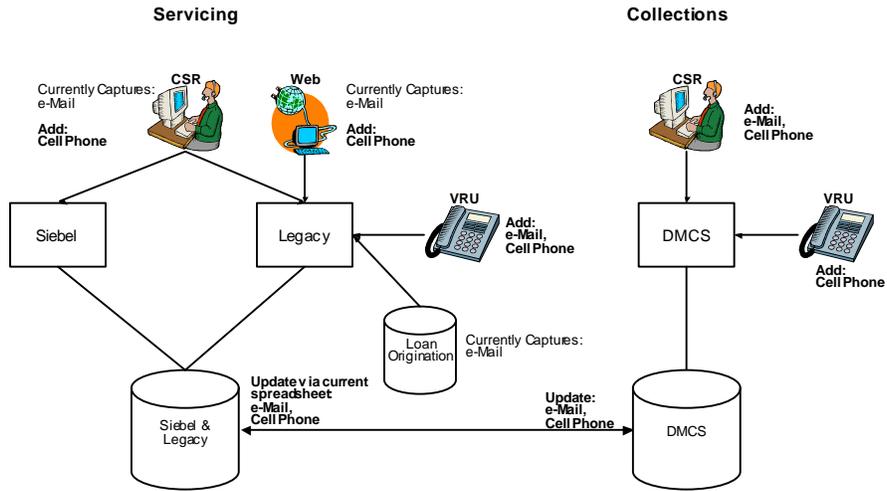
Capture Additional Borrower Information  
As Is





**Figure 31: Capture Additional Borrower Information-Phase 1**

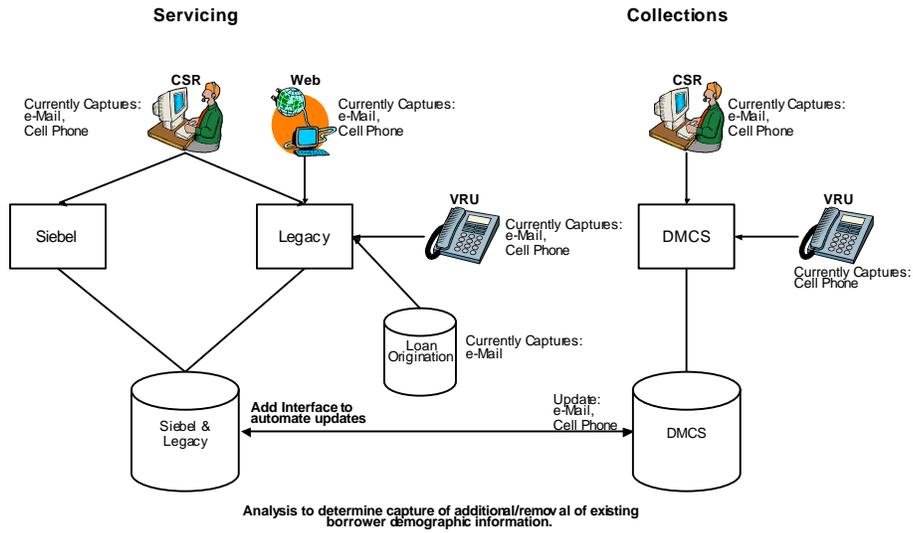
Capture Additional Borrower Information  
Phase 1





**Figure 32: Capture Additional Borrower Information-Phase 2**

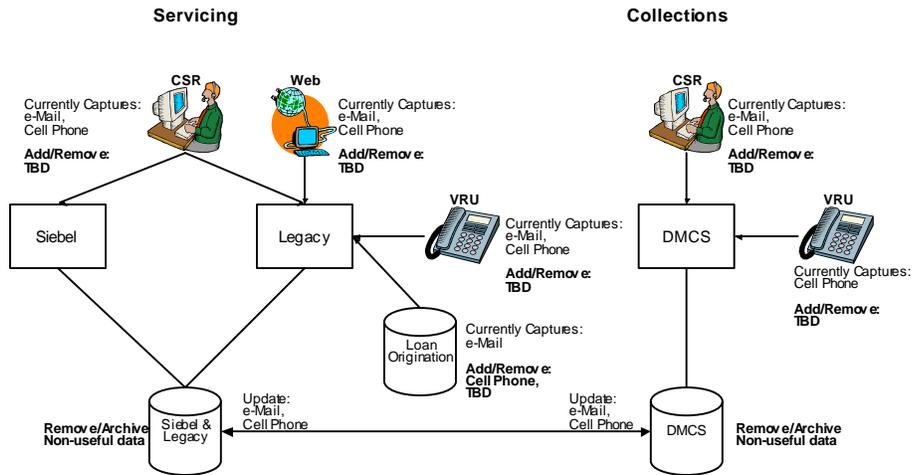
Capture Additional Borrower Information  
Phase 2





**Figure 33: Capture Additional Borrower Information-Phase 3**

Capture Additional Borrower Information  
Phase 3





**Phase 1 and 2 Cost Drivers**

**Table 25 - Capture Additional Borrower Information Cost Drivers**

Business Opportunity	Business Component	Type	Description
Phase 1	DLSS and DMCS	Business Analysts	<ul style="list-style-type: none"> <li>Review of data structure</li> </ul>
	DLSS and DMCS	Testers	<ul style="list-style-type: none"> <li>Testers to review changes made to systems</li> </ul>
	DLSS and DMCS	Developers	<ul style="list-style-type: none"> <li>DBA work for data model changes</li> <li>Interface Developers for inter and intra system work</li> </ul>
	DLSS and DMCS	Contracts	None Identified
	DLSS and DMCS	Contractors	<ul style="list-style-type: none"> <li>Would need a TO for work</li> </ul>
	DLSS and DMCS	Timeline	<ul style="list-style-type: none"> <li>Would need to synch up with system release work (i.e. forms and interfaces) but nothing should preclude this work</li> <li>Need to assess DMCS replatform issue</li> </ul>
	DLSS and DMCS	Training	<ul style="list-style-type: none"> <li>Would need to train production staff of new jobs and changes to schedules (if any)</li> </ul>
	DLSS and DMCS	SME	None Identified (current contracts should have appropriate resources)
	DLSS and DMCS	HW	<ul style="list-style-type: none"> <li>Wouldn't expect any substantial increase in DASD → review in assumptions section</li> <li>No data conversion is necessary</li> </ul>
	DLSS and DMCS	Telecom	<ul style="list-style-type: none"> <li>Not expected to increase interface and bandwidth requirements due to the amount of information for display/transmittal → review in assumptions section</li> </ul>
	DLSS and DMCS	SW	None Identified
	DLSS and DMCS	Security	<ul style="list-style-type: none"> <li>Need to establish security policies around use of new information.</li> <li>Need to update security plans and procedures for FSA/SCM → review in assumptions section</li> </ul>
Phase 2	DLSS and DMCS	Business Analysts	<ul style="list-style-type: none"> <li>Review of entire data structure</li> </ul>
	DLSS and DMCS	Testers	<ul style="list-style-type: none"> <li>Testing required of systems once significant changes to data model are performed</li> </ul>
	DLSS and DMCS	Developers	<ul style="list-style-type: none"> <li>Inter and Intra system Interfaces need updating</li> <li>User Interfaces need to be updated (Legacy, Web, VRU, and Siebel - DLSS; Legacy and VRU for Collections)</li> </ul>
	DLSS and DMCS	Contracts	None Identified
	DLSS and DMCS	Contractors	<ul style="list-style-type: none"> <li>Would need a TO for work</li> </ul>
	DLSS and DMCS	Timeline	<ul style="list-style-type: none"> <li>Would need to synch up with system release work (i.e. forms and interfaces) but nothing should preclude this work</li> <li>Need to assess DMCS replatform issue</li> </ul>
	DLSS and DMCS	Training	<ul style="list-style-type: none"> <li>Of Production Staff for new batch interfaces and job updates</li> <li>Of User community to review changes to UI layout</li> </ul>
	DLSS and DMCS	SME	<ul style="list-style-type: none"> <li>This may have data implications with other programs → need to review any changes with overall SCM data vision</li> </ul>
	DLSS and DMCS	HW	No new HW identified
	DLSS and DMCS		



Business Opportunity	Business Component	Type	Description
	DLSS and DMCS	Telecom	No Telecom issues identified
	DLSS and DMCS	SW	No new tools identified
	DLSS and DMCS	Security	<ul style="list-style-type: none"> <li>Need to update security plans and procedures for FSA/SCM → review in assumptions section</li> </ul>

## Assumptions (Cost Driver and Other)

### Phase 1 Assumptions

- For Servicing, adding cell phone with no history represents approximately 9 bytes times the overall number of contacts (6.5 Million borrowers times 9 bytes equals approximately 60 Mb of information for Legacy and approximately 60 Mb for Siebel – There are no VRU and Web space requirements since this information is displayed real time). Therefore this is not a substantial increase in storage requirements.
- For Collections, adding cell phone with no history represents approximately 9 bytes times the overall number of contacts (4.5 Million borrowers times 9 bytes equals approximately 40 Mb of information). Therefore this is not a substantial increase in storage requirements.
- For Collections, adding Email with no history represents approximately 50 bytes times the overall number of contacts (4.5 Million borrowers times 50 bytes equals approximately 225 Mb of information). Therefore this is not a substantial increase in storage requirements.
- No effect on phone networks
  - Any changes to talk time are minimal - collection/verification of cell phone and email would not take long
- Not expected to increase interface and bandwidth requirements due to the amount of information for display/transmittal (approximately 59 bytes extra to display at Collections Operating Partner system)
- No data conversion is necessary in either system since data elements will be collected via phone (VRU, Legacy and Siebel) and web updates
- Relating to reengineering/re-platforming of DMCS, changes can be made to collections system, since modifications are minor
- Changes can be made with simple DMR within Task Order structure
- Review of security and updating of security plans can be accomplished with ACM/Vendors and principle FSA personnel.

### Phase 2 Assumptions

- Changes can be made with simple DMR within Task Order structure
- Review of security and updating of security plans can be accomplished with Accenture/Contract Vendors and principle FSA personnel.

### Phase 3 Assumptions

- Updates would need to be made to application (FAFSA), processing of the application, and the transition of information to all systems.
- Review of security and updating of security plans can be accomplished with Accenture/Contract Vendors and principle FSA personnel.



## 7.4.6 Opportunity 8: Loan Consolidation

### Requirements

#### 7.4.6.1.1 Phase 1

1. Modify past DLSS code support validation edits for each Direct Loan status, eligibility to consolidate, and loan balance.
2. Update code to support PLUS loans.
3. Add Call Center user interface to support request and status (DLSS and Siebel.)
4. Modify daily batch processing to support the new functionality.
5. Test new functionality.
6. Train Call Center reps on new functionality.
7. Alter data structure to support this new information.
8. Capacity analysis of systems to support increased data that needs to be captured.
9. Capacity Analysis of Call Center to handle increased volume.

#### 7.4.6.1.2 Phase 2

1. Add web interface code to support on-line request and status on Servicing's web site.
2. Utilize e-Sign functionality that exists in Consolidations currently.

