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DATE	REVISION	BY		
12/30/05		HIFMIP Project Team	**Segment Architecture: Financial Management**	
			DATE: December 2005	
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HUD BLUEPRINTS
BUILDING IT TOGETHER

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1.0 Executive Summary

The President's Management Agenda (PMA) seeks to ensure that federal government resources are well managed and wisely used, and improving financial management is a key component of this initiative. The PMA builds upon financial reform legislation of the past several years including the Chief Financial Officers' Act of 1990 (CFO Act), the Government Performance and Results Act (GPRA), the Federal Financial Management Improvement Act (FFMIA) and other legislation that established federal requirements for accounting standards, financial statements, effective internal controls, integrated financial management systems, strategic planning, and performance measurement and reporting.

HUD is making progress in achieving the PMA financial management goals, but significant challenges remain. HUD's current system environment is characterized by costly legacy systems and a lack of system integration, oftentimes requiring extensive manual efforts and inefficient business processes. Generally, HUD maintains stove-piped systems that perform redundant functions and maintain inconsistent data; the result of supporting independent implementations to meet current emergencies, new regulations and maintenance processes. To address these issues, the Department established HUD's Integrated Financial Management Improvement Project (HIFMIP).

The future state of HUD's financial management system environment will include a Center of Excellence (COE) to provide application hosting services and will meet federal financial management system requirements for Core accounting services. HUD's goal is to create an Integrated Financial Management System (IFMS) with a single financial system infrastructure that includes the Fair Housing Administration (FHA), Government National Mortgage Administration (Ginnie Mae) and the Office of Federal Housing Enterprise Oversight (OFHEO), using standardized applications and services that will ensure accountability and control of resources; and produce accurate, consistent, timely, and useful financial information while linking to program information.

To create the IFMS, non-core accounting processes and data must be removed from the existing core financial systems. The OCFO is working with the Program Offices to determine roles and responsibilities for the separation and removal of non-core accounting program processes and data currently residing within the core financial system. Subsidiary systems that are integrated, interfaced, or otherwise provide information to the current core financial system will be modified or replaced.

2.0 Introduction

In FY 2000, an assessment of the HUD Central Accounting and Program System (HUDCAPS) was conducted to analyze its core accounting capabilities and to create a systems strategy based

on a new financial management vision (Vision). The project analyzed HUD's "as-is" business processes and current financial activities. In June 2003, HUD initiated the first phase of a project to refresh the FY 2000 Vision and to address other challenges posed by HUD's current system environment under the HUD's Integrated Financial Management Improvement Project (HIFMIP).

In refreshing the FY 2000 Vision, the HIFMIP Team conducted sessions with HUD executives and senior management; interviewed over 130 headquarters and field personnel; catalogued best practices; and analyzed and documented HUD's current financial systems, information flows, and business events.

The future "to-be" state of HUD's Integrated Financial Management System (IFMS) environment will include a COTS certified core financial system and the skilled resources of a Center of Excellence (COE) that provides a comprehensive source of financial, budget, and performance information for the Department. The HIFMIP project will implement an integrated financial management system that provides for the agency's general ledger, payments, receipts, costs, funds management and reporting, and that integrates/ interfaces with other internal and external financial systems. HUD has confirmed that the Peoplesoft (PS) v. 8.8 commercial- off-the-shelf (COTS) software will provide the required core accounting functionalities to be the Integrated Core Financial System (ICFS). FHA has already upgraded to PS v. 8.8 in February 2005 for its subsidiary general ledger, and Ginnie Mae has recently acquired Peoplesoft, using an external service provider. OFHEO is currently using Oracle Financial software.   Oracle Corporation has announced its plans to create a "fusion" version of Oracle Financials and Peoplesoft by the end of 2008. HUD will be looking to the "fusion" software and its capabilities to serve in the end state IFMS solution.

The figure shown below illustrates what the ICFS would look like. The decision whether to transition to a single core financial system will be based on the level of consolidation and integration required to meet the financial information requirements for all HUD stakeholders; the software, hardware and support available to HUD; and the alternative that is most cost effective and efficient for HUD.

Diagram 1. ICFS High Level Systems Architecture

ICFS High Level Systems Architecture
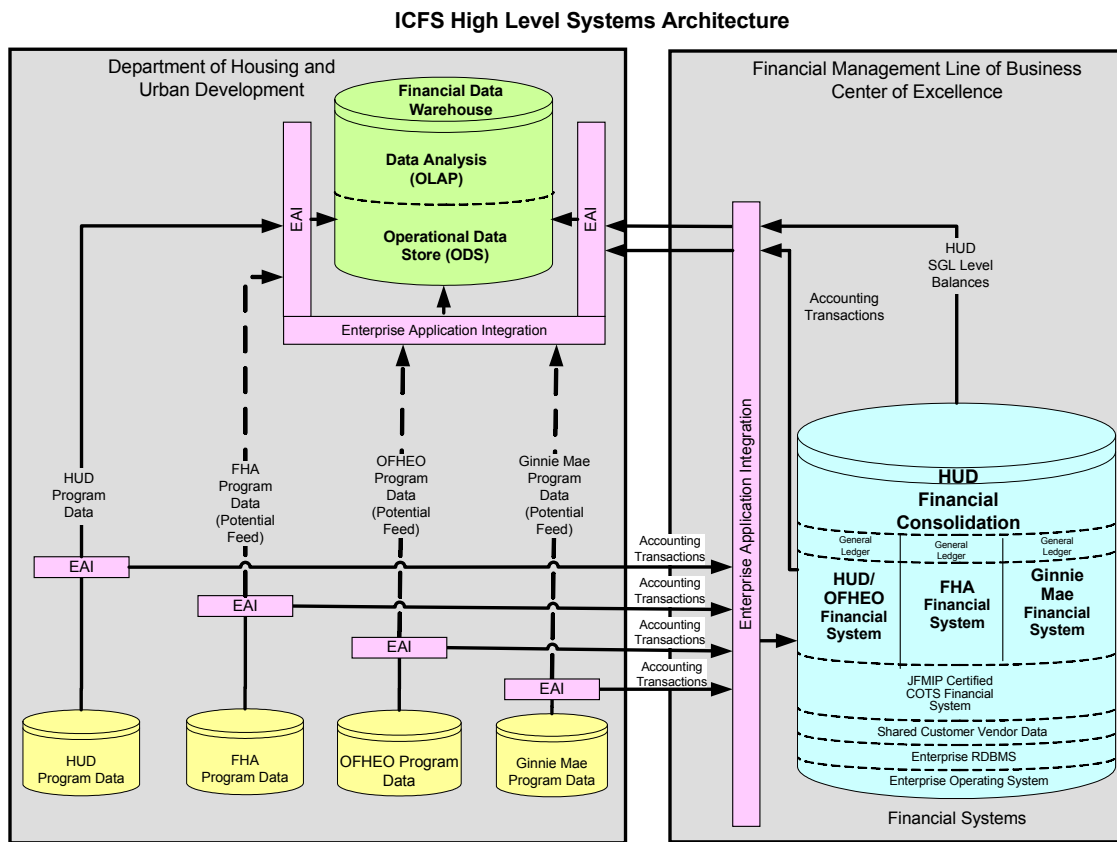
The transition from the "as is" to the "to be " environment will require a comprehensive multi-year project plan and strategy that will be completed in phases. To implement the IFMS Vision, HUD will need to align resources (people, process, knowledge capital, finances, technology, and sponsorship) in a cooperative, focused manner. The HIFMIP project will establish a project infrastructure that includes rigorous planning, project management, change management, communications, and timely decision-making. To execute the IFMS Vision, enterprise-wide focus must be made to establishing common transaction processing, confirming business rules, creating standard portal structures, and ensuring standard data structure (single data representation, Metadata structure, and data end condition). The following figure illustrates the full implementation of an end-to-end integrated financial system that includes core financial and other functions, internal and external agency interfaces, and process flows envisioned for the IFMS.