#### 7.4.6.1.3 Phase 3

1. Incorporate Phase 2 functionality on integrated web site.



### Application Software Relationship Diagram

Figure 34: Loan Consolidation-Current

Loan Consolidation  
As Is

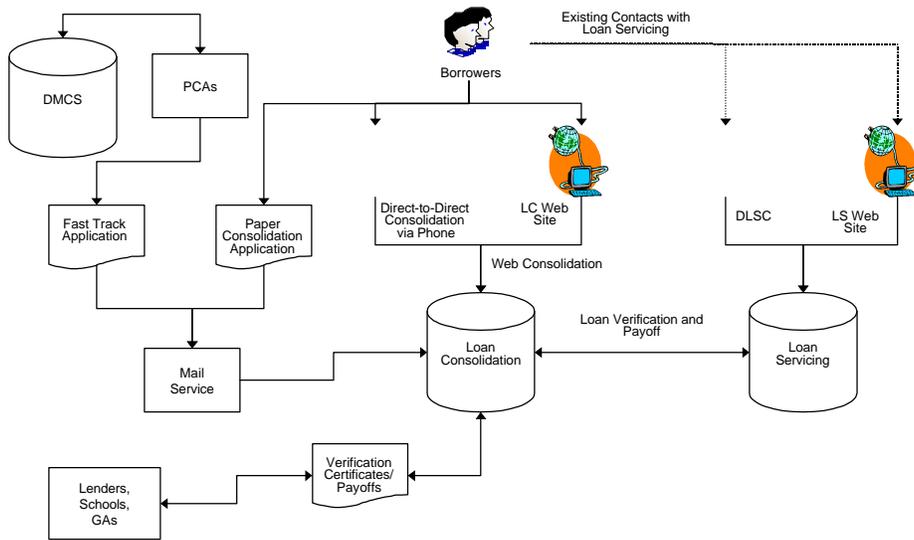




Figure 35: Loan Consolidation-Phase 1

Loan Consolidation  
Phase 1

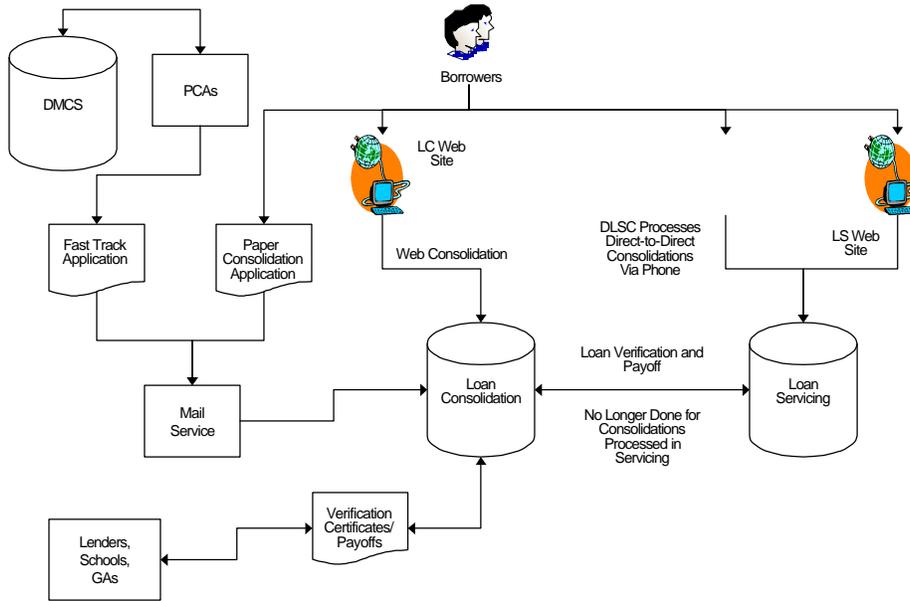
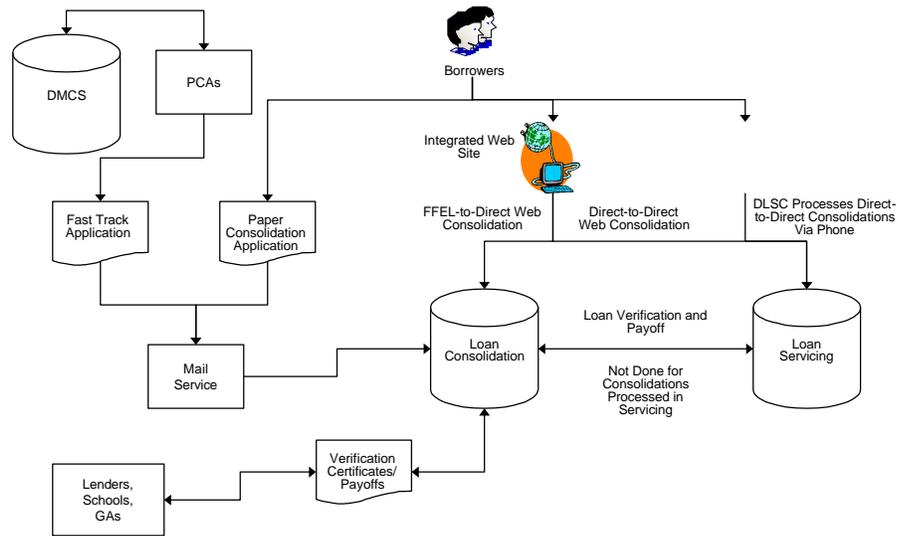




Figure 36: Loan Consolidation-Phase 2

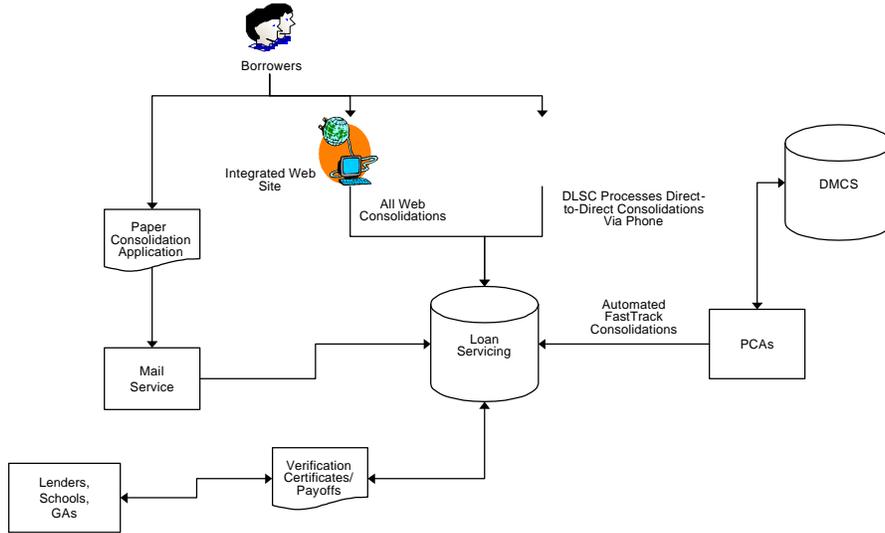
Loan Consolidation  
Phase 2





**Figure 37: Loan Consolidation-Phase 3**

Loan Consolidation  
Phase 3





**Phase 1 and 2 Cost Drivers**

**Table 26 – Loan Consolidation Cost Drivers**

Business Opportunity	Business Component	Type	Description
Phase 1	DLSS	Business Analysts	<ul style="list-style-type: none"> <li>Capacity analysis of Servicing’s VRU</li> </ul>
	DLSS	Testers	<ul style="list-style-type: none"> <li>Test new functionality in DLSS</li> </ul>
	DLSS – web, DLSS - Legacy	Developers	<ul style="list-style-type: none"> <li>Update the LC and Servicing website (design, build, test)</li> <li>Developers to update DLSS code and user interface (design, build, test)</li> </ul>
	DLC, DLSS	Contracts	<ul style="list-style-type: none"> <li>Reduce DLC</li> <li>Increase DLSS</li> <li>*Not net change</li> </ul>
		Contractors	
	DLSS, DLC	Timeline	<ul style="list-style-type: none"> <li>Will need to coordinate phone number changes</li> </ul>
	DLSS	Training	<ul style="list-style-type: none"> <li>Train Servicing CSRs on new functionality</li> </ul>
		SME	None Identified
		HW	None Identified
		Telecom	<ul style="list-style-type: none"> <li>Establish consolidation phone number at DLSC</li> </ul>
		SW	None Identified
		Security	None Identified
Phase 2		Business Analysts	None Identified
	DLSS - web	Testers	<ul style="list-style-type: none"> <li>Test new functionality</li> </ul>
	DLSS – web	Developers	<ul style="list-style-type: none"> <li>Developers to modify Servicing web site for new functionality (design, build, test)</li> </ul>
		Contracts	None Identified
		Contractors	None Identified
		Timeline	None Identified
	DLSS	Training	<ul style="list-style-type: none"> <li>Training of CSR's to assist borrowers with functionality (develop/deploy/materials)</li> </ul>
		SME	None Identified
		HW	None Identified
		Telecom	None Identified
		SW	None Identified
		Security	None Identified

**Assumptions (Cost Driver and Other)**

**Phase 1 Assumptions**

1. Modify the DLSS contract to add Direct Loan-to-Direct Loan consolidations.
2. Modify the DLC contract to reduce volumes, identify impacts to unit price.
3. Only superficial changes to the Servicing website in Phase 1.
4. Utilize eSign where appropriate.
5. Existing environment can handle this additional functionality.

**Phase 2 Assumptions**

1. A secure connection between DLC and DLSS can be established where necessary.
2. End state leverages an integrated website to support this functionality.



**Phase 3 Assumptions**

1. One contractor can maintain both Consolidation and Servicing functions.



## 7.4.7 Opportunity 10: Credit Management Data Mart Reporting Capabilities

### Requirements

#### 7.4.7.1.1 Phase 1

1. Augment the Credit Management Data Mart with Collections data
  - a. Perform Data Structure Analysis of Collections and Credit Management Data Mart (i.e. what data elements to incorporate into Credit Management Data Mart)
    - i. Modify/Expand Credit Management Data Mart data structure to include Collections data if necessary
    - ii. Review backup and archive procedures
    - iii. Test the new functionality
  - b. Perform Capacity Analysis (Expansion of HW/SW)
    - i. Purchase/Lease additional storage devices to house data
    - ii. Test the new HW
  - c. Create Batch Programs
    - i. Extraction from Collections (monthly procedure)
    - ii. Extraction from FMS (daily procedure)
    - iii. Transfer and Schedule programs to move data into Credit Management Data Mart
    - iv. Reconciliation program to review data input
    - v. Test the new functionality
2. Develop new Credit Management Data Mart reports for Collections data
  - a. Perform Reporting analysis of existing Collections MIS reports
  - b. Create/Modify Credit Management Data Mart reports as necessary
  - c. Remove Duplicate Collections MIS reports
3. Establish Policies and Procedures and Training for new Credit Management Data Mart users
  - a. Expand user base of Credit Management Data Mart (Power, Regular, Admin)
    - i. Review SW contract Requirements
  - b. Train Production Staff of new batch routines
  - c. Train User Staff of new Reporting capabilities

#### 7.4.7.1.2 Phase 2

1. Enable SCM with reporting
  - a. Fully analyze reporting requirements
  - b. Enhance Credit Management Data Mart reporting to include both Servicing and Collections
  - c. Convert Collections information into Credit Management Data Mart
    - i. Perform Test conversion of data
    - ii. Schedule and perform production data conversion into Credit Management Data Mart
2. Augment the Credit Management Data Mart with Collections data
  - a. Perform Data Structure Analysis of Collections and Servicing Credit Management Data Mart data elements



- i. Modify/Expand Credit Management Data Mart data structure to include Collections data if necessary
      - b. Perform Capacity Analysis (Expansion of HW/SW)
      - c. Purchase/Lease additional storage devices to house data
      - d. Convert Collections and Servicing information into Credit Management Data Mart
        - iii. Perform Test conversion of data
        - iv. Schedule and perform production data conversion into Credit Management Data Mart.
      - e. Create/Modify Batch Programs
      - f. Test the new functionality
    3. Develop new Credit Management Data Mart reports for Collections and Servicing data
      - a. Perform Reporting analysis of existing Collections MIS reports
      - b. Create/Modify Credit Management Data Mart reports as necessary (note: assume no changes to existing reports)
      - c. Remove Duplicate Collections MIS reports
    4. Establish Policies and Procedures and Training for new Credit Management Data Mart users
      - a. Expand user base of Credit Management Data Mart (Review SW contract Requirements)
      - b. Train/Update Production Staff of new batch routines
      - c. Train/Update User Staff of new capabilities