Diagram 2. End-to-End Capture and Dissemination of Financial Information

End-to-End Collaboration
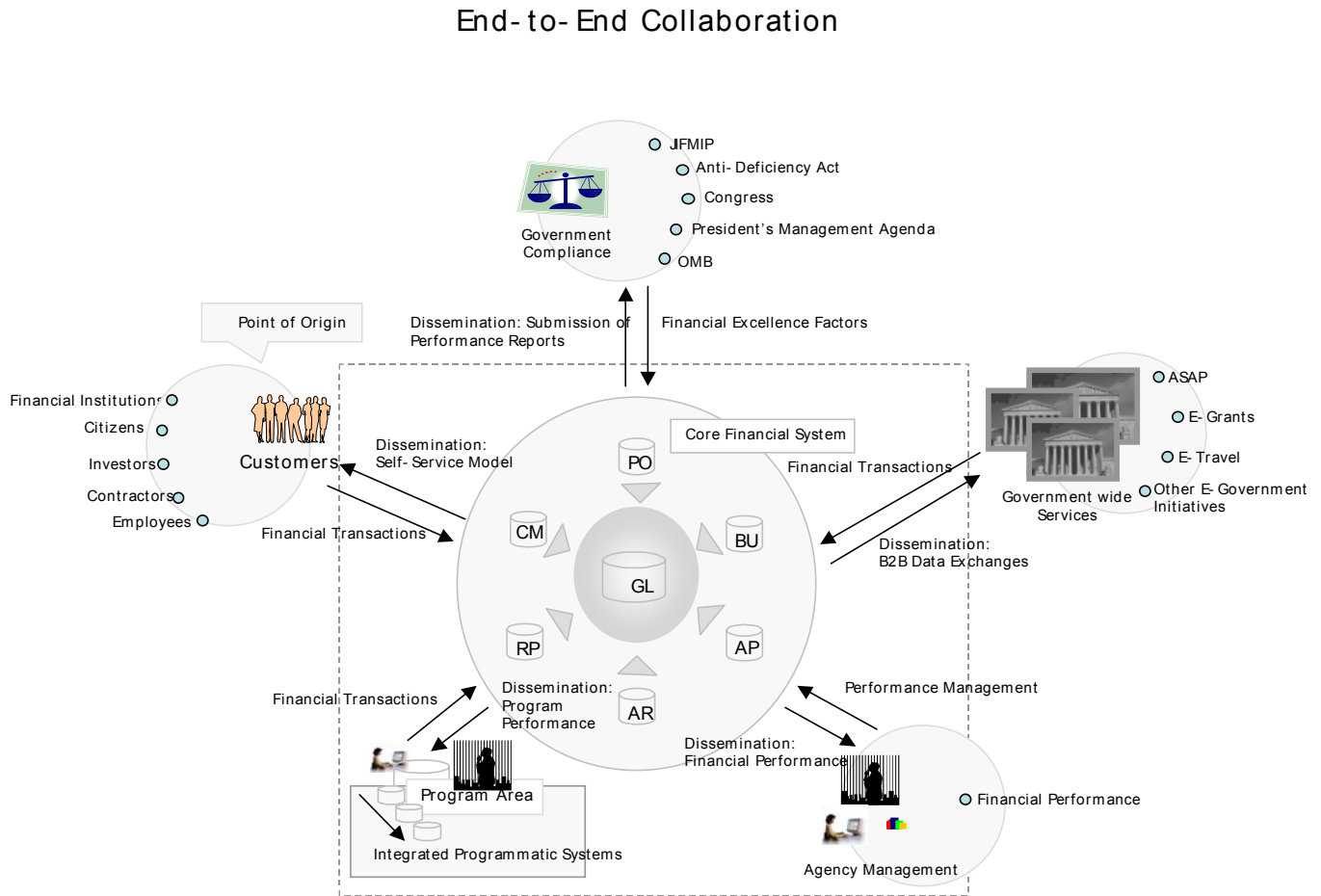
To realize the IFMS Vision, HUD will continuously measure and demonstrate both improvements to financial management practices and to achieving progress toward attaining the Vision. HUD's IFMS Vision has been designed to assist management to achieve this end and is built around four key components:

1. An Improvement Portfolio that identifies and defines the short, medium, and long-term initiatives to be undertaken to achieve the Vision.

2. Measurable benefits that will accrue to HUD and its stakeholders as a result of achieving the Vision and designed to provide the foundation for measuring progress and improvement.

3. Threads interwoven into the Vision to ensure that people, processes, technology, and organizational improvements remain in balance throughout the implementation of the Vision.

4. A four-phased, multi-year year implementation approach that encapsulates the Improvement Portfolio, measurable benefits, and key threads, and provides a road map for achieving the Vision in a planned, progressive, manageable way.

Implementation of the IFMS will be covered in four phases through FY 2013:

Phase I: (2/2003 – 4/2006) Confirm Vision for Integrated Consolidated Financial System (ICFS), conduct comprehensive planning (feasibility study, cost benefit analysis, risk analysis, risk plan and system decision), complete enterprise requirements, confirm COTS selection, establish internal stakeholder groups to support project, and develop comprehensive phased plan and approach to implementation.

Phase II: (4/2006 – 9/2012) Implement the COTS certified core financial solution to replace OCFO, FHA, Ginnie Mae and OFHEO systems that leverage state of the art technologies and re-engineers business processes based on Federal requirements and industry best practices.

Phase III: (4/2006 – 9/2011) Redesign or replace and standardize interfaces with HUD systems that provide data and information to the core financial system on-line, real time. Implement Budget Formulation / Preparation System Integration, Procurement System Integration and integrate core financial system with additional enterprise COTS solutions and government wide systems.

Phase IV: (10/2012 – 9/2013) Complete modernization of HUD financial and subsidiary systems to the integrated financial system and leverage the single system via implementation of decision support, performance management and customer relationship management solutions.

The benefits to HUD will include an increase in staff productivity, the ability to shift resources from non-value added tasks to analysis and advice in support of HUD's mission, the replacement of aged systems that are increasingly expensive to maintain, an improvement in the end-to-end financial cycle, improved performance, and advancements in HUD's decision support systems. In addition, HUD will be able to more readily address many of the issues raised by OMB, GAO, and the auditors when the Vision is successfully executed.

The Federal Enterprise Architecture (FEA) is a business-based framework for Government-wide improvement. The FEA is being constructed through a collection of interrelated "reference models" designed to facilitate cross-agency analysis and the identification of duplicative investments, gaps, and opportunities for collaboration within and across Federal Agencies. HUD has incorporated the FEA principles into a Target Enterprise Architecture (EA) for the Department that is a business-driven plan that describes the desired end-state for HUD's performance, business, applications and services, technology, data, and security. HUD is using

EA as a tool for business transformation and progress. The primary purpose of the Target EA is to effectively plan a course for achieving HUD's strategic vision and goals. By defining the desired end-state from several distinct perspectives, (e.g., business, data, etc.), the Target EA provides a "line of sight" into the complex relationships that exist among these different perspectives.

2.1 EA Legislative Background

It is the policy of the United States Government that executive agencies shall significantly improve the management of their information systems, including the acquisition of information technology, by implementing the relevant provisions of the Paperwork Reduction Act of 1995 (Public Law 104-13), the Information Technology Management Reform Act (ITMRA) of 1996 (Division E of Public Law 104-106), and the Government Performance and Results Act (GPRA) of 1993 (Public Law 103-62). OMB Circular A-130 (November 2000) issued under the authority of the ITMRA, Paperwork Reduction Act, GPRA and other legislation establishes policy for the management of Federal information resources of all agencies of the executive branch of the Federal government. It specifically orders that agencies must document and submit their Enterprise Architecture plans to the Office of Management and Budget (OMB).

OMB Circular A-130 states that enterprise architecture is the explicit description and documentation of current and desired (target) relationships among business and management processes and information technology. EA also provides a strategy that will enable an agency to support its current IT environment and act as a roadmap for the transition to the approved target architecture. Transition processes include EA planning, an agency's capital planning and investment control (CPIC) process, and system life cycle methodologies.

To support the transition to an agency's target architecture, OMB Circular A-11 added enterprise architecture to the business case (Part III, OMB Exhibit 300) for agency IT investments. OMB Guidance requires agencies to explain how each IT investment supports, modernizes or conforms to the agency's enterprise architecture and the Federal Enterprise Architecture Framework.