#### 7.4.7.1.3 Phase 3

1. Update data and reports as necessary to support other SCM functions (i.e. Delinquency Reporting via Risk Management)



### Application Software Relationship Diagram

Figure 38: Credit Management Data Mart Reporting Capabilities-Current

### CMDM Reporting Capabilities – As Is

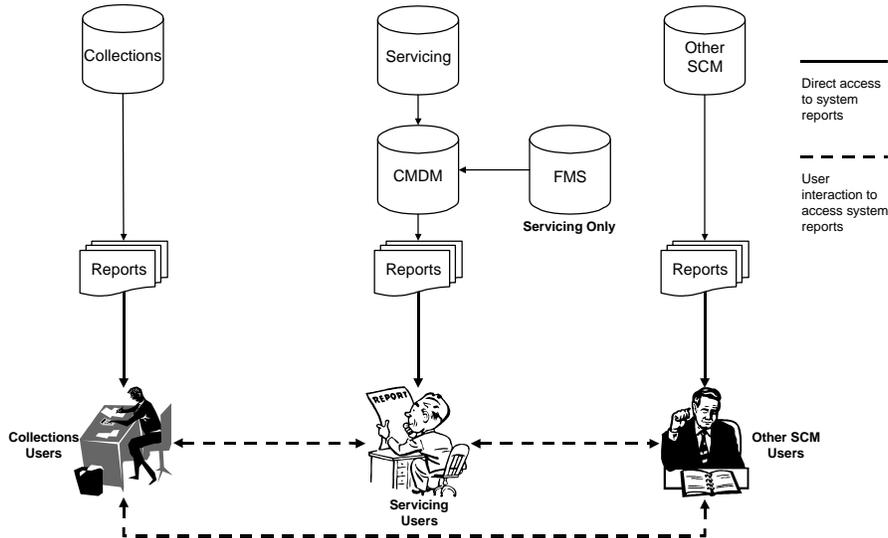


Figure 39: Credit Management Data Mart Reporting Capabilities-Phase 1

### CMDM Reporting Capabilities – Phase 1

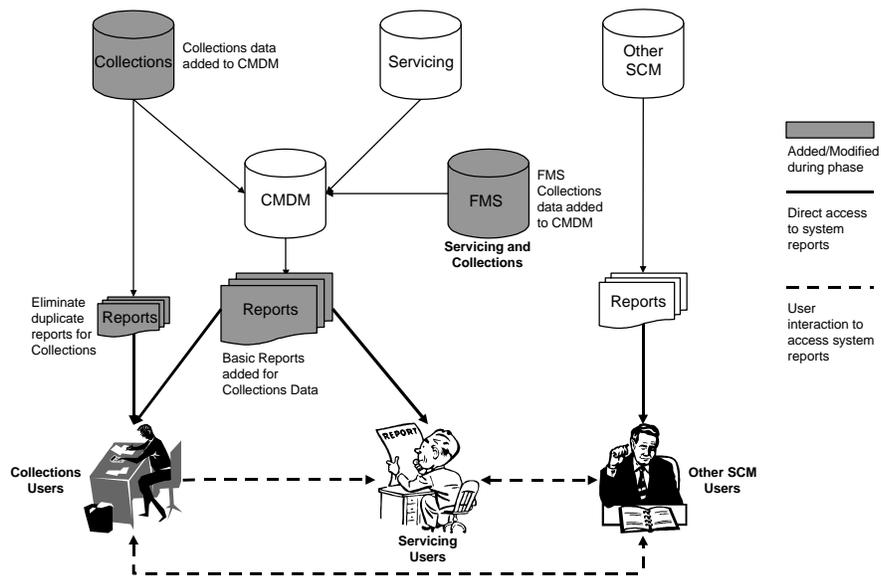




Figure 40: Credit Management Data Mart Reporting Capabilities-Phase 2

### CMDM Reporting Capabilities – Phase 2

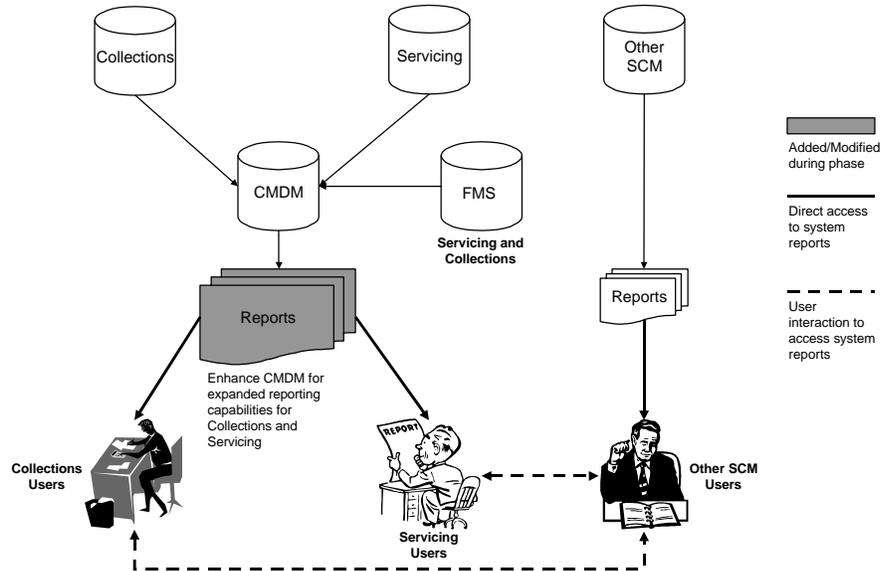
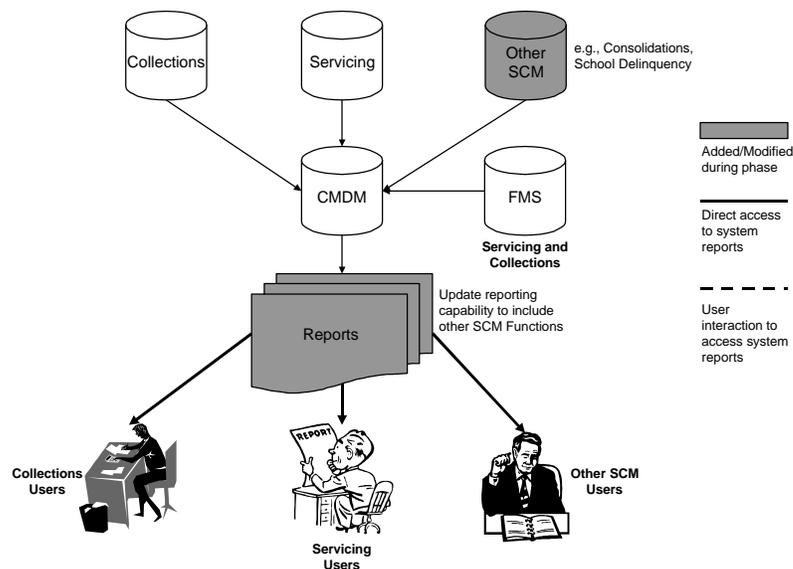


Figure 41: Credit Management Data Mart Reporting Capabilities-Phase 3

### CMDM Reporting Capabilities – Phase 3





**Phase 1 and 2 Cost Drivers**

**Table 27 - CMDM Cost Drivers**

Business Opportunity	Business Component	Type	Description
Phase 1	CMDM, FMS and DMCS	Business Analysts	<ul style="list-style-type: none"> <li>To review the current functionality (interfaces, batch processes, procedures, etc.)</li> </ul>
	CMDM, FMS, DMCS	Testers	<ul style="list-style-type: none"> <li>Testers for running of batch routines and conversion activities</li> </ul>
	DMCS	Developers - Legacy	<ul style="list-style-type: none"> <li>Need to create production batch routines that download data into Credit Management Data Mart. (this is a monthly routine)</li> </ul>
	FMS	Developers - Legacy	<ul style="list-style-type: none"> <li>Need to create production batch routines that download data into Credit Management Data Mart. (this is a daily routine)</li> </ul>
	DMCS, FMS, CMDM	Developers	<ul style="list-style-type: none"> <li>Developers for creating batch routines and reconciliation routines</li> </ul>
	DMCS, FMS, CMDM	Contracts	<ul style="list-style-type: none"> <li>Would have to evaluate any impact this may have to deliverable structure</li> </ul>
	DMCS, FMS, CMDM	Contractors	None Identified
	CMDM	Timeline	<ul style="list-style-type: none"> <li>Existing FMS conversion activities need to be complete by March 1<sup>st</sup> to begin work for adding Collections data elements</li> </ul>
	CMDM, FMS, DMCS	Training	<ul style="list-style-type: none"> <li>Training for new Credit Management Data Mart functionality and production staff for running routines at FMS and DMCS</li> </ul>
	CMDM	SME – Microstrategy	<ul style="list-style-type: none"> <li>Expert needed for configuring data structure and reports</li> </ul>
	CMDM	SME – Informatica	<ul style="list-style-type: none"> <li>Expert needed for configuring data interfaces and translations</li> </ul>
	CMDM	HW - DASD	<ul style="list-style-type: none"> <li>Need to purchase (lease from CSC) additional storage</li> </ul>
	CMDM	HW - Tapes	<ul style="list-style-type: none"> <li>Tapes for archiving data past 13 months old</li> </ul>
	CMDM	Telecom	<ul style="list-style-type: none"> <li>Would need to define a line between Collections and Credit Management Data Mart (however, both of these systems are located within the VDC)</li> <li>Would not need to define a line between FMS and Credit Management Data Mart because traffic already exists</li> </ul>
	CMDM	SW	None Identified
CMDM, FMS and DMCS	Security	<ul style="list-style-type: none"> <li>Would need to review current data security plans for Credit Management Data Mart → see associated assumption</li> </ul>	
Phase 2	CMDM, FMS, DLSS, DMCS	Business Analysts	<ul style="list-style-type: none"> <li>Needed to perform a complete review of data and system processes</li> </ul>
	CMDM, FMS, DLSS, DMCS	Testers	<ul style="list-style-type: none"> <li>Testers for running of batch routines and conversion activities</li> </ul>
	CMDM, FMS, DLSS, DMCS	Developers	<ul style="list-style-type: none"> <li>Batch program updates</li> </ul>



Business Opportunity	Business Component	Type	Description
	CMDM, FMS, DLSS, DMCS	Contracts	<ul style="list-style-type: none"> <li>Need to validate against contract deliverables</li> </ul>
	CMDM, FMS, DLSS, DMCS	Contractors	None Identified
	CMDM, FMS, DLSS, DMCS	Timeline	<ul style="list-style-type: none"> <li>Need to coordinate all activities against program schedules</li> </ul>
	CMDM, FMS, DLSS, DMCS	Training	<ul style="list-style-type: none"> <li>Training for new Credit Management Data Mart functionality and production staff for running routines at FMS, DMCS and DLSS</li> </ul>
	CMDM	SME - Microstrategy	<ul style="list-style-type: none"> <li>Expert needed for configuring data structure and reports</li> </ul>
	CMDM	SME - Informatica	<ul style="list-style-type: none"> <li>Expert needed for configuring data interfaces and translations</li> </ul>
	CMDM	HW - DASD	<ul style="list-style-type: none"> <li>Lease/Purchase additional DASD to house Credit Management Data Mart data</li> </ul>
	CMDM and others	Telecom	<ul style="list-style-type: none"> <li>Need to review with all systems to determine any changes to bandwidth → see associated assumption</li> </ul>
	CMDM	SW	<ul style="list-style-type: none"> <li>Review of SW licenses</li> </ul>
	CMDM	Security	<ul style="list-style-type: none"> <li>Would need to review current data security plans for Credit Management Data Mart → see associated assumption</li> </ul>

**Assumptions (Cost Driver and Other)**

**Phase 1 Assumptions**

1. Modeled after Servicing updates and procedures
  - a. The existing reporting by Credit Management Data Mart of Servicing data will be used to generate Collections reports. There will be no additional reports or modifications to the existing reports.
2. Changes are necessary to HW to support converting and maintaining Collections data
  - a. DASD
    - i. Won't need to purchase additional DASD (CSC has agreement with FSA for leasing purposes).
    - ii. 30 GB per month includes storage space as well as temporary space for file transfers and processing.
    - iii. Only 13 months of storage space is necessary for Collections data (30\*13 = 390 GB of overall space).
    - iv. Won't need to purchase additional DASD storage cabinets (CSC has agreement with FSA for leasing purposes).
  - b. Backups
    - i. Need to purchase additional tapes for archiving purposes of each month.
    - ii. Don't need to purchase/lease space for tape storage – CSC handles this for FSA.
    - iii. Don't need to purchase additional licenses for tape backups.
    - iv. No changes to backup procedures or archiving strategy
  - c. Database
    - i. No data structure changes are necessary because Collections data is fundamentally like Servicing data



- ii. Present Oracle Database can handle the increased volume of data.
  - iii. There are no negative performance impacts necessitating re-platforming database software or hardware.
  - iv. There will be no changes to the aggregation strategy and therefore no changes to the aggregation tables. The original intent of this strategy was to increase the performance of the data retrieval for reports.
  - v. Translation is necessary to get Collections data into Credit Management Data Mart (code modifications would take place using Informatica platform)
3. Reconciliation between Credit Management Data Mart and Collections will be handled similarly to how Direct Loan reconciles. Following this reconciliation process CFO will provide a monthly sign-off.
  4. No additional Responsibilities for QC personnel.
  5. Phase 1 will not retire the existing reporting out of Collections unless there are clearly identifiable duplicate reports that would exist with the augmentation of data into Credit Management Data Mart and the reports that are generated out of this system.
    - a. Existing licensed user base will not need to be extended (i.e. no new software requirements).
    - b. No changes to existing reports
  6. The Demographic feeds from Collections will occur on a monthly basis, and there will be a daily feed of the financial information from FMS.
  7. Would not need any additional telecom lines (All systems are located within the VDC)
  8. Media for connecting Collections to Credit Management Data Mart is already established (i.e. no new network connectivity required)
  9. New data from Collections will not affect production for existing reporting (i.e. online run times, access, etc.)
  10. No changes to existing software license agreements necessary to support additional user community
  11. Conversion will be completed by the end of Phase 1
  12. Limited testing necessary for conversion.
  13. Review of security plan is required since data usage is going to change. However, since this is primarily within the VDC and within the FSA programs, we can utilize any prior existing security requirements to fulfill this opportunity.

## **Phase 2 Assumptions**

1. Changes necessary to HW to support Collections data.
2. Modifications are necessary for Credit Management Data Mart network infrastructure for increased user activity and data requirements as well as storage and backups.
3. Changes will affect production for existing reporting (i.e. online run times, access).
4. Cannot be handled by a simple DMR.
5. Changes to existing software license agreements are necessary to support additional user community.
6. Would need to review the bandwidth required, however since most systems reside within the VDC assume no additional bandwidth required during requirements and design of Phase 2.
7. Review of security plan is required since data usage is going to change. However, since this is primarily within the VDC and within the FSA programs, we can utilize any prior existing security requirements to fulfill this opportunity.



### **Phase 3 Assumptions**

1. Changes necessary to HW to support additional data elements.
2. Modifications are necessary for Credit Management Data Mart network infrastructure for increased user activity and data requirements as well as storage and backups.
3. Changes will affect production for existing reporting (i.e. online run times, access).
4. Cannot be handled by a simple DMR.
5. Changes to existing software license agreements are necessary to support additional user community.
6. Would need to review the bandwidth required
7. Review of security plan is required since data usage is going to change.



## 7.4.8 Opportunity 11: Risk Management

### Requirements

#### 7.4.8.1.1 Phase 1

1. Create Trending Analysis Model for Servicing Data already stored in Credit Management Data Mart.
  - a. Include more data elements into Credit Management Data Mart from Servicing – after analysis
    - i. Data Structure Analysis
    - ii. HW/SW Capacity Analysis
    - iii. Conversion Activities
    - iv. Testing
    - v. Purchasing of additional software and hardware to support new model
    - vi. Review of backup/archival strategy
    - vii. Review of data reconciliation
    - viii. Updates to Batch jobs
    - ix. Updates to Batch job interfaces
  2. Create Basic reports to analyze for associated trends with Servicing Data
    - a. SMEs to evaluate Microstrategy tables and aggregation models as well as reports
    - b. Train user staff of new reports and capabilities

#### 7.4.8.1.2 Phase 2

2. Modify Trending Analysis Model to include data from Collections
  - a. Include more data elements into Credit Management Data Mart from Collections – after analysis
    - i. Data Structure Analysis
    - ii. HW/SW Capacity Analysis
    - iii. Conversion Activities
    - iv. Testing
    - v. Purchasing of additional software and hardware to support new model
    - vi. Review of backup/archival strategy
    - vii. Review of data reconciliation
    - viii. Updates to Batch jobs
    - ix. Updates to Batch job interfaces
  3. Create reports to analyze data trends across SCM.
    - c. SMEs to evaluate Microstrategy tables and aggregation models as well as reports
    - d. Train user staff of new reports and capabilities

#### 7.4.8.1.3 Phase 3

No identified steps for this opportunity during this phase.