Applicable legislative and regulatory requirements drive requirements for the HUD financial management solution. These include:

- Federal Managers' Financial Integrity Act of 1982 (FMFIA)
- The Chief Financial Officers Act of 1990 (CFO Act)
- The Government Management Reform Act of 1994 (GMRA)
- Federal Financial Management Improvement Act of 1996 (FFMIA)
   Office of Management and Budget (OMB) Circular A-127 "Financial Management Systems"
- Joint Financial Management Improvement Program (JFMIP)
- M-03-01 – OMB Memorandum on Business Rules for Intergovernmental Transactions
- E-government Act of 2002 (Public Law No: 107-347) - The E-government Act of 2002 enhances the management and promotion of electronic commerce

- OMB Circular A-123, Management Accountability and Control
- Prompt Payment Final Rule (Formerly OMB Circular A-125, Prompt Payment)
- Circular A-127, Financial Management Systems
- Statements of Federal Financial Accounting Standards (SFFAS)
- Debt Collection Improvement Act of 1996
- Federal Credit Reform Act of 1990
- P.L. 106-107 the Federal Financial Assistance Management Improvement Act of 1999
- Statement of Federal Financial Accounting Standards (SFFAS) No. 4 Managerial Cost Accounting
- OMB Bulletin 01-09, Form and Content of Agency Financial Statements OMB Bulletin 01-02, Audit Requirements for Federal Financial Statements
- Federal Accounting Standards Advisory Board (FASAB)
- Anti-Deficiency Act

2.2 HUD Information Technology Principles

The EA Team operates according to an established set of principles that help to shape the development of the EA and the implementation of information technologies.[1] Here is a brief explanation of how these principles apply to the financial management segment:

- **Single Enterprise:** A common goal across all Federal entities is to reduce the number of redundant, stovepipe systems within the organization. The HIFMIP project team will work collaboratively with other HUD IT initiatives to ensure that development efforts are complimentary and coordinated in a manner that eliminates duplication and redundancy. Initiatives currently under way include Grants, Procurement, FHA Subsidiary Ledger, Ginnie Mae Subsidiary Ledger, and HIHRTS.

- **Aligned With HUD's Strategic Plan:** The HUD Strategic Plan FY2003-FY2008 was published in March 2003. The Plan identifies one performance goal as "Strengthen and replace financial management systems to improve the integrity of financial data and to ensure that accounts can be fully audited." The HUD Strategic Plan states that this will be accomplished by the reduction of non-compliant financial management systems through the HUD Integrated Financial Management Improvement Project (HIFMIP).

- **IT Investment Management Process:** The role of technology in carrying out the HIFMIP mission is to deliver applications and services that are inherently designed to facilitate better integration of business and financial activities through integrated services operating on common data.

- **Core Business Operations:** HIFMIP promotes a shared environment and seamless integration with programmatic systems. While existing programmatic systems will retain

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[1] HUD's EA Principles are available at *http://www.hud.gov/offices/cio/ea/*

their unique roles by continuing to provide core business services, their ability to seamlessly link to financial data (from the new core financial system) is the ongoing challenge and significant accomplishment. Through open architecture, the introduction of a core financial system is an opportunity to improve service delivery and access to information in a timely manner.

- **Enterprise Solutions:** A number of systems currently perform the same accounting functions including purchases, payment requests, accounts payable, and accounts receivable throughout HUD. Processes that are duplicated in different systems have the potential to generate large volumes of inconsistent data. The HIFMIP vision is to achieve fully integrated financial management by employing a common set of FFMIA-compliant procedures, processes, and controls that are supported by a modern, integrated suite of JFMIP-compliant financial management systems. These systems must enable the end-to-end capture and recording of timely and accurate information from the point of origin to the point of dissemination. HUD will operate in an efficient business-like manner providing accurate, reliable, and timely financial information to stakeholders that depicts the fiscal performance of HUD, its programs and supporting operations, supports decision-making and performance management, and consistently achieves clean audit opinions.

- **Enterprise Standards:** HIFMIP's goal is to have an integrated financial management system with a single financial system infrastructure using standardized applications and services that are supported and enabled by integrated financial management data and information system(s). Meeting this goal depends upon achieving integrated data and information and developing applications that maximize the use of software that standardize, integrate and share data.

- **Information as an Enterprise Asset:** Upon the conclusion of Phase IV, HUD will have the ability to integrate program, budget, and customer and performance information such that end users can readily access business intelligence and performance management information.

- **Reduce Complexity:** One of the primary goals of HIFMIP is to reduce the number of systems and provide users a friendly, intuitive customer interface.

- **Security:** The HIFMIP solution will incorporate security as an integral part of overall system management and ensure that the product protects information from unauthorized access, use, disclosure, disruption, modification, or destruction in order to provide: 1) integrity, which means guarding against improper information, modification, or destruction, and includes ensuring information non-repudiation and authenticity; 2) confidentiality, which means preserving authorized restrictions on access and disclosure, including means for protecting personal privacy and proprietary information; and 3) availability, which means ensuring timely and reliable access to users and use of information.

- **E-Government:** HIFMIP will provide a modular, open systems architecture in order to enable full participation in E-Government initiatives.

- **Enterprise-Wide Access:** HUD relies on third party business partners to implement many of its major programs. The implementation of a new integrated core financial management

information system, and the open architecture that it will offer, will enable HUD to provide accurate and timely information with access to stakeholders, in an environment that will support integration with relevant program systems.

2.3 HUD Information Technology Lifecycle

To meet legislative requirements, the United States Department of Housing and Urban Development (HUD) Office of the Chief Information Officer (OCIO) has developed an enhanced Information Technology Lifecycle. The lifecycle is comprised of three phases - architecture, investment and implementation – and promotes a high level of integration between the Department's Enterprise Architecture (EA) practice, IT Investment Management (ITIM) process, and system implementation processes including HUD's System Development Methodology (SDM) and project management guidelines.

The lifecycle mandates that the development of information technology architecture is a pre-requisite for the preparation and submission of IT investment initiatives. To be considered to receive funding for IT initiatives, the segment architecture for the individual line of business and/or service must be defined. This segment architecture or IT blueprint must be reconciled with HUD's enterprise-wide architecture so that the IT investment corresponds with HUD's IT investment principles.

2.4 Segment Architectures

To organize the complex Enterprise Architecture effort into manageable pieces, HUD has introduced the concept of Segment Architecture (SA) to facilitate the EA analysis. Each Segment Architecture defines the levels of the architecture for a specific area or line of business. The SA becomes the "Blueprint" to guide the investment and implementation of information technology from the current environment to a future envisioned modern IT environment. The Blueprint may evolve over time to incorporate changing internal and external factors and increasing detail as the Segment Architecture matures. The required elements of an SA Blueprint are described in the table below and described in detail in later sections of this document.

Table 1. HUD Target EA Framework – Architectural Layers for an SA Blueprint

Component	Content
Business Profile	• Documents crosscutting segment component requirements, and information value-chain • Defines the crosscutting segment within the Federal Service Component Reference Model (SRM) • Documents implementation alternatives and associated risk
System Profile	• Maps business and information requirements to the future state technical architecture (FSTA)
Architectural Profile	• Defines automation targets and integration targets (by organization)
Implementation Plan	• Defines performance measures • Describes major program implementation projects, dependencies, and schedule

2.4.1 Line of Business

Pursuant to the President's Management Agenda (PMA), the Office of Management and Budget (OMB) created the Line of Business (LOB) initiative, which addresses redundant IT investments and business processes across the Federal Government. As a result, the Financial Management Line of Business (FM LOB) was established as the framework for a government-wide financial management solution that is efficient and improves business performance while ensuring integrity in accountability, financial controls and mission effectiveness.

The FM LOB solution utilizes Centers of Excellence (COE) to provide information technology (IT) hosting and operational support, i.e. processing services, for core FM activities. This solution is a market-driven approach based on a shared services model that will maximize economies of scale, scope, and skill while benefiting from the use of both government and industry best practices and technologies.

HIFMIP is following the Financial Management Line of Business (FM LOB) solution to ensure that it is a business and performance-based solution that supports cross-agency collaboration, transformation, and improves financial management government-wide. Additional outcomes of this approach include:

- The management of knowledge as a corporate asset using standard shared information drivers;

- The ability to enable a workforce of effective managers equipped with the correct information to make effective business decisions;

- The ability to provide information integrity by adopting leading practices to optimize business operations;

- Emphasis on cooperative strategies for satisfying common needs across the enterprise;

- The ability to capture and validate information once and reuse across the enterprise; provide security and protection of sensitive information; and

- Embrace and expand current E-Government initiatives.