Application Software Relationship Diagram

Figure 42: Risk Management-Current

**Risk Management – As Is**

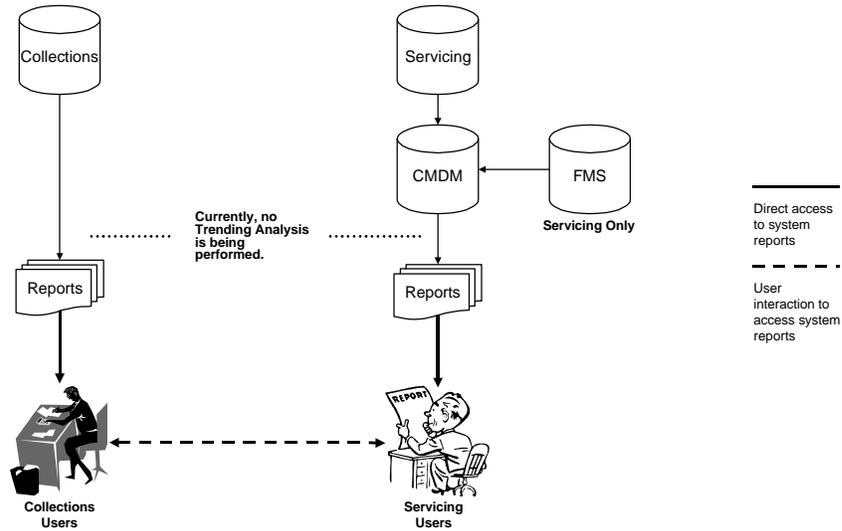


Figure 42: Risk Management-Phase 1

**Risk Management – Phase 1**

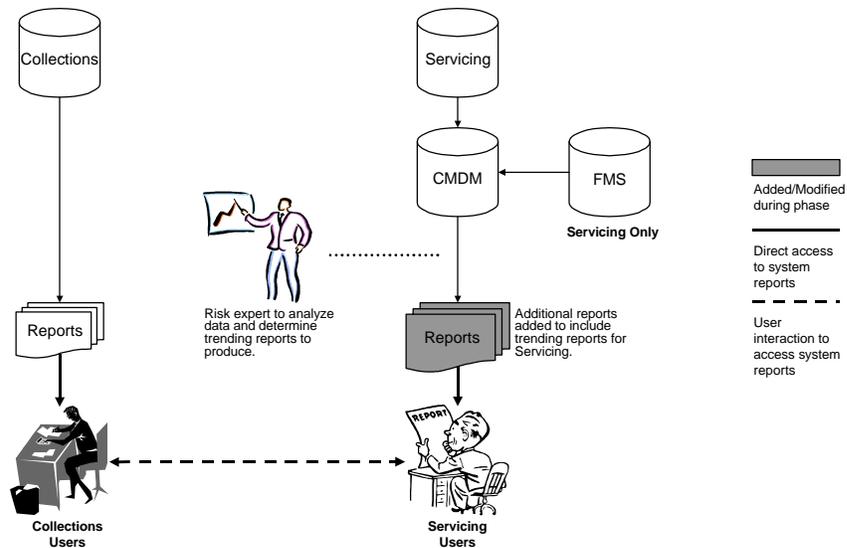
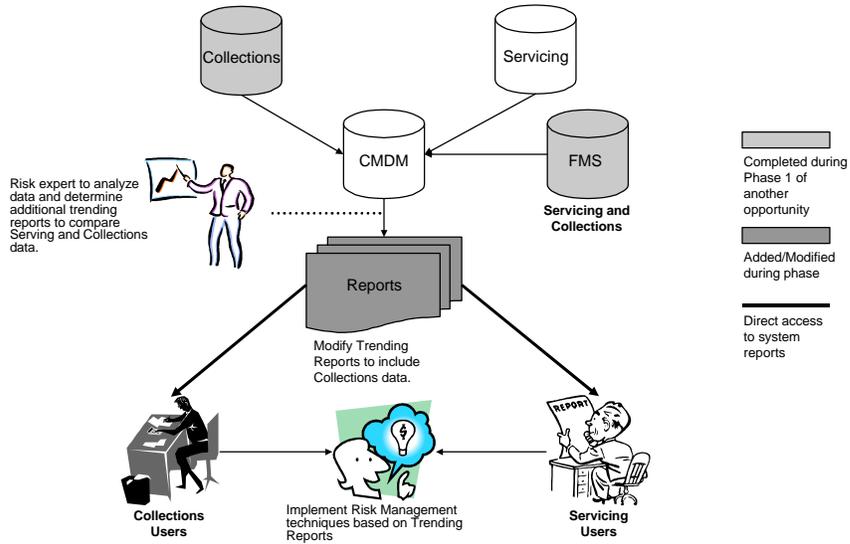




Figure 42: Risk Management-Phase 2

### Risk Management – Phase 2





**Phase 1 and 2 Cost Drivers**

**Table 28 – Risk Management Cost Drivers**

Business Opportunity	Business Component	Type	Description
Phase 1	CMDM, DLSS, FMS	Business Analysts	<ul style="list-style-type: none"> <li>Needed to perform trending reports analysis</li> </ul>
		Testers	None Identified
	CMDM, DLSS, FMS	Developers	<ul style="list-style-type: none"> <li>Updates to Batch programs</li> </ul>
		Contracts	None Identified
		Contractors	None Identified
		Timeline	None Identified
	CMDM	Training	<ul style="list-style-type: none"> <li>Updated training material if more reports are created</li> </ul>
	CMDM, DLSS	SME	<ul style="list-style-type: none"> <li>Microstrategy Expert if reports need modification (aggregation tables, etc.)</li> <li>Informatica Expert if data streams need modification</li> </ul>
	CMDM	HW	<ul style="list-style-type: none"> <li>Need a capacity analysis if more data is added to Credit Management Data Mart to increase reporting efficiency</li> </ul>
		Telecom	None Identified
		SW	None Identified
		CMDM	Security
Phase 2	CMDM, DLSS, DMCS, FMS	Business Analysts	<ul style="list-style-type: none"> <li>Needed to perform trending reports analysis</li> </ul>
		Testers	None Identified
	CMDM, DLSS, DMCS, FMS	Developers	<ul style="list-style-type: none"> <li>Updates to Batch programs</li> </ul>
		Contracts	None Identified
		Contractors	None Identified
		Timeline	None Identified
	CMDM	Training	<ul style="list-style-type: none"> <li>Updated training material if more reports are created</li> </ul>
	CMDM, DLSS, DMCS	SME	<ul style="list-style-type: none"> <li>Microstrategy Expert if reports need modification (aggregation tables, etc.)</li> <li>Informatica Expert if data streams need modification</li> </ul>
	CMDM	HW	<ul style="list-style-type: none"> <li>Need a capacity analysis if more data is added to Credit Management Data Mart to increase reporting efficiency</li> </ul>
		Telecom	None Identified
		SW	None Identified
		CMDM	Security

**Assumptions (Cost Driver and Other)**

**Phase 1 Assumptions**

1. Detailed Analysis of existing reporting to take place within Credit Management Data Mart for DLSS information.
  - a. All FMS data to be loaded into Credit Management Data Mart by March 1<sup>st</sup>.
2. If reports are to be modified with no new additional data elements, only Microstrategy personnel required



3. If reports are to be modified with new additional data elements, Microstrategy and Informatica personnel are necessary
  - a. Would need a capacity analysis of existing HW for DASD requirements
  - b. Would need to modify batch programs at DLSS and Credit Management Data Mart for new data elements
  - c. Would need to modify batch programs at FMS and Credit Management Data Mart for new data
  - d. Would need to modify batch programs at DLSS and Credit Management Data Mart for new data elements
    - i. Need Informatica resource
    - ii. Need Microstrategy resource for data model and report

### **Phase 2 Assumptions**

1. Detailed Analysis of existing reporting to take place within Credit Management Data Mart for DLSS and DMCS information
2. If reports are to be modified with no new additional data elements, only Microstrategy personnel required
3. If reports are to be modified with new additional data elements, Microstrategy and Informatica personnel are necessary
  - a. Would need a capacity analysis of existing HW for DASD requirements
  - b. Would need to modify batch programs at DLSS, DMCS and Credit Management Data Mart for new data elements
  - c. Would need to modify batch programs at FMS and Credit Management Data Mart for new data
  - d. Would need to modify batch programs at DLSS and Credit Management Data Mart for new data elements
    - i. Need Informatica resource
    - ii. Need Microstrategy resource for data model and report

### **Phase 3 Assumptions**

There is no opportunity work with this phase.



## 7.4.9 Opportunity 12: Document Warehousing and Retention

### Requirements

#### 7.4.9.1.1 Phase 1

1. Move Servicing Promissory Notes to either the Collections or Consolidations warehouse
  - a. Review and Update Promissory Note location references throughout FSA systems
  - b. Take backup images of all Promissory Notes (if they don't already exist)
  - c. Prepare Promissory Notes for shipment (obtain boxes and shipment services)
  - d. Move Promissory Notes to new site
  - e. Re-index Promissory Notes based on indexing scheme
  - f. Review Report of movement to ensure nothing has been lost

#### 7.4.9.1.2 Phase 2

1. Review and update document retention and storage policies
  - a. Establish review of current document retention and storage policies
    - i. Establish Legal Definition of retention
  - b. For Documents that no longer need hardcopy element
    - i. Sample Review current image of target documents
    - ii. Re-Index and Re-Image if necessary
    - iii. Destroy outdated documents

#### 7.4.9.1.3 Phase 3

No identified opportunity work during this phase.



## Application Software Relationship Diagram

Figure 44: Document Warehousing and Retention-Current

### Document Warehousing and Retention As Is

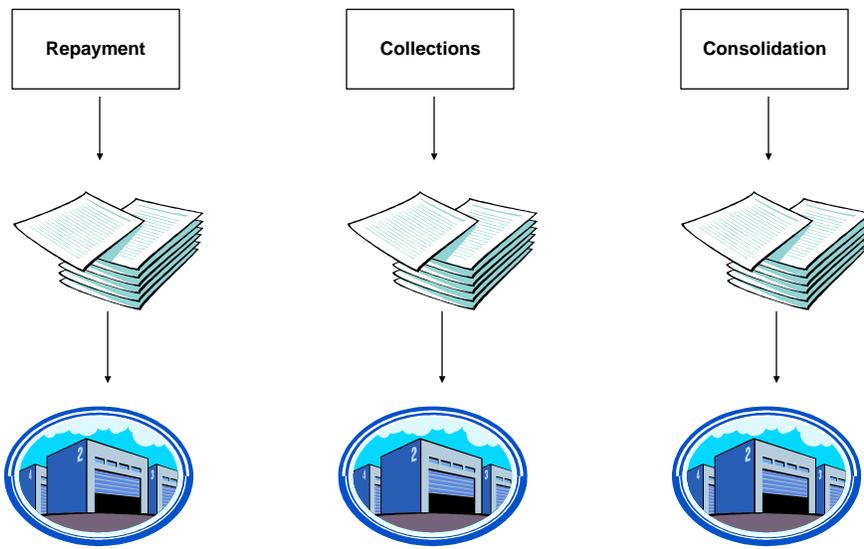
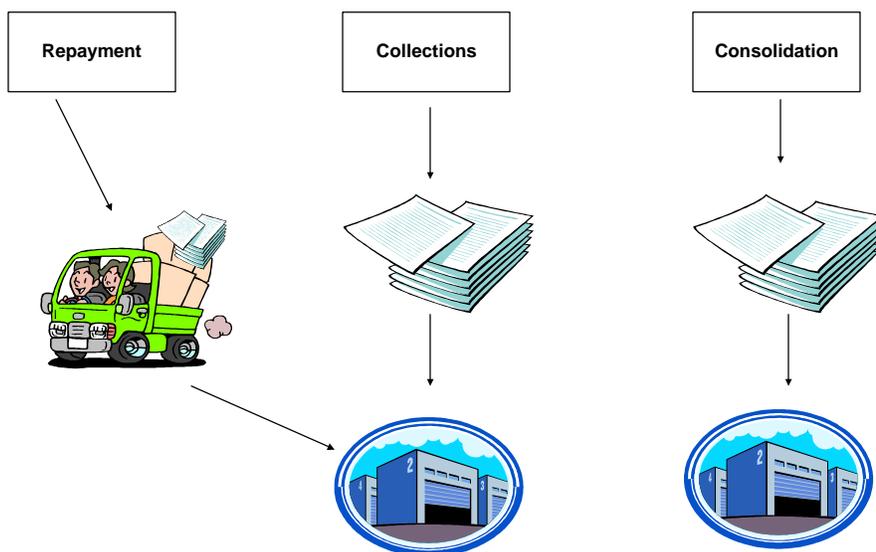


Figure 45: Document Warehousing and Retention-Phase 1

### Document Warehousing and Retention Phase 1





**Phase 1 and 2 Cost Drivers**

**Table 29 – Document Warehousing and Retention Cost Drivers**

Business Opportunity	Business Component	Type	Description
Phase 1	DLSS, DMCS	Business Analysts	<ul style="list-style-type: none"> <li>Research all indexing of DLSS for existing P-Notes and how these would be re-indexed into new system</li> </ul>
		Testers	None Identified
		Developers	None Identified
	DLSS, DMCS	Contracts	<ul style="list-style-type: none"> <li>Adjust DLSS deliverable for P-Notes</li> </ul>
		Contractors	<ul style="list-style-type: none"> <li>Needed for moving P-Notes to new site</li> </ul>
	DLSS, DMCS	Timeline	None Identified
		Training	None Identified
		SME	None Identified
		HW	None Identified
		Telecom	None Identified
		SW	None Identified
DLSS	Security	<ul style="list-style-type: none"> <li>Review and update security plan for DLSS around Promissory Note storage</li> </ul>	
Phase 2	DMCS, LO/LC	Business Analysts	<ul style="list-style-type: none"> <li>Research archiving and storage definitions</li> <li>Research existing warehousing functions</li> </ul>
		Testers	None Identified
		Developers	None Identified
	DMCS, LO/LC	Contracts	<ul style="list-style-type: none"> <li>Contract Language is modified</li> </ul>
		Contractors	None Identified
		Timeline	None Identified
		Training	None Identified
		SME	None Identified
		HW	None Identified
		Telecom	None Identified
		SW	None Identified
DMCS, LO/LC	Security	<ul style="list-style-type: none"> <li>Review and update security plans around Promissory Note storage</li> </ul>	

**Assumptions (Cost Driver and Other)**

**Phase 1 Assumptions**

1. For Estimate purposes, assume that the two final systems are interchangeable → therefore use DMCS as reference destination system
2. No additional security requirements would occur based on shipping these Promissory Notes.

**Phase 2 Assumptions**

1. Security plans would need review/revision with new document retention standards

**Phase 3 Assumptions**

No tasks associated with this phase of the opportunity.



## 7.4.10 Opportunity 15: Electronic Refunds

### Requirements

#### 7.4.10.1.1 Phase 1

1. No Phase 1 Requirements

#### 7.4.10.1.2 Phase 2

1. Select a pilot group of Schools and Lenders to receive Electronic Refunds.
2. Modify data that is sent to FMS to include Schools' /Lenders' bank account information.
3. Modify FMS and FMSS/GAPS to send, receive, and store bank account information for Schools/Lenders.
4. Automate payments for Schools/Lenders pilot group.
5. Modify Servicing Accounting Group data that is sent to FMS to include EDA borrowers' bank account information.
6. Modify FMS and FMSS/GAPS to send/receive and store bank account information borrowers.
7. FMSS/GAPS process the information using existing functionality to electronically apply refunds to borrowers bank account.

#### 7.4.10.1.3 Phase 3

1. Extend pilot for all schools and lenders.



### Application Software Relationship Diagram

Figure 46: Electronic Refunds-Current

Electronic Refunds  
As Is

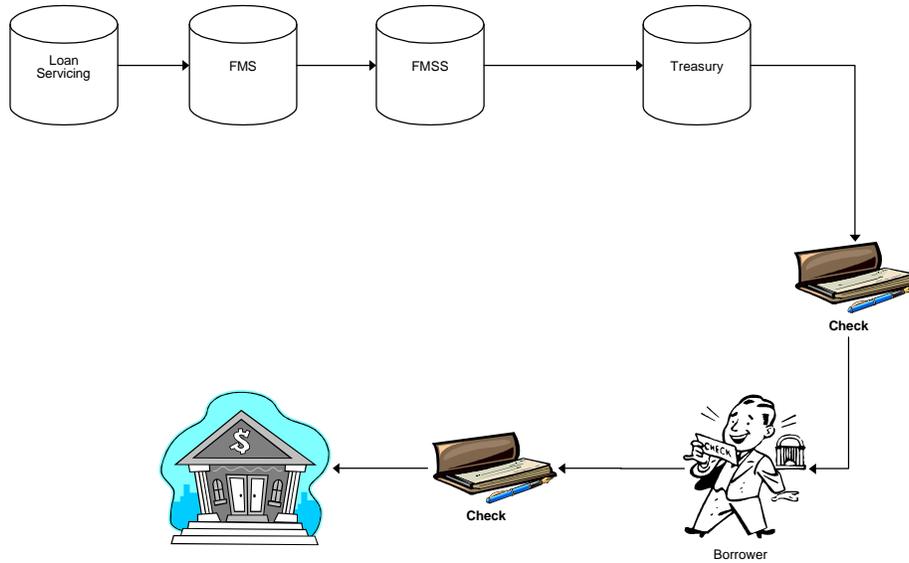


Figure 47: Electronic Refunds-Phase 1.1

Electronic Refunds  
Phase 2 – Option 1

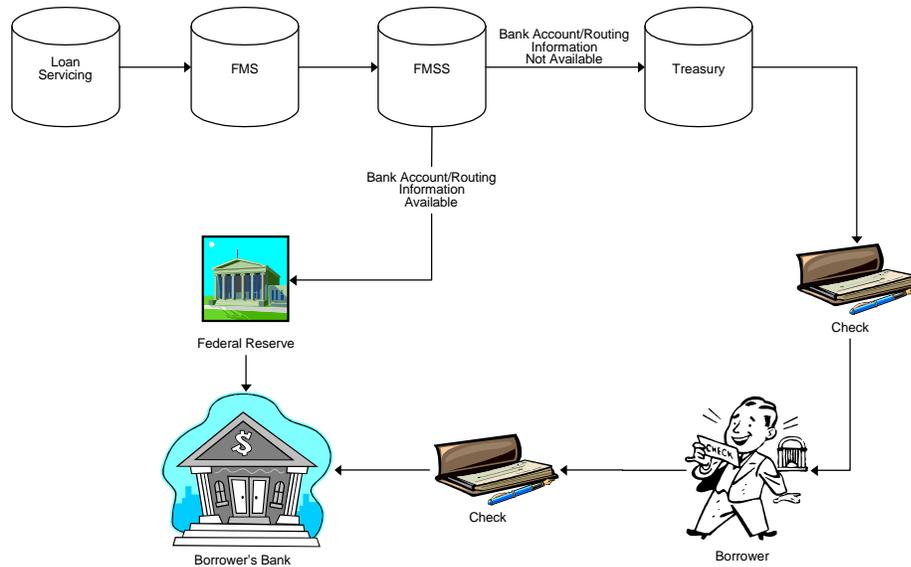
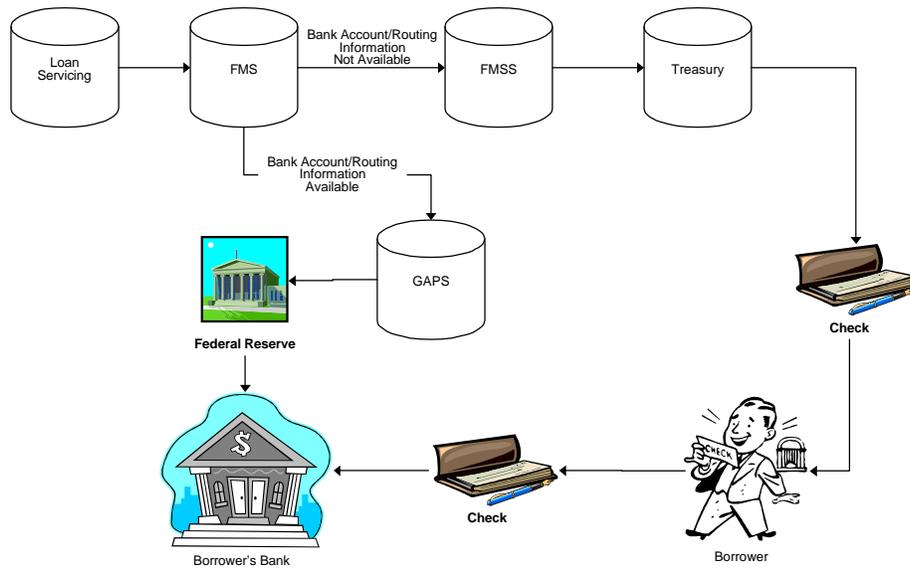




Figure 47: Electronic Refunds-Phase 1.2

Electronic Refunds  
Phase 2 – Option 2





**Phase 1 and 2 Cost Drivers**

**Table 30 - Electronic Refunds Cost Drivers**

Business Opportunity	Business Component	Type	Description
Phase 2		Business Analysts	None Identified
	DLSS, FMS, FMSS/GAPS	Testers	<ul style="list-style-type: none"> <li>Test new functionality end to end.</li> </ul>
	DLSS, FMS, FMSS/GAPS	Developers	<ul style="list-style-type: none"> <li>Servicing – Developers Modify files sent to FMS to include bank account information</li> <li>FMS/FMSS/GAPS – Developers to modify scripts to process new information</li> </ul>
		Contracts	None Identified
		Contractors	None Identified
		Timeline	None Identified
		Training	None Identified
		SME	None Identified
		HW	None Identified
		Telecom	None Identified
		SW	None Identified
	Security	None Identified	

**Assumptions (Cost Driver and Other)**

**Phase 1 Assumptions**

There is no Phase 1 component for this opportunity.

**Phase 2 Assumptions**

1. FMSS/GAPS and FMS will be willing to send electronic refunds directly to borrowers.
2. FMSS/GAPS and PMS currently have the ability to electrically send funds to banks.
3. FMSS/GAPS currently has the ability to store all borrower, school, and lender bank account information.

**Phase 3 Assumptions**

None identified for this opportunity during this phase.



## 7.4.11 Opportunity 16: Integrated Web Site

### Requirements

#### 7.4.11.1.1 Phase 1

There are no identifiable technology requirements for this phase.

#### 7.4.11.1.2 Phase 2

1. Implement one Web Site for all SCM functions
  - a. Establish Security Requirements
  - b. Establish Operation Procedures (Uptime, Downtime, etc.)
  - c. Establish rules of behavior for Web Site
  - d. Existing Web Site Analysis for functionality
    - i. Develop Requirements for integrated Web Site
    - ii. Solicit RFP
    - iii. Vendor Analysis and Hardware and Software Analysis
    - iv. Choose Vendor, Platform, and Software
  - e. Build Test and Development Environments
    - i. Perform an initial capacity analysis for Web Site
    - ii. Purchase and Setup HW
    - iii. Purchase and Setup SW
    - iv. Purchase Telecom Bandwidth
    - v. Create Interface Architecture between new site and existing Legacy Systems
      1. Test Interface connectivity

#### 7.4.11.1.3 Phase 3

1. Work on possible Web Site enhancements
  - a. Review Security Requirements
  - b. Review Operational Procedures
  - c. Review Web Site Behavior rules
  - d. Perform Current Web Site Analysis
    - i. Functional Analysis
    - ii. Capacity Analysis (HW, SW and Telecom)



### Application Software Relationship Diagram

Figure 49: Integrated Web Site-Current

#### Integrated Web Site – As-Is (System Centric)

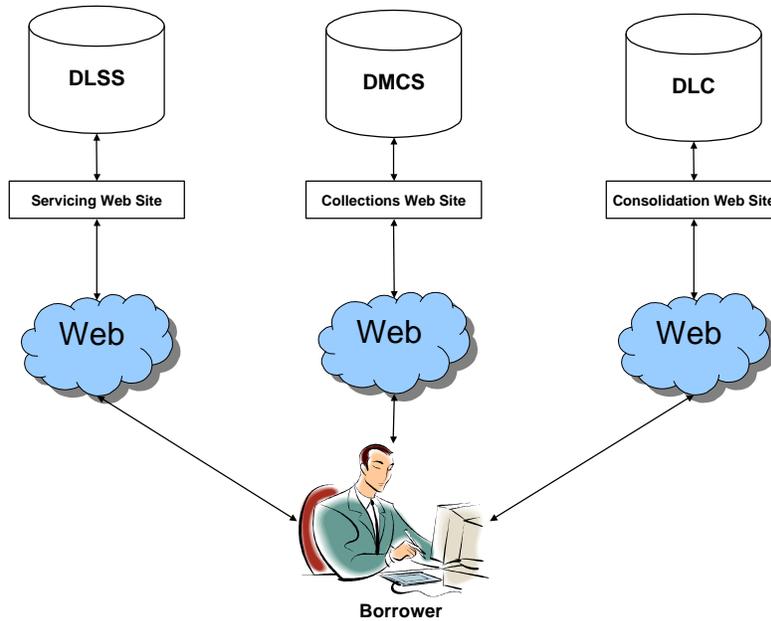
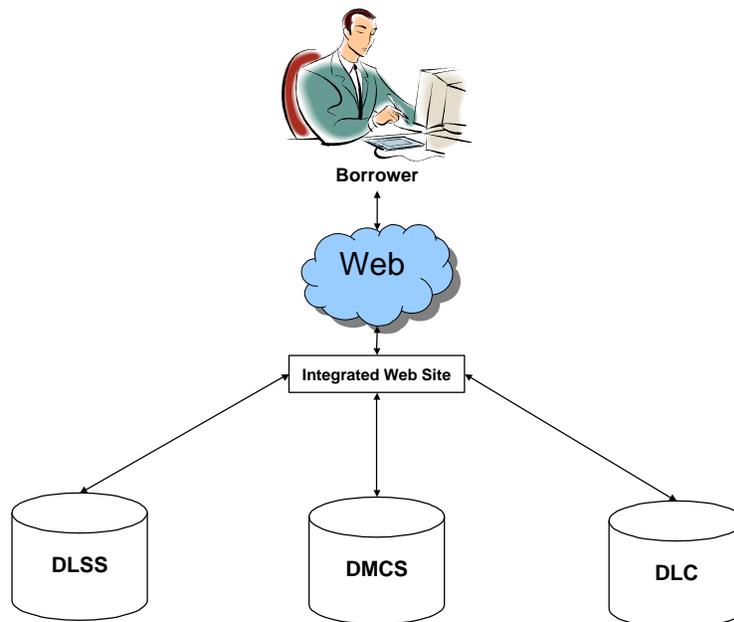


Figure 50: Integrated Web Site-Phase 2

#### Integrated Web Site – Phase 2 (Borrower Centric)





**Phase 1 and 2 Cost Drivers**

**Table 31 - Integrated Web Site Cost Drivers**

Business Opportunity	Business Component	Type	Description
Phase 2	DLSS, DMCS, LO/LC	Business Analysts	<ul style="list-style-type: none"> <li>• Needed to perform functional analysis of site</li> </ul>
	DLSS, DMCS, LO/LC	Testers	<ul style="list-style-type: none"> <li>• Testers needed for network and interface connectivity</li> </ul>
	DLSS, DMCS, LO/LC	Developers	<ul style="list-style-type: none"> <li>• Developers for Interface work</li> <li>• DBA for Database Architecture Design</li> </ul>
	SCM	Contracts	<ul style="list-style-type: none"> <li>• Vendor Analysis and Selection</li> </ul>
	DLSS, DMCS, LO/LC	Contractors	<ul style="list-style-type: none"> <li>• Contractors for interface work</li> </ul>
	DLSS, DMCS, LO/LC	Timeline	<ul style="list-style-type: none"> <li>• Need to synchronize with existing environments and schedules</li> </ul>
	SCM	Training	<ul style="list-style-type: none"> <li>• Training for new application software</li> </ul>
	SCM	SME	<ul style="list-style-type: none"> <li>• Necessary for new application software</li> </ul>
	SCM	HW	<ul style="list-style-type: none"> <li>• Application Servers (Application, Web)</li> <li>• HW storage cabinets</li> <li>• PC peripherals (keyboards, mouse, monitors, cabling, etc.)</li> <li>• Database Servers</li> <li>• Firewall/Security Infrastructure</li> </ul>
	SCM	Telecom	<ul style="list-style-type: none"> <li>• Need connectivity between all legacy sites and Internet</li> </ul>
	SCM	SW	<ul style="list-style-type: none"> <li>• Review Software Requirements and Licenses</li> <li>• Operating System</li> <li>• Database</li> <li>• Development Tools</li> <li>• Security Application</li> <li>• Backup Utilities (Tapes, etc.)</li> <li>• Web Site Application</li> </ul>
	DLSS, DMCS, LO/LC	Security	<ul style="list-style-type: none"> <li>• Need to assess Site Security</li> <li>• Need to review Security plans</li> <li>• Need to review Security Software for application</li> </ul>

**Assumptions (Cost Driver and Other)**

**Phase 2 Assumptions**

1. Would need to build new environment to support development activities
2. Would partner with a vendor that has the appropriate user network, building security, etc.
3. Standard development environment includes an application server, a web server and a database server.
4. Would require at least one T1 connectivity to all existing development sites.
5. Would use Microsoft products for Operating system of development application servers.
6. Would use Unix and Oracle for the Database technology
7. Would require new servers to have tape backups (DLT technology)

**Phase 3 Assumptions**

None identified for this opportunity during this phase.