Table 2 provides a crosswalk of Financial Management functions as identified in the Federal Enterprise Architecture Financial Management Business Reference Model (FEA BRM) to the JFMIP Core Financial System Requirements to FMLOB Core Functions to the HUD defined Core functions. The FMLOB Core Functions are derived from the JFMIP Core Requirements. HUD has chosen to break down the functions to a lower level to facilitate the functional and system analyses: Budget and Finance / Funds Management / Budget Formulation – Budget Execution.

Table 2. Financial Management Functions

FEA BRM	JFMIP Core System Requirements	FM LOB Core Functions	HUD Functions	JFMIP Core Function Description
Accounting	General Ledger Management	General Ledger Management	General Ledger Management	All transactions to record financial events must post to the general ledger regardless of the origin of the transaction. The GL must summarize and maintain account balances at the U.S. SGL account and attribute level.
	Funds Balance with Treasury Management			Provides the ability to reconcile the agency's fund balance with Treasury on a regular basis and account for non-expenditure transfers, collections, and disbursements.
Budget and Finance	Funds Management	Funds Management	Budget Formulation Budget Execution	The Funds management function covers the preparation of an agency budget estimate to request financing and for ensuring that funds obligated or disbursed do not exceed those appropriated or authorized.
Accounting	Cost Management	Cost Management	Asset Management Cost Management	The Cost Management function encompasses the capability to accumulate, recognize, and distribute the cost of an agency's activities in the financial system for management information purposes.
Payments	Payments	Payment	Accounts	The Payment function

FEA BRM	JFMIP Core System Requirements	FM LOB Core Functions	HUD Functions	JFMIP Core Function Description
	Management	Management	Payable	encompasses the processes to maintain payee information, record and warehouse payments to be disbursed, execute payment, and provide for payment histories.
Collections and Receivables	Receivable Management	Receipts Management	Accounts Receivable	The Receivables function includes recording, monitoring, and collecting amounts due the government whether previously established as a receivable or not.
Reporting and Information	Reporting	Reporting	Financial Reporting	Ensures that the system provides the basic standard reports needed to review financial information and to fulfill central agency reporting requirements.
	System Management		Core Financial System Management	Ensures the capabilities exist to capture, process and report the financial activity of Federal agencies. It establishes the framework for sharing data among components of an agency's single integrated financial management system.

2.4.2 Cross-cutting Service

Financial management integration requires a number of entities in HUD to work together to carry out the mission of the Department. Crosscutting benefits of an IFMS include:

– A department-wide accounting system including department-wide payables and receivables;

– Direct HUD-wide access to standardized, accurate, and timely information;

– Productivity improvements and staff can focus on providing better analytical information;

– Linking of agency performance to costs; increased capability to accurately measure and report on program costs; and maximized return on investment;

– Efficient HUD-wide reporting and fiscal year end closings;

– Adequate department-wide funds control;

– Improved communication between budget and program offices; and

– Availability of efficient programmatic data for budget formulation.

2.5 Segment Definition

The Integrated Financial Management Solution recommended by HIFMIP supports all of HUD's current business functions. The following diagram maps HUD's current business functions to the components of the core solution recommended by the HIFMIP Vision.

Diagram 3. HUD's Business Functions to Core Functions

Future State Mapped to Business Functions
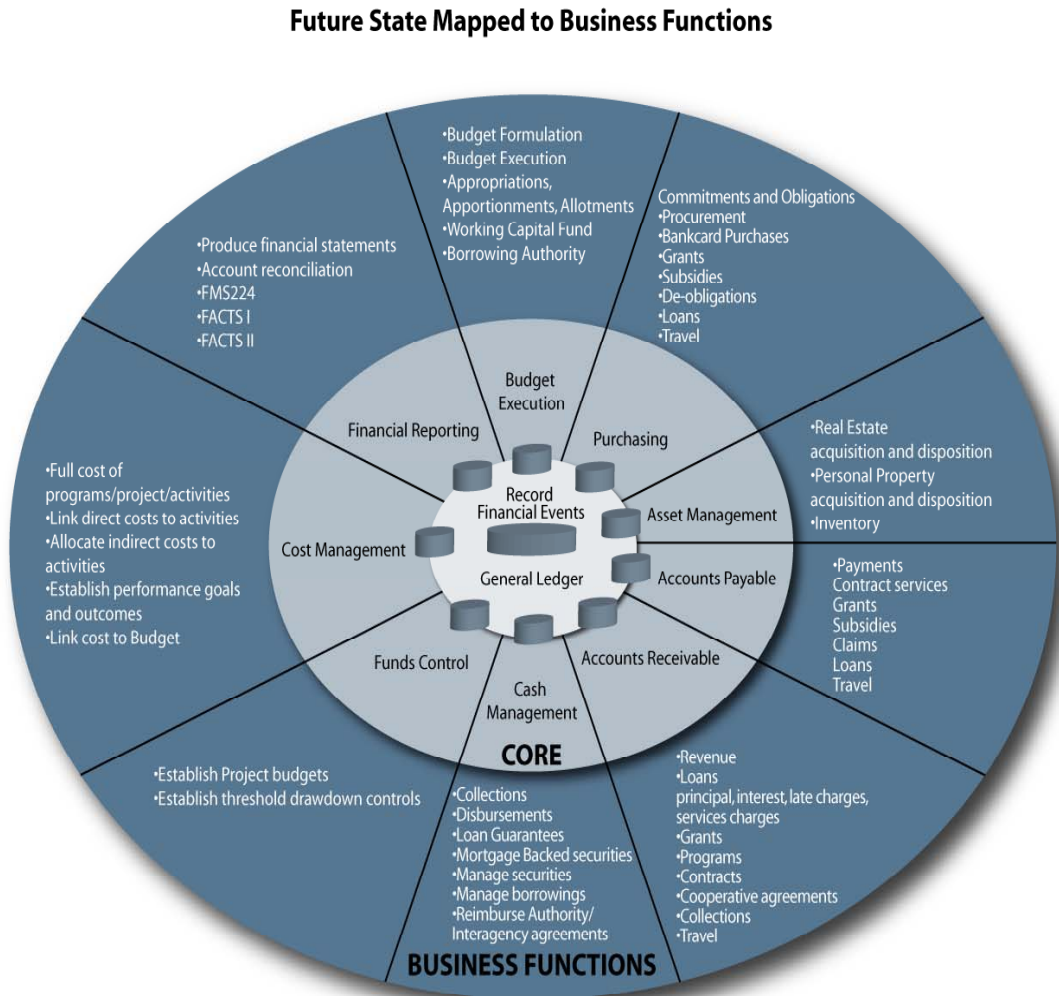
2.6 About this Blueprint

HUD realizes its target Enterprise Architecture through the development of segment target architectures, called Blueprints, designed around core lines of business and enterprise-wide crosscutting business functions.

2.6.1 Scope

This document provides an architectural blueprint (segment architecture) for HUD's Integrated Financial Management business functions that are supported across multiple systems and programmatic areas.

2.6.2 Outline

The following chapters describe the business profile, system profile, architectural profile, and implementation plan components of this segment architecture blueprint.

2.6.3 Cross References

Source references for this document include the following:

– HUD Current Systems and Vision Linked to Federal Enterprise Architecture (FEA); HIFMIP, December 12, 2003
– HUD's Financial Management Vision; HIFMIP, July 20, 2005
– HIFMIP OMB 300, FY 2006/2007
– FM LOB Concept of Operations; Draft 4, June 29, 2004
– Financial Management (FM) Center of Excellence (COE) Checklist, December 2004
– HUD Enterprise Architecture Practice Principles,
  http://www.hud.gov/offices/cio/ea/newea/resources/eaprin.pdf
– HIFMIP High-level Functional Requirements Document, April 27, 2005
– HIFMIP Functional Decomposition Diagrams and Function / Process Definitions with Functional Dependency Diagrams Document – Final, May 2, 2005
– External Financial Information Flows and Recommendations – Final, June 14, 2005
– Data Model with Entity and Attribute Definitions Document – Final,   May 27, 2005
– Software Installation and Configuration Report, June 3, 2005
– Financial Event Information Flow Diagrams and Discussion Paper, June 16, 2005
– Technical Hardware and Software Environment Report and Test Business Cycles, Test Cases, and Expected Results – Final, June 16, 2005
– System Support and Acquisition Plan – Final, July 22, 2005
– ICFS System Security Plan, July 22, 2005
– Detail-Level Data Requirements Document – Final, July 26, 2005
– Legacy System Disposition Plan, Final, December 12, 2005
– HIFMIP Roadmap- Final, December 1, 2005
– HIFMIP Project Work Plan, Final, November 21, 2005

2.6.4 Revision History

Version 1.0   December 30, 2005

3.0 Business Profile

In 2001, President Bush created the President's Management Agenda to address the need for citizen-centered, results-oriented, and market-based federal government initiatives. Pursuant to the PMA, the Office of Management and Budget (OMB) created the Financial Management Line of Business (FMLOB) initiative to address redundant IT investments and business process across the Federal Government.