## 7.4.12 Opportunity 18: Borrower Comment Access

### Requirements

#### 7.4.12.1.1 Phase 1

There are no identifiable technology requirements for this phase.

#### 7.4.12.1.2 Phase 2

1. Develop web based application to accept social security number of borrower and return Borrower Comment data from Servicing, Consolidations, and Collections systems respectively.
2. Leverage existing MQ Series Bus to take requests from the web application and interface with DLSS, DMCS, and DLC systems respectively.
3. The data returned from the systems will be formatted and passed back to web application through the MQ layer for viewing.
4. Create and administer login ID's.
  - a. Develop policies for administering security for new solution.
    - i. Create functionality for password expiration, lock out, and logging specifications. (It might be possible to leverage authentication functionality and policy on the Dept of Ed web site for DLSS)
5. Review client desktop requirements.
6. Review network access/security policies (ports, fire walls, etc.).
7. Test application functionality.
8. Test access across user base.
9. Distribute login ID's.

#### 7.4.12.1.3 Phase 3

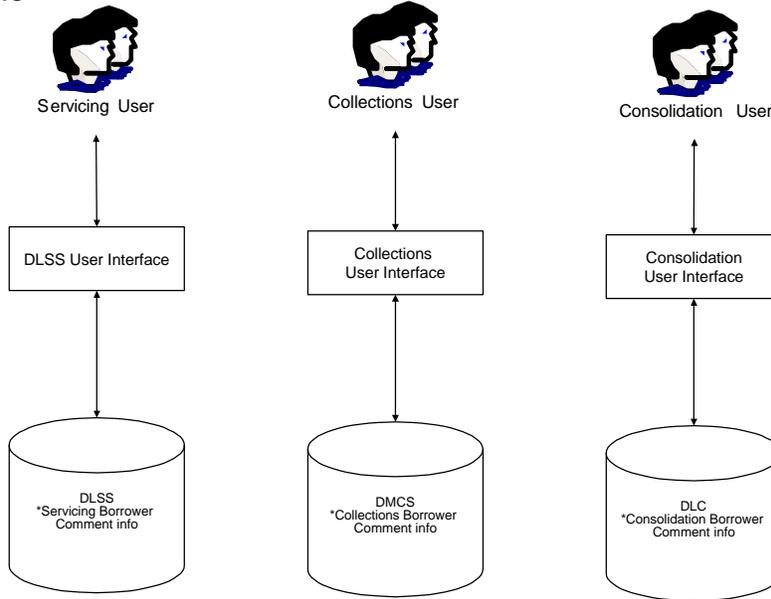
1. Create a central authentication database or leverage an existing initiative to provide a centralized point for authentication and Login Administration.



### Application Software Relationship Diagram

**Figure 51: Borrower Comment Access-Current**

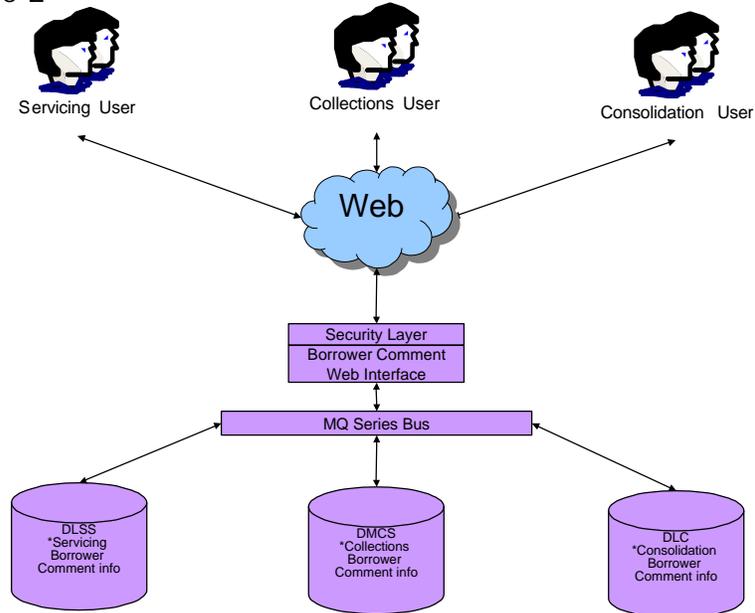
Borrower Comment Access  
As-Is





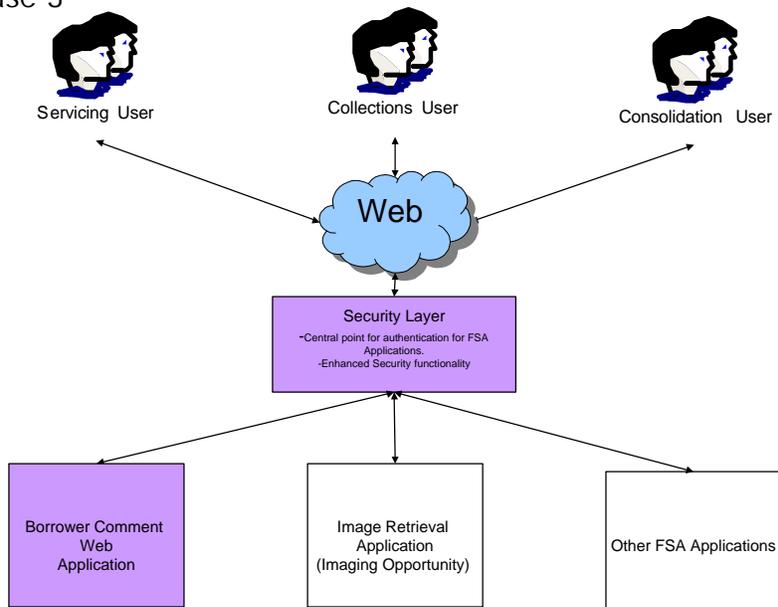
**Figure 51: Borrower Comment Access-Current**

Borrower Comment Access  
Phase 2



**Figure 52: Borrower Comment Access-Current**

Borrower Comment Access  
Phase 3





**Phase 1 and 2 Cost Drivers**

**Table 32 - Borrower Comment Access Cost Drivers**

Business Opportunity	Business Component	Type	Description
Phase 2		Business Analysts	None Identified
	DLSS, DMCS, DLC	Testers	<ul style="list-style-type: none"> <li>Test application functionality</li> <li>Test accessibility across user base</li> </ul>
	DLSS, DMCS, DLC	Developers	<ul style="list-style-type: none"> <li>Develop web application</li> <li>Build and maintain authentication and security structures.</li> <li>Develop MQ Series Bus to interface with legacy systems</li> <li>Legacy Developers create interface with MQ Series Bus</li> </ul>
		Contracts	None Identified
		Contractors	None Identified
		Timeline	None Identified
	DLSS, DMCS, DLC	Training	<ul style="list-style-type: none"> <li>Train users on access and functionality of new application</li> </ul>
		SME	None Identified
		HW	<ul style="list-style-type: none"> <li>Servers to host web application</li> <li>Production Infrastructure</li> <li>Server to host Dev and Test Environments</li> </ul>
		Telecom	None Identified
		SW	<ul style="list-style-type: none"> <li>MQ Series</li> <li>MQSI</li> <li>Web application development tools</li> </ul>
	DLSS, DMCS, DLC	Security	<ul style="list-style-type: none"> <li>Develop authentication and security protocols</li> </ul>

**Assumptions (Cost Driver and Other)**

**Phase 1 Assumptions**

There is no Phase 1 Component associated with this opportunity.

**Phase 2 Assumptions**

1. Users who need to access this application may not have access to the ED LAN.
2. Users will only require “Read Only” access to Borrower Comment data.
3. Users will not use this application to view any other data besides borrower comment data.
4. Security will be administered at the authentication level on the web application.
5. There is an existing MQ Series bus that can leveraged for this new application and can handle the load.



### **Phase 3 Assumptions**

1. An initiative to create a central authentication database within ED or within Servicing, Collections, or LC is being implemented. If there isn't such a database, then there might be a large opportunity to implement one.



## 7.5 Other Opportunities

This section provides Phase Work Definitions for opportunities that do not have a technical component.

**Table 33 - Other Opportunities**

Opportunity Number	Opportunity Name	Phase 1	Phase 2	Phase 3
5	Legal Proceeding Resources	<ul style="list-style-type: none"> <li>Pilot resource sharing for a limited number of cases</li> <li>Resources are provided necessary information</li> <li>Develop To-Be model for SCM Legal Proceedings</li> <li>Research other areas of consolidation</li> </ul>	<ul style="list-style-type: none"> <li>Provide access to multiple systems for all SCM Legal Proceeding resources</li> <li>Train staff</li> <li>Reorganize organization into SCM Legal Proceeding Group</li> <li>Other areas as identified by Phase 1</li> </ul>	No Work Identified
6	Central Contract Management	<ul style="list-style-type: none"> <li>Conduct review of current contract management functions</li> <li>As-Is Assessment</li> <li>Develop recommendations – To-Be Model</li> <li>Implement quick hits (e.g., house all contract management resources on one team)</li> <li>Begin to incorporate common language and specifications in all contracts across SCM</li> </ul>	<ul style="list-style-type: none"> <li>Reorganize to To-Be Model</li> <li>Culture change – Performance Based Contracting, Flexible, Outcome Focused</li> <li>Provide performance support – training</li> </ul>	
7	Share USPS Skip Tracing Services	<ul style="list-style-type: none"> <li>2 Lessons learned discussions between key POCs (FSA and Contractor) for DLSS and DMCS address changes</li> <li>1 Discussion with USPS regarding benefits/trade-offs of each service; potential discussion of other services offered by USPS</li> <li>Review IRS Skip Trace (currently used only by DMCS) process and agreement to determine if there is overlap with USPS services, either in benefits and/or cost</li> </ul>	<ul style="list-style-type: none"> <li>Move forward with implementation of shared service(s) across both DLSS and DMCS, which maximizes benefits to both and reflects objectives of the Risk Management Approach for Common Services for Borrowers</li> </ul>	No Work Identified



Opportunity Number	Opportunity Name	Phase 1	Phase 2	Phase 3
13	Bankruptcy Unit	<ul style="list-style-type: none"> <li>• Repayment to piggyback current agreement with ECMC to handle processing of DL bankruptcy cases</li> <li>• Compete Services</li> <li>• Hire additional staff within Repayment to process bankruptcies</li> </ul>	No Work Identified	No Work Identified
14	Leverage GA Best Practices	<ul style="list-style-type: none"> <li>• Solicit best practices from Gas</li> <li>• Hold Meetings between Gas, Servicers, and FSA to discuss best Practices</li> </ul>	No Work Identified	No Work Identified
18	Discharge/Cancellation Unit	No Work Identified	<ul style="list-style-type: none"> <li>• Perform an analysis of the Discharge/Cancellation Unit functions</li> </ul>	<ul style="list-style-type: none"> <li>• Modify Loan verification certificates such that lenders certify that underlying loans are not known to be dischargeable</li> <li>• Modify consolidation application such that borrowers attest that underlying loans are not known to be dischargeable</li> </ul>
19	Central IQCU	No Work Identified	<ul style="list-style-type: none"> <li>• Fulfillment IQCU</li> <li>• Other Quality Opportunities</li> </ul>	No Work Identified



## 8 Equipment and Facilities Architecture

This Equipment and Facilities Architecture highlights all the equipment and facilities required to operate the CSB Business Architecture.

The Equipment and Facilities Architecture includes the following sections:

- **Equipment and Facilities Definition** - Lists all the equipment or equipment categories as well as the facilities required to support the CSB Business Architecture
- **Equipment and Facilities Relationship Diagram** – Illustrates the interactions between different types of equipment and facilities within the CSB business architecture

Each of these sections illustrates the hardware and system software as well as the execution, development and operations environments required to support the implementation of CSB opportunities. Specific components address:

- Physical network and computing platforms required to support the delivery vehicles:
  - A description of, and logical placement for, the computer and communications hardware
  - Interfaces between systems and facilities
  - Computer and communications services required to support the CSB Business Architecture
  - Required response time, availability and security
- Workspace characteristics required to support the CSB Business Architecture

The following Opportunities do not have an Equipment and Facilities Architecture component during Phase 1 or otherwise:

**Table 34 - Opportunities with no Equipment and Facilities Architecture component during Phase 1**

#	Opportunity Title	Reason for Exclusion from this section
1	Payment Processing	Only a Phase II Opportunity
2	Legal Proceeding Resources	No Technical Requirements identified for this Opportunity
3	Correspondence	Phase I is exclusive to bringing up new Correspondence Business Partner with single mail stream from DLSS
4	NDNH Data Match	Phase I is exclusive to providing a Pilot and all transmission of data will be manually processed
6	Central Contract Management	No Technical Requirements identified for this Opportunity
9	Share USPS Skip Tracing Services	No Technical Requirements identified for this Opportunity
12	Document Warehousing and Retention	Phase I is exclusive to moving Promissory Notes out of DLSS warehouse
14	Bankruptcy Unit	No Technical Requirements identified for this Opportunity
15	Leverage GA Best Practices	No Technical Requirements identified for this Opportunity
17	Discharge / Cancellation Unit	No Technical Requirements identified for this Opportunity



## 8.1 Opportunity 5: Imaging

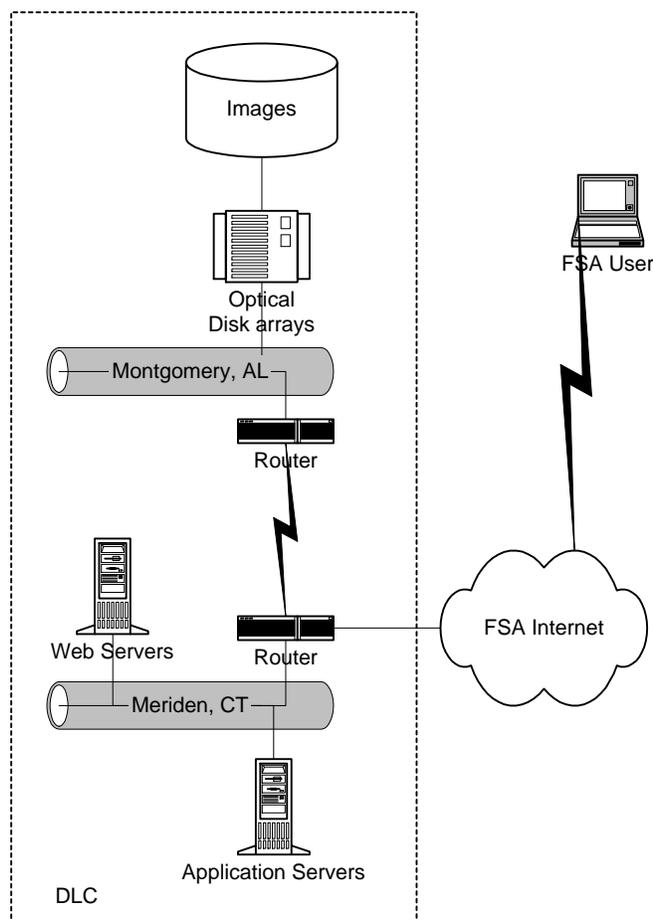
### 8.1.1 Equipment Definition

**Table 35 - Imaging Equipment Definition**

System	Component and Location	Work Performed
LC	Convera RetrievalWare (Meriden, CT)	<ul style="list-style-type: none"> <li>Add User IDs and passwords for ED Personnel</li> <li>Make application accessible from the web</li> </ul>

### 8.1.2 Equipment Relationship Diagram

**Figure 53: Imaging Equipment Relationship**





## 8.2 Opportunity 7: Capture Additional Borrower Information

### 8.2.1 Equipment Definition

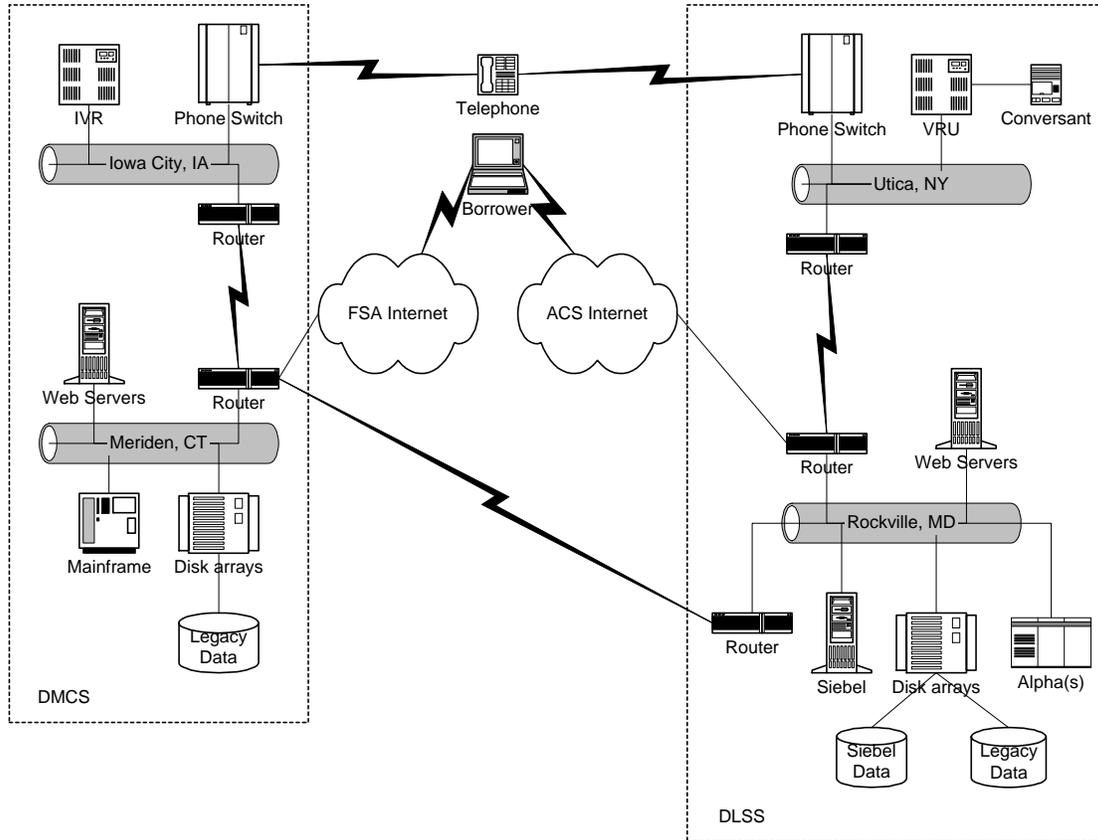
**Table 36 - Capture Additional Borrower Information Equipment Definition**

System	Component and Location	Work Performed
DLSS	Legacy DB	<ul style="list-style-type: none"> <li>Add field data structure information for cell phone</li> </ul>
DLSS	Legacy UI	<ul style="list-style-type: none"> <li>Add field for cell phone</li> </ul>
DLSS	Siebel DB	<ul style="list-style-type: none"> <li>Add field data structure information for cell phone</li> </ul>
DLSS	Siebel UI	<ul style="list-style-type: none"> <li>Add field for cell phone</li> </ul>
DLSS	Web UI	<ul style="list-style-type: none"> <li>Add field for cell phone</li> <li>Add field for data interface from Legacy</li> </ul>
DLSS	Web Interface to Legacy	<ul style="list-style-type: none"> <li>Add cell phone to record layout for Legacy updates</li> </ul>
DLSS	Interface to DMCS	<ul style="list-style-type: none"> <li>Add cell phone and e-mail to record layout</li> </ul>
DLSS	VRU	<ul style="list-style-type: none"> <li>Add language to VRU to ask for e-mail and cell phone updates</li> <li>Update interface to pull cell phone information to VRU</li> </ul>
DMCS	Legacy DB	<ul style="list-style-type: none"> <li>Add field data structure information for cell phone</li> <li>Add field data structure information for e-mail</li> </ul>
DMCS	Legacy UI	<ul style="list-style-type: none"> <li>Add field for cell phone</li> <li>Add field for e-mail</li> </ul>
DMCS	Access db	<ul style="list-style-type: none"> <li>Add cell phone and e-mail to db that is sent to DLSS for updating</li> </ul>
DMCS	IVR	<ul style="list-style-type: none"> <li>Add language to IVR to ask for e-mail and cell phone updates</li> <li>Update interface to pull cell phone and provide for updates</li> </ul>



## 8.2.2 Equipment Relationship Diagram

**Figure 54: Capture Additional Borrower Information Equipment Relationship**





### 8.3 Opportunity 8: Loan Consolidation

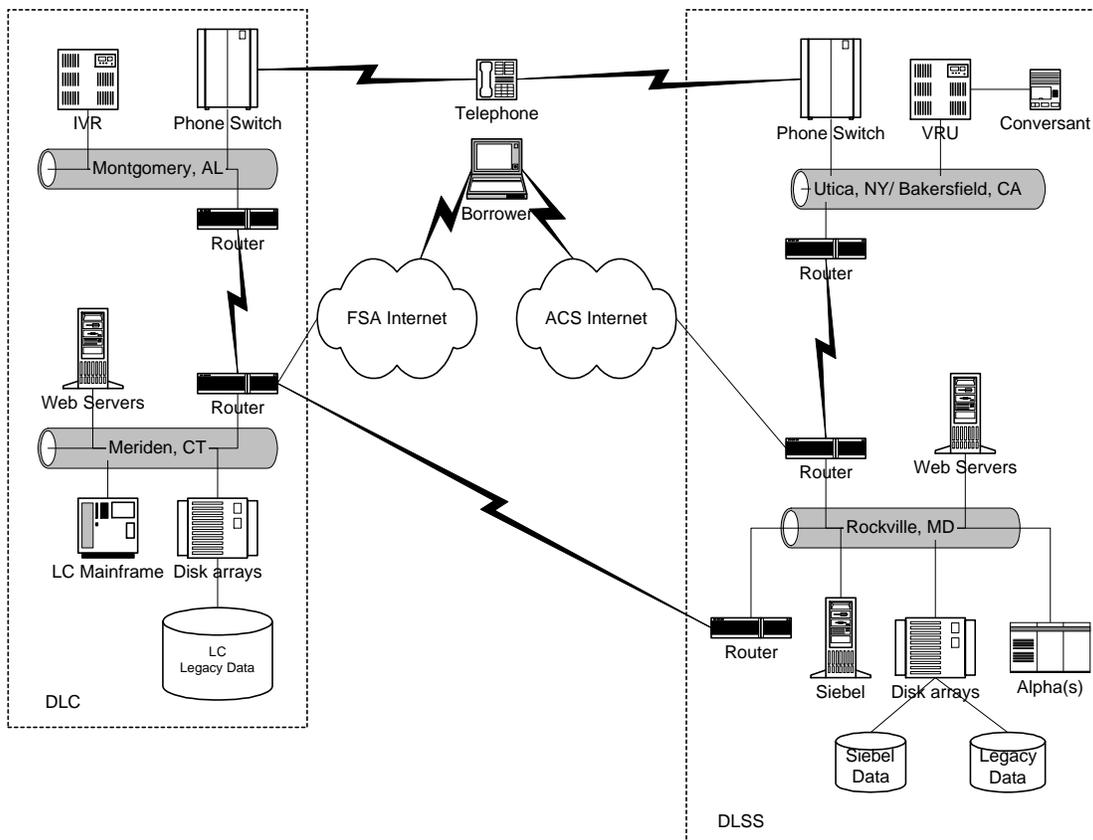
#### 8.3.1 Equipment Definition

**Table 37 - Loan Consolidation Equipment Definition**

System	Component and Location	Work Performed
DLSS	Legacy Application	<ul style="list-style-type: none"> <li>Modify and implement code for handling Direct Loan-to-Direct Loan Consolidation</li> </ul>
DLSS	Legacy UI	<ul style="list-style-type: none"> <li>Modify UI to allow CSR to perform Direct Loan-to-Direct Loan Consolidation</li> </ul>
DLSS	Siebel Application	<ul style="list-style-type: none"> <li>Modify application to handle Direct Loan-to-Direct Loan Consolidation</li> </ul>
DLSS	Siebel UI	<ul style="list-style-type: none"> <li>Modify UI to allow CSR to perform Direct Loan-to-Direct Loan Consolidation</li> </ul>
LC	Web UI	<ul style="list-style-type: none"> <li>Display Servicing phone number for Direct Loan-to-Direct Loan Consolidation</li> </ul>