The established LOB Task Forces and OMB are focused on a business-driven, common solution and target architecture developed through an architectural framework. The vision of the FMLOB is to establish the framework for a government-wide financial management solution that is efficient and improves business performance while ensuring integrity in accountability, financial controls and mission effectiveness. The common solution utilizes Centers of Excellence (COE) to provide information technology (IT) hosting and operational support, and drive the standardization of business process, data and interfaces for core FM activities.

The COEs will meet the following criteria:

- Comply with the Federal Financial Management Improvement Act (FFMIA).
- Operate JFMIP approved financial management software.
- Support "clean" audit opinions.
- Align practices with E-Gov initiatives (e.g., Common vendor file usage, intra-governmental transaction processing using DUNS numbers, etc.).
- Develop common data exchange interfaces – one set of interface development and support for all agencies (e.g., one common interface to the four E-Gov payroll systems providers).
- Provide hardware and other IT infrastructure required to operate – scalability, portability and interoperability.
- Offer application management services to maintain and upgrade hardware and software for agencies serviced.
- Use "best practice" approaches and methodologies for standardized implementation tasks (e.g., change management, project management, training, data conversion and interface development).
- Offer data warehousing services for management information systems and cost accounting.
- Adhere to the requirements outlined in ISO 15489 by supporting an electronic records management system (ERMS) that has been certified under DoD Std. 5015.2.
- Support the FMLOB goals.
- Follow the Financial Enterprise Architecture (FEA) Requirements.

Within HUD, there are four program areas that are independently audited:

1. Federal Housing Administration (FHA)

2. Government National Mortgage Association (Ginnie Mae)

3. The Office of Federal Housing Enterprise Oversight (OFHEO)

4. Other Major Business Areas included in the Consolidated Financial Statement Audit:

    a. Office of Housing

    b. Office of Public and Indian Housing (PIH) - PIH administers a number of programs, the largest of which is subsidies or rental assistance

    c. Office of Community Planning and Development (CPD)

    d. Office of Fair Housing and Equal Opportunity (FHEO)

    e. Office of Healthy Homes & Lead Hazard Control (OHHLHC)

    f. Administrative offices – HUD administrative functions are performed by the Office of Administration (Admin), the Office of the Chief Financial Officer (OCFO), and the Office of the Chief Procurement Officer (OCPO).

Each program area is responsible for complying with federal financial management requirements to produce accurate, consistent, timely and useful financial information. The role of financial management within HUD is to support the execution of all of HUD's programs and to ensure accountability and support program performance evaluation and decision-making.

Currently, HUD does not have a single system capable of integrating financial and program information to empower decision-makers. Program area audited financial statements are combined for the Department-level financial statements and reports. There are challenges in retrieving timely and accurate data from financial systems, and there is the need for improved quality control, improved funds control, and improved processes. The HIFMIP project is charged with establishing the integrated system and business process environment.

3.1 Link to HUD's Strategic Plan and APP Goals

The HUD Strategic Plan FY2003-FY2008 was published in March 2003. In this document, the direction of HUD's financial management systems development is directly addressed. The Plan identifies one performance goal as "Strengthen and replace financial management systems to improve the integrity of financial data and to ensure that accounts can be fully audited." Two tracks are identified for the improvement of financial management systems:

- The phased implementation of an integrated financial system for FHA.
- The reduction of non-compliant financial management systems through the HUD Integrated Financial Management Improvement Project (HIFMIP).

Related performance goals identified in the Strategic Plan that drive the need for an IFM are:

- "Apply principles of business process analysis and evaluation, target enterprise architecture objectives and integrate common processes to improve HUD's management and internal controls, improve systems, resolve audit issues and improve service delivery to all customers."

- "Continue to improve the Internet content, policy technology and reliability of program data. . ."

HUD's latest Annual Performance plan listed ten areas as major priorities of which five are impacted by the HIFMIP vision.

- Improving key areas of risk management strategies and program controls.
- Reducing unnecessary reporting burdens while improving performance reporting.
- Improving financial performance.
- Integrating budget and performance.
- Advancing electronic government.

3.2 Common Requirements Vision

The Common Requirements Vision (CRV) is a set of architectural requirements that are applicable across HUD that will be needed in HUD's desired end-state environment. The CRV initiates the translation of HUD's Strategic direction and drivers into a set of common services that will be needed in the target environment.

Table 3. Common Requirements Vision

Common Requirement: Integrated Financial Management System		
Description	**Source**	**Capabilities**
HIFMIP will implement an integrated financial management system that provides for the agency's general ledger, payment, receipts, cost, funds management and reporting; that will integrate/ interface with other financial program systems that support the agency's ability to manage funds and achieve program goals. The system will have the capability to share relevant information with other agencies and include an agency executive information system that provides financial and program management information.	HUD Strategic Plan- "Embrace high standards of ethics, management and accountability." HIFMIP will improve management, internal controls, and financial systems in order to resolve audit issues Driver- Mandate to use a Center of Excellence to provide financial services including application hosting for the new COTS certified system. Driver – Comply with JFMIP and federal financial management system requirements. Driver – Separate core accounting functions and processes from business to implement COTS COE solution.	Standardized data and data interchange Financial Reporting Activity based management Information Retrieval Real-Time Data Access Web-based eGov support Billing and Accounting Credit/Charge Expense Management Payroll Payment/Settlement Internal Controls Debt Collection Revenue Management Auditing Financial Reporting

HUD must modify or replace existing systems and establish new or modify existing internal and external interfaces in order to implement a COE and a core accounting system that is compliant with federal financial management systems requirements. Critical to the success of this plan is to be able to disaggregate the program / business from the core accounting functions resident in HUD's financial systems inventory. As of September 2005, HUD is maintaining 44 financial and mixed program/ financial systems. Phase II of the HIFMIP plan is to address the replacement of HUD's current Core accounting system and departmental general ledger: the HUD Central Accounting and Program System (HUDCAPS). Phase II will also include the replacement / modification of the Program Accounting System (PAS), the Line of Credit Control System

(LOCCS) and the Personal Services Cost Reporting System (PSCRS). The OCFO and HIFMIP Project Team is working with PIH, CPD, and Housing to develop the strategies, plans, and schedules to address the migration of Section 8 business functions, processes, and data from the current financial systems to the program offices for incorporation into their program systems. The new ICFS will have no provisions for non-core accounting functions and HUDCAPS will not be maintained to support program functions.

Diagram 4 depicts the interrelationship of financial management functions and business / programmatic functions. The scope of the HIFMIP project is currently to select and implement the ICFS using a COE service provider for the core accounting functions for HUD and to implement an integrated financial management system compliant with federal financial management system requirements.

Diagram 4. HUD's Business Functions

Under the CFO Act, Congress mandated that a Department CFO's responsibility extends to every aspect of financial management related to operating Department programs. For this reason, the CFO is the key decision maker in "agency wide and agency component accounting, financial, and asset management systems." The three circles above represent three functions: Federal Financial Assistance, Integrated Financial Management, and Program/ Business Management functions.

- There are functions within Federal Financial Assistance and Program/Business Management that are unrelated to fiscal management. These functions should be excluded from the Vision.

- There are points of intersection between Federal Financial Assistance and Program/Business Management and IFM. These functions should be <u>included</u> in the Vision

Integrated Financial Management - Circle 1 represents functions, systems, processes and procedures necessary to account for the financial resources and results of HUD. These functions include budget execution, contract funding, payables, receivables, cash management (programmatic and accounting), cost management, funds control, general ledger, financial reporting, commitments, grant payments, contract payments, grantee awards, procurement (fiscal aspects) and all other financial transactions.

Federal Financial Assistance - Circle 2 represents those functions, systems, processes and procedures that are necessary to administer grants, loans, subsidies, etc. The functions have financial and non-financial components. Integrated Financial Management includes the financial aspects of Federal Financial Assistance.