#### 8.3.2 Equipment Relationship Diagram

**Figure 55: Imaging Equipment Relationship**





## 8.4 Opportunity 10 and 11: Credit Management Data Mart Reporting Capabilities and Risk Management

### 8.4.1 Equipment Definition

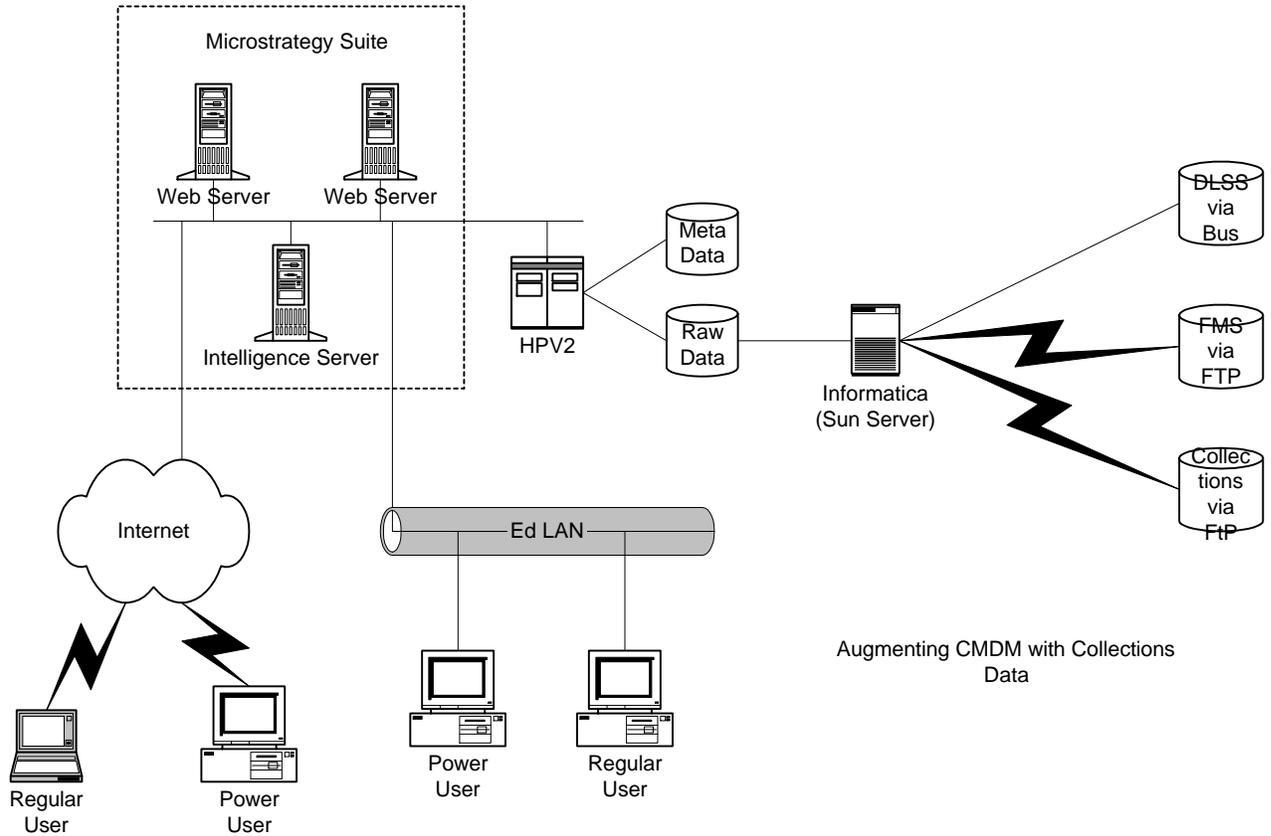
**Table 38 - CMDM and Risk Management Equipment Definition**

System	Component (and Location)	Work Performed
Credit Management Data Mart	Microstrategy Suite (VDC)	<ul style="list-style-type: none"> <li>Expansion of Data Structure</li> <li>Augment Aggregate tables</li> <li>Review SW licenses</li> </ul>
Credit Management Data Mart	HPV2 and associated data volumes (VDC)	<ul style="list-style-type: none"> <li>Review DASD requirements (expand infrastructure)</li> <li>Capacity Analysis of Oracle db</li> <li>Create new user accounts for access</li> </ul>
Credit Management Data Mart	Internet (VDC)	<ul style="list-style-type: none"> <li>Capacity Analysis with User Base (with all types of users)</li> </ul>
Credit Management Data Mart	Informatica (VDC)	<ul style="list-style-type: none"> <li>Develop translation routines running on ETL</li> <li>Create schedule for Collections data jobs</li> <li>Test conversion and jobs related</li> </ul>
Credit Management Data Mart	Security (VDC and FSA)	<ul style="list-style-type: none"> <li>Review Security Plan for types of data</li> <li>Review/update Security Plan for new users</li> </ul>
Credit Management Data Mart – External sources	Interfaces	<ul style="list-style-type: none"> <li>Establish/review connectivity between FMS and Credit Management Data Mart</li> <li>Establish/review connectivity between Collections and Credit Management Data Mart</li> <li>Review of interface connections to ensure transmission speeds meet desired upload and download speeds</li> </ul>



### 8.4.2 Equipment Relationship Diagram

**Figure 56: CMDM and Risk Management Equipment Relationship**





## 8.5 Opportunity 12: Electronic Refunds

### 8.5.1 Equipment Definition

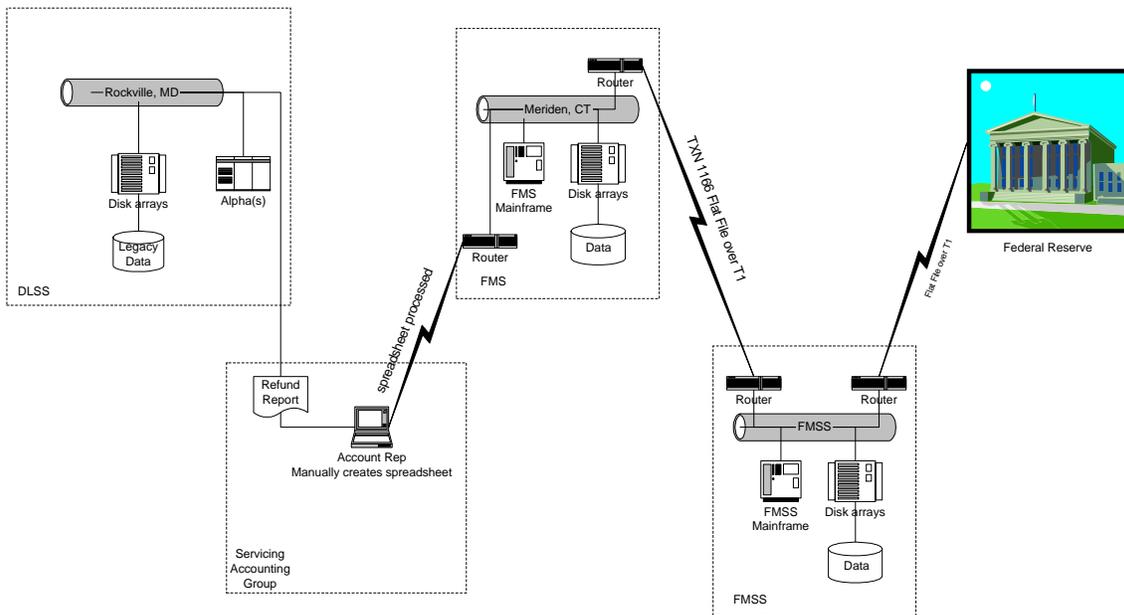
**Table 39 - Electronic Refunds Equipment Definition**

System	Component and Location	Work Performed
DLSS	Legacy Application	<ul style="list-style-type: none"> <li>Modify refund reporting to Accounting Group to include bank account information for EDA borrowers</li> </ul>
DLSS	Servicing Accounting Group	<ul style="list-style-type: none"> <li>Modify spreadsheet for transmission to FMS to include bank account information for EDA borrowers</li> </ul>
FMS	Application	<ul style="list-style-type: none"> <li>Modify processing of Servicing Accounting Group Spreadsheet to incorporate borrow bank account information</li> <li>Modify flat file for txn 1166 to include bank account information for borrowers</li> </ul>
FMS	DB	<ul style="list-style-type: none"> <li>Store borrower bank account information</li> </ul>
FMSS/ GAPS	Application	<ul style="list-style-type: none"> <li>Modify processing of txn 1166 to incorporate borrow bank account information</li> <li>Modify data feed to Federal Reserve to include borrower bank account information</li> </ul>
FMSS/ GAPS	DB	<ul style="list-style-type: none"> <li>Store borrower bank account information</li> </ul>

### 8.5.2 Equipment Relationship Diagram

**Figure 57: Electronic Refunds Equipment Relationship**

#### 8.6





**Opportunity 16 and 18: Integrated Web Site and Borrower Comment Access**

8.6.1 Equipment Definition

This opportunity does not have a phase 1 component. However, we will need to plan, purchase and configure the development and test platforms to meet current project schedules.

**Table 40 - Integrated Web Site and Borrower Comment Access Equipment Definition**

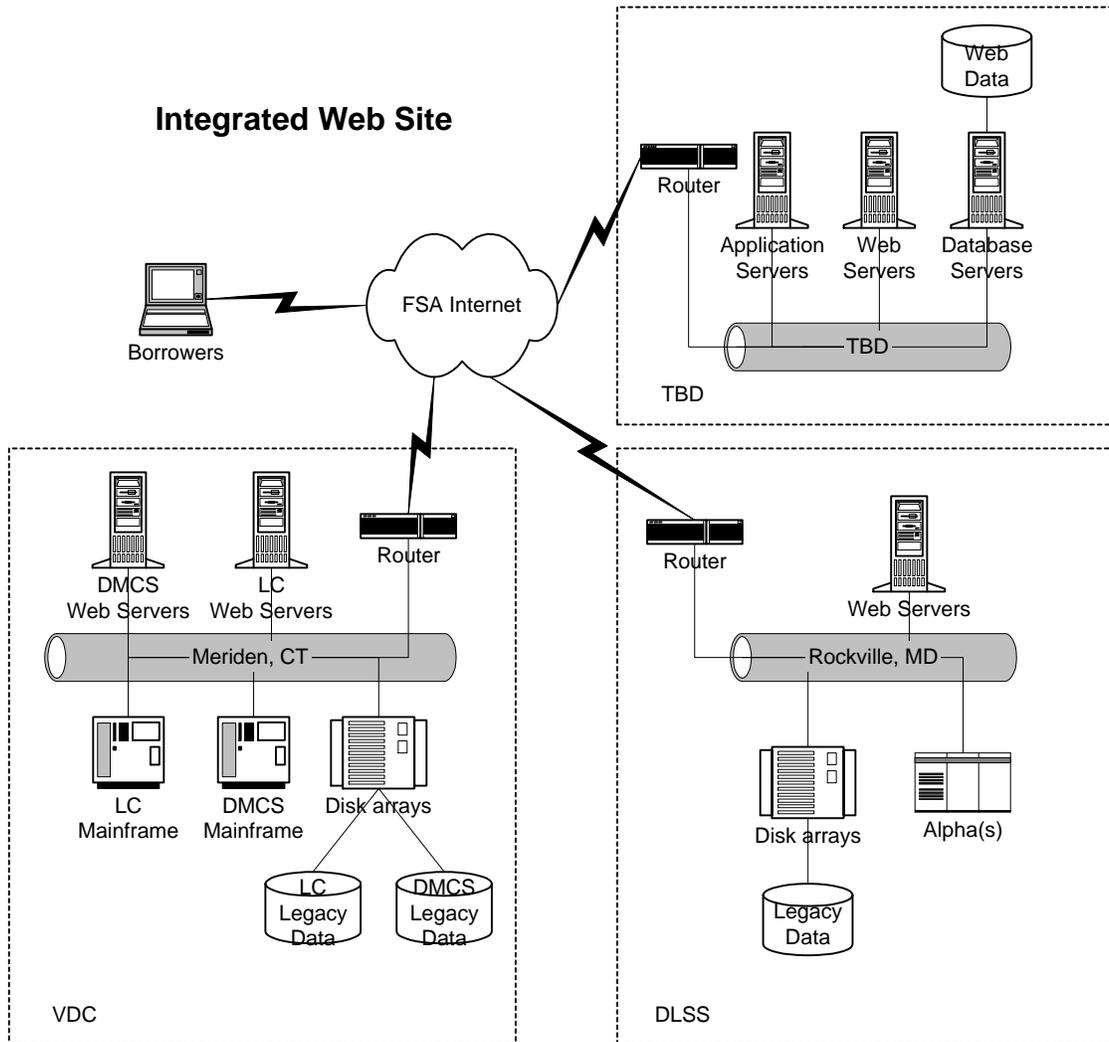
System	Component and Location	Work Performed
TBD	Application Servers (TBD)	<ul style="list-style-type: none"> <li>• Setup application security</li> <li>• Install and configure operating system</li> <li>• Install and configure web application software</li> </ul>
TBD	Web Servers (TBD)	<ul style="list-style-type: none"> <li>• Install operating System</li> <li>• Install and configure web system</li> </ul>
TBD	Web Database (TBD)	<ul style="list-style-type: none"> <li>• Install operating System</li> <li>• Install and configure web database system</li> <li>• Setup and configure user definitions and access</li> </ul>
TBD	Telecomm and Network (TBD)	<ul style="list-style-type: none"> <li>• Setup network lines and add servers to network</li> </ul>
TBD	Security (TBD)	<ul style="list-style-type: none"> <li>• Setup network security</li> </ul>
TBD	Interface (TBD)	<ul style="list-style-type: none"> <li>• Develop interfaces to existing legacy systems</li> </ul>
TBD	System Performance (TBD)	<ul style="list-style-type: none"> <li>• Develop platform sufficient to support systems development and test with 3 resources</li> </ul>
DLSS	Interface (Rockville, MD)	<ul style="list-style-type: none"> <li>• Develop interface to new development and test systems</li> </ul>
DLSS	Telecomm and Network (VDC)	<ul style="list-style-type: none"> <li>• Configure network access to new web development and test environments</li> </ul>
LC	Interface (VDC)	<ul style="list-style-type: none"> <li>• Develop interface to new development and test systems</li> </ul>
LC	Telecomm and Network (VDC)	<ul style="list-style-type: none"> <li>• Configure network access to new web development and test environments</li> </ul>
DMCS	Interface (VDC)	<ul style="list-style-type: none"> <li>• Develop interface to new development and test systems</li> </ul>
DMCS	Telecomm and Network (VDC)	<ul style="list-style-type: none"> <li>• Configure network access to new web development and test environments</li> </ul>
FSA	Security	<ul style="list-style-type: none"> <li>• Review and update security plans for new system</li> <li>• Review and update security plans for new user access to new system</li> <li>• Review and update security profiles for new users to existing legacy systems</li> </ul>



### 8.6.2 Equipment Relationship Diagram

The following diagram illustrates typical internet connectivity required to support a development and test environment.

**Figure 56: Integrated Web Site and Borrower Comment Access Equipment Relationship**





See Appendix A: CSB\_Assumptions v7.doc