Program/ Business Management – Circle 3 represents functions, systems, processes, and procedures necessary to manage each program and other business areas such as contracts and procurements. Inherent in all program delivery activities are the financial implications of actions taken. Integrated Financial Management includes the financial management of program delivery, procurement, contracts management, and all other program/business

The HIFMIP Project is concerned with the Integrated Financial Management Circle 1: core financials and the points of intersection between Federal Financial Assistance and Program/ Business Management. Integrated Financial Management supports the financial functions required to track financial events, provide financial information significant to the financial management of the Department, and are required for the preparation of financial statements. Thus, Integrated Financial Management encompasses the financial systems and the financial portions of hybrid systems necessary to support program execution.

3.3 Mapping to Business Reference Model (BRM)

The purpose of the Business Reference Model (BRM) is to assist in the standardization of the terminology used to describe HUD's business Department-wide and is used as a framework to evaluate HUD's business. The target Business layer within HUD's EA provides a functional view of HUD's business and aligns to the mission and strategic goals of the Department. The BRM facilitates the analysis of:

- Development of an EA Transition Plan, which sequences transition activities based on business priorities and dependencies.

- Consolidation, reduction or standardization of duplicate or common business functions/ sub-functions.

- Sharing of best practices across similar business functions / sub-functions.

- Reengineering and modernization of business functions / sub-functions.

- Sharing and re-use of common resources in support of multiple business functions / sub-functions.

Financial management within HUD's EA is categorized as a business support function that crosses HUD's Business Areas and enables HUD to operate effectively. HUD's Business Areas are further layered into Business Functions and Business Sub-Functions. As shown in the Tables below, the target core accounting system environment will not fully support all the Business Functions and Sub-functions within the Business Areas.

Table 4. Business Area: Mode of Delivery

HUD EA Business Function	HUD EA Business Sub-function	HUD EA Sub-function Description
Grants Management		
	Award	Includes the assignment and sub-assignment of funds, which encompasses the negotiation process and the paperwork to execute a proper grant agreement. Specifically includes the preparation and issuance of the award notification and transfer of funds to recipient.
	Administer	Encompasses activities associated with maintaining the grant after it has been awarded. Establishes payment thresholds and caps, facilitates receivables and funds disbursement, as well as allowing the grantees to report accomplishments.
Loan Insurance		
	Service Insurance	Includes activities associated with general administration and maintenance of insurance supporting a loan from the time it is issued until the loan is paid.

HUD EA Business Function	HUD EA Business Sub-function	HUD EA Sub-function Description
Subsidies Management		
	Allocate Subsidy Funds	Enable HUD to properly determine recipients of funding based on analysis of demographic information (e.g., rent costs, income), select recipients, review funds availability, and disburse subsidy payments to recipients.
	Administer Subsidies Programs	Enables HUD to properly determine recipients of funding based on analyses of demographic information (e.g., rent, costs, income), select recipients, review funds availability, and disburse subsidy payments to recipients.

Table 5. Business Area: Support Delivery Services

HUD EA Business Function	HUD EA Business Sub-function	HUD EA Sub-function Description
Planning and Resource Allocation		
	Budget Formulation	Budget Formulation involves all activities undertaken to determine priorities for future spending and to develop an itemized forecast of future funding and expenditures during a targeted period of time. This includes the collection and use of performance information to assess the effectiveness of programs and develop budget priorities.
	Budget Execution	Budget execution involves day-to-day requisitions and obligations for agency expenditures, invoices, billing dispute resolution, reconciliation, service level agreements, and distributions of shared expenses.

Table 6. Business Area: Management of Government Resources

HUD EA Business Function	HUD EA Business Sub-function	HUD EA Sub-function Description
Financial Management		
	Accounting	Financial Management enables HUD to manage its financial control activities and the flow of financial information across its information systems.
	Budget and Finance	
	Payments	
	Collections and Receivables	
	Asset and Liability Management	
	Reporting and Information	

3.3.1 Definition of Applicable Line of Business

HUD defines integrated financial management as, "A common set of fiscal procedures, processes and controls supported by enterprise-wide applications and technologies, that capture information at the point of occurrence, from which HUD can report accurate and timely information regarding the fiscal performance of HUD and its programs, and provide timely and relevant information to stakeholders."[2] Embodied in this definition is the need for a seamless integrated financial solution that leverages technology to automate routine tasks and provide consistent accurate information.

The preferred approach to accomplishing the integrated financial management solution with an enterprise-wide single vendor/single instance solution will be an ICFS with one application and one database. Flexibility to configure this solution to ensure support of potentially independent subsidiary ledger systems for FHA and Ginnie Mae is part of the approach, depending on the specific COTS solution chosen during the System Define Phase. The HIFMIP Feasibility Study analyzed four implementation options and a set of seven related configuration excursions to identify the most feasible approach to integrated financial management. The single vendor/single instance solution provided the most advantageous configuration to achieve HUD's HIFMIP

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[2] *HIFMIP Working Group document dated 10/23/03.*

project goals and had a higher likelihood of providing beneficial outcomes relative to multiple instance configurations. [3]

Integrated financial management supports the mission of HUD and is an inherent function in the delivery of all HUD programs. Integrated financial management is critical to carrying out HUD's priorities and business operations.   Financial policies, processes, organizations, applications, and services that ensure financial integrity and efficiency at HUD comprise the foundation for the HUD delivery system.

3.4 Requirements Definition

In Phase I of the HIFMIP project, HUD has performed detailed functional and technical analysis of the current system environment; projected the target system environment; and created a roadmap of business and technical activities to bring HUD from the current system environment to the target system environment. The project will continue to analyze methods, procedures, performance, functions, equipment, and security for each system, each interface, and each Program area as the project evolves through its implementation phases.

3.4.1 Functional Requirements

HUD performs accounting processes associated with the following functions:
- Funds Management
- Purchasing Management
- Accounts Payable Management
- Accounts Receivable Management
- Asset Management
- Cost Management
- Core Financial System Management
- General Ledger Management
- Financial Reporting Management
- Grants Management
- Loans Management

The HIFMIP Project Team has delivered a detailed Functional Requirements Document (July 2005) (FRD) in accordance with HUD's System Development Methodology. The   FRD identifies specific system and user requirements within the scope of HIFMIP for the proposed ICFS, as well as the functions that fall within a core financial system requirement as well as other financial required and mixed systems.   The HIFMIP FRD satisfies the need for the Project to provide:

- Key Business Activity Roles
- Workflow models for core business functions and process

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[3] *Calibre,* IDRP, *Section 2.3.1 "Single and Multiple Instance Analysis."*

- Diagram Information Value Chain

The HIFMIP Project FRD document should be consulted for further specific detail.

3.4.2 Financial Management Workflow

The Congress and the Administration mandate that agencies improve program performance, reduce paper usage, and achieve financial management excellence. Current work practices have generally become outdated and manual processes are often time-consuming, ineffectual, and prone to errors. HUD will need to rely more heavily on workflow automation to succeed. Workflow technology coordinates group activities electronic notification to staff that action is required in a transaction.   Included in this process, document tracking is fully automated to assist in version control.

3.4.3 Information Value Chain (IVC)

The information value chain illustrates the logical sequence of events to transform data inputs and fulfill business information requirements. The diagram below depicts the components of the financial cycle supported by the HIFMIP Vision.

Diagram 5. End-to-End Fiscal Processing

Implement an Integrated Financial Management Solution (IFMS) for end-to-end fiscal processing. Eliminate fragmentation in the financial cycle by including all accounting functions in one integrated solution

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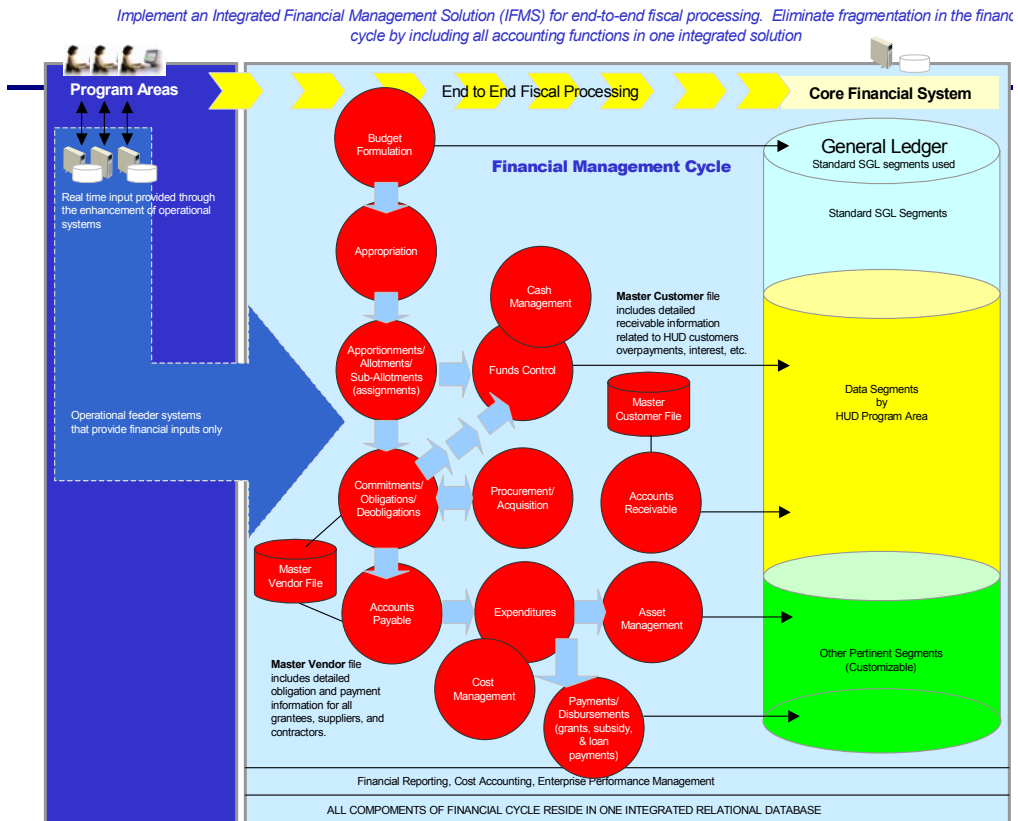
4.0 Architectural Profile

The Architectural Profile defines functional automation targets and system integration targets to fulfill business and information requirements. Automation targets represent individual systems or system modules that support specific functional or integration requirements. Integration targets represent interfaces between one or more automation targets.

Equipment Requirements

- **PC-LAN** - A Local Area Network (LAN) with IBM-compatible personal computer workstations.
- **UNISYS** - A Unisys mainframe computer connected via communication lines using Unisys terminals or PC-emulation.
- **HITACHI** - An IBM-compatible mainframe computer connected via communication lines to IBM 3270 Terminals or PCs running IBM compatible 3270 emulation.
- **NOTES** - An IBM Lotus Notes Server connected to users via a LAN.
- **MS SERVER 2000** – A Microsoft Windows 2000 Server running SQL databases connected to users via a LAN.
- **SUN E10K** – A Sun Microsystems Enterprise Server connected to users via a LAN.
- **ORACLE** – Oracle Federal Financials / iProcurement using Oracle 9i server

Performance Requirements

The ICFS should be available to users 24 hours a day, 7 days a week (24x7) except for interruptions for software installation periodic cycles, hardware maintenance or unplanned outages due to hardware, software, or network problems. Backups will be taken while the system remains available for end-users. Batch processing of interfaces and reports will be performed while the on-line transaction processing is available. Machine capacity should be planned to be sufficient to allow all batch processes to complete during the overnight period (EST) to minimize the impact on on-line transaction processing. Where possible, current batch interfaces will be replaced by real time EAI based transactions to balance workload and improved availability of financial results. Online availability should meet or exceed a monthly service level of 99.5%

The ICFS should receive confirmation of the accuracy and validity of the completion of batch and on-line financial events in the form of acceptance and error messages to the end-user.

Timing Requirements

The internal software design of a COTS federal financial system has a direct affect on the timing of both on-line and batch processes. Many components, such as workstation speed, network capacity, application and database server size, and configuration also contribute to the overall response time. Below are the service level targets for system use over the standard HUD network.

Table 7. Transaction Response Times

Number	Requirement	Timing	Plus / Minus
1.	Launch ICFS Home Page or Portal from an open browser	5 Sec	2 Sec
2.	Transaction inquiry to retrieve a processed transaction	6 Sec	2 Sec
3.	Transaction update	10 Sec	4 Sec

Capacity Limits

The number of ICFS users is expected to increase over the approximate 1,100 current HUDCAPS users due to improved on-line query and reporting capabilities and the ability of on-line transaction approvals rather than hard copy forms.

Table 8. Inbound and Outbound Interfaces

System	Inbound Interfaces	Outbound Interfaces
HUDCAPS	8	10
PAS	3	7
LOCCS	7	10

4.1 Functional Automation Targets

The following diagram depicts functional automation targets.

Table 9. Functional Automation Targets

	Funds Management	Purchasing	Accounts Payable	Accounts Receivable	Asset Management	Cost Management	Core Financial System Management	General Ledger Management	Financial Reporting
Asset Management									
Asset Cataloging									
Asset Transfer and Allocation									
Catalog Management									
Portfolio Management					X	X			
Facilities and License Management									
Computer / Automation Management									
Business Partner Management									
Partner Relationship Management									
Data Exchange	X		X	X	X	X		X	
Performance Management	X					X			
Contract Management	X		X	X					
Profile Management			X	X					
Decision Support / BI									

	Funds Management	Purchasing	Accounts Payable	Accounts Receivable	Asset Management	Cost Management	Core Financial System Management	General Ledger Management	Financial Reporting
Graphing / Charting									
Surveys									
Decision Support and Planning	X					X			X
Knowledge Capture									
Demand Forecasting	X								X
Data Management									
Data Classification	X		X	X		X	X	X	
Data Cleansing									
Data Mart									X
Data Mining									X
Meta Data Management							X		
Data Integration	X					X	X	X	X
Electronic Document and Records Management									
Document Imaging and OCR									
Document Classification		X	X	X		X		X	
Library / Storage		X	X	X			X		

	Funds Management	Purchasing	Accounts Payable	Accounts Receivable	Asset Management	Cost Management	Core Financial System Management	General Ledger Management	Financial Reporting
Geospatial Data Management and Analysis									
Graphing/ Charting									
Imagery									
Mapping / Elevation / GPS									
Identity Management									
Access Control							X		
Alerts and Notifications							X		
Content Authoring							X		
Identification / Authorization							X		
Role / Privilege Management							X		
Verification							X		
Knowledge Management and Collaboration									
Knowledge Engineering									
Categorization									
Information Retrieval									X
Knowledge Discovery									
Search									X
Portal									
Access Control							X		
Alerts and Notifications							X		

Financial Management Segment Architecture

	Funds Management	Purchasing	Accounts Payable	Accounts Receivable	Asset Management	Cost Management	Core Financial System Management	General Ledger Management	Financial Reporting
Content Authoring							X		
Online Tutorials							X		
Personalization							X		
User Management							X		
Reporting									
Standardized									X
Canned									X
Modeling									X
Categorization									X
Classification									X
Survey									
Customer Feedback									
Surveys									
Customer Analytics									
Tracking and Workflow									
Process Workflow	X	X	X	X	X	X			
Conflict Resolution									
Case/ Issue Management									

5.0 System Profile

The System Profile maps business and information requirements to a future state technical architecture. The HIFMIP Project has delivered a **Legacy System Disposition Plan**, December 12, 2005 (LSDP) and a **HIFMIP Roadmap**, December 1, 2005 (Roadmap) that describe the current system environment, the anticipated state of the system environment at each project end-phase during implementation, and the target future state of the system environment upon completion of the IFMS. Appendix E shows the graphical representation of the "Roadmap" at

each end-phase state for each fiscal year from the current "As Is" system environment in FY 2005 through to the "To Be" future state system environment in FY 2013.

The LSDP is a starting point for planning and communicating the desired target environment for the ICFS implementation for each fiscal year end-state environment. The LSDP will be updated to document changes in plans due to schedule changes, reprioritization of objectives, and changes in other initiatives that impact the ICFS implementation.

The LSPD:
- Summarizes the analysis of HUD's legacy business systems and processes that provide financial, budgetary, and other relevant information to the core general ledger;

- Identifies the systems and interfaces impacted by the implementation of a new core financial system;

- Assesses whether the business systems and interfaces should be integrated, interfaced, consolidated, replaced, or eliminated to support the core financial system; and

- Recommends a strategy for the disposition of each system and interface.

In the target environment, the new ICFS has been identified as the Peoplesoft v. 8.8 (PS) COTS software. HUD has confirmed PS can meet HUD's business requirements. FHA has already implemented a version of the PS software as the basis for the FHA Subsidiary Ledger, and Ginnie Mae is in the early stages of moving from in-house financial software to Peoplesoft using an external service provider. OFHEO is currently using Oracle Financials. Oracle has announced plans to create a "fusion" version of Oracle Financials and Peoplesoft by the end of 2008. The table below compares HUD core functions against the PS modules and subsystems.

Table 10: Peoplesoft Software Modules and Subsystems

HUD Core Functions	Peoplesoft v. 8.8 Modules	Peoplesoft v. 8.8 Module Subsystems	Peoplesoft Module Descriptions
Funds Management	General Ledger	Commitment Control	Commitment Control enables agencies to control and report on its SGL balances relating to commitments, obligations, expenditures, ad revenues against pre-defined, authorized budgets. Users will be able to create and maintain control budgets, check actual transactions against control budgets and update the General Ledger, check recognized revenue against

HUD Core Functions	Peoplesoft v. 8.8 Modules	Peoplesoft v. 8.8 Module Subsystems	Peoplesoft Module Descriptions
			revenue estimate budgets, close and/or roll forward budgets, and inquire on budgets and funds checking activities via delivered on-line inquiry screens.
Purchasing	Purchasing		PS Purchasing and eProcurement applications streamline the procurement process with the requisition and purchase order management and tracking, on-line shipment receipt, and procurement card management and processing.
Accounts Payable	General Ledger	Accounts Payable	PS Accounts Payable enables the management of disbursements while keeping controls over matching, approval processes, and payments.
Collections	General Ledger	Accounts Receivable / Billing	PS Accounts Receivable module provides assistance with the maintenance, tracking, and collection of receivables from customers. PS Billing stores billing business rules and creates customer invoices (bills).
General Ledger	General Ledger		PS General Ledger serves as the core of the PS Financial Management System.
Cost Management	Projects		PS Projects provides a central repository for financial and distribution information related to individual projects.
General System Functionality	General System		PS General System provides the characteristics of the software and hardware that allow for the proper execution of everyday financial processing and reporting.
	Contracts		Designed to manage the entire lifecycle of a contract for goods and services.
	Grants Management		Not tested.
	Asset Management		Not tested.

5.1 Current Segment Implementation

In HUD's current environment, core financial transactions and cycles reside in several systems and platforms. Each of the four program areas: FHA, Ginnie Mae, OFHEO and OCFO (responsible for all other major business areas), are independently audited and are responsible for complying with federal financial management requirements to produce accurate, consistent, timely and useful financial information.

Currently, HUD does not have a single system capable of integrating financial and program information to empower decision-makers. Program area audited financial statements are combined for the Department-level financial statements and reports. There are challenges in retrieving timely and accurate data from financial systems, and there is the need for improved quality control, improved funds control, and improved processes. The HIFMIP project is charged with establishing the integrated system and business process environment.

HUD's current core accounting systems pose several challenges for the Department: the HUDCAPS software program is written in DB2 and COBOL; and PAS and LOCCS reside on a Unisys mainframe with an operating system no longer supported in a mainframe environment. These systems maintain both programmatic and core financial data and functions. The separation of the Core functions, and information leads to untimely, inaccurate, redundant, and fragmented data for system users. Complex interfaces, interdependent processing, and inadequate workflows are limitations imposed by HUD's current array of stove-piped systems. HIFMIP's Vision recommends a single integrated model for all core financial transactions.

5.2 Current Systems Within Segment

The HIFMIP Project Team has supplied a full set of detailed functional requirements, data requirements, system and technical requirements, system security requirements.

The LSDP and HIFMIP Roadmap identify the set HUD's financial systems impacted by the ICFS implementation, provide the plan of disposition for each legacy system and interface with the core financial system, and a migration plan from the current "as is" systems environment to the future state "target" systems environment.

Table 11. Systems Affected by HIFMIP

No.	Office (Owner)	System ID	System Short Name	Name
1	ADMN	D67A	FIRMS	Facilities Integrated Resources Management System
2	ADMN	A35	HPS	HUD Procurement System
3	ADMN	P162	HIHRTS	HUD Integrated Human Resources Training System
4	ADMN	P035	SPS	Small Purchase System
5	ADMN	A51	FAADS	Federal Assistance Award Data System

No.	Office (Owner)	System ID	System Short Name	Name
6	OCFO	A21	LAS	Loan Accounting System
7	OCFO	A39	Hyperion	HUD Consolidated Financial Statement System
8	OCFO	A65A	SAVE	Section 235 Automated Validation and Editing
9	OCFO	A67	LOCCS	Line of Credit Control System
10	OCFO	A75	HUDCAPS/FFS	HUD Central Accounting & Reporting System
11	OCFO	A75I	PSCRS	Personal Service Cost Report Subsystem
12	OCFO	A75R	FDM	Financial Data Mart
13	OCFO	A91	CCFF	Consolidated Cost and FTE Files
14	OCFO	A96	PAS	Program Accounting System
15	OCFO	D08	Bonds	Bond Payment
16	OCFO	D091	CAPS	OCFO WebFocus Corrective Action Plan Reports System
17	OCFO	D21	DARTS	Departmental Accounts Receivable and Collection Tracking System
18	OCFO	D61	EZB	EZ Budget
19	OCFO	D65A	BOSS	Section 8 Budget Outlay Support System
20	OCFO	D91A	REAP/TEAM	Resource Estimation Allocation Process/ Total Estimation and Allocation Mechanism
21	OCFO	H18	IATS	Integrated Automated Travel System
22	OCFO	P001	HTMS/ eTravel	HUD Travel Management System/ FedTraveler.com
23	OCFO	P190	GFITS	Government Financial Information Tracking System
24	CPD	C04	IDIS	Integrated Disbursement and Information System
25	OH	A43	SFIS	Single Family Insurance System
26	OH	F24D	REMS	Real Estate Management System
27	OH	F87	TRACS	Tenant Rental Assistance Certification System
28	OH	P013	FHA-SL	FHA Subsidiary Ledger
29	OH	F17C	FHAC	FHA Connection
30	Ginnie Mae	B16	MASS	Macola Accounting Software System
31	PIH	P113	PIC	PIH Information Center System
32	PIH	P104	WASS	Web Access Security Subsystem
33	OFHEO	UNK	FIMS	Financial Information and Management System
34	OCIO	Unknown	TIBEC	Technology Investment Board Portfolio

Appendix B has a full list of the financial system interfaces, the sources from which they have been identified, and whether the interface will be included in the LSDP scope or excluded from further analysis. Scope determination for inclusion in the LSDP was made based on whether or

not the feeder system interface would be directly impacted through changes made during a HIFMIP phase.

For further information, please refer to the LSDP document and the HIFMIP Project Library for specific documents and deliverables.

5.3 Mapping to Service Component Reference Model (SRM)

The Federal Service Component Reference Model (SRM) is a functional framework that classifies service delivery components into a hierarchy of Service Domains, Service Types, and Components. The SRM reflects vertical and crosscutting services and provides a leverage-able foundation to define opportunities for the re-use of applications, application capabilities, components, and work processes. In order to ensure that a crosscutting segment is implemented correctly within the overall Federal and HUD Enterprise Architecture, it is important to understand how the crosscutting segment fits within the Federal Service Component Reference Model (SRM). Appendix C shows the alignment of the SRM Service Domains, Service Types, and Components with the Business Management functions. As "Financial Management" is defined as a Service Type within the "Back Office Services" Service Domain, the relative Financial Management Service Components are already in place. New Service Components relate to greater abilities for Budget evaluation, forecasting, modeling, planning, and development.

5.4 Mapping to Future State Technical Architecture Framework

The ideal solution for implementing the HIFMIP vision is an enterprise-wide single vendor/single instance system. This single platform core financial system, with subsidiary ledgers for the FHA, Ginnie Mae, and OFHEO uses dedicated applications, common vendor and customer files, and a common database to capture and record financial events at the transaction level. This end state architecture is depicted below. The end state, which represents the final integrated stage of the architecture, will be achieved when all HUD business areas are supported by a common instance of ICFS.