NASA Procedural Requirements

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Subject: NASA Financial Information Systems

Responsible Office: Office of the Chief Financial Officer

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Chapter 2. Integrated Financial Management Systems

2.1 Overview

2.1.1 Financial systems management requires a joint effort of the NASA Chief Financial Officer (CFO), Chief Information Officer (CIO), and the Integrated Enterprise Management Program (IEMP). The CIO's focus is on managing the technology aspects of financial systems to meet the needs of end users. The CFO is focused on assuring financial systems perform as a useful tool to conduct financial business processes, report financial information, and maintain data integrity. The Chief Financial Officer Act (see Authority and References) extends Agency CFO's responsibility to all financial management aspects for operating Agency programs. For this reason, the NASA CFO is the key decision maker in "Agency-wide and Agency component accounting, financial and asset management systems." This chapter defines the roles and responsibilities of key individuals within NASA, who are responsible for implementing the concepts outlined in the Federal Financial Management System Requirements (FFMSR). The FFMSR describes the basic elements of a model for integrated financial systems in the Federal government, how these elements should relate to each other, and specific considerations in developing and implementing integrated financial systems. The FFMSR was developed by the General Services Administration (GSA) Financial Systems Integration Office (FSIO). All financial management systems must deliver the following:

a. Demonstrate compliance with accounting standards and requirements.

b. Provide timely, reliable, and complete financial management information for decision making at all levels of government.

c. Meet downstream information and reporting requirements with transaction processing data linked to transaction engines.

d. Accept standard information integration and electronic data to and from other internal, governmentwide, or private-sector processing environments.

e. Provide for "one-time" data entry and reuse of transaction data to support downstream integration, interfacing, or business and reporting requirements.

f. Build security, internal controls, and accountability into processes and provide an audit trail.

g. Be modular in design and built with reusability as an objective.

h. Meet the needs for greater transparency and ready sharing of information.

i. Scale to meet internal and external operational, reporting, and information requirements for both small and large entities.

2.2 Agency Requirements

2.2.1 NASA is responsible for implementing the Financial Systems concepts outlined in the FFMSR.

2.2.1.1 Linking Program Delivery with Financial Management. Congress authorizes programs and funding for agencies to carry out specific purposes. Program delivery results in financial events such as acquisitions, grants, loans, payment of benefits, and payroll, which become the basis for financial transactions that must be captured and recorded through standard business processes. Government program financial events must be in accordance with their intended purposes and align with recording standards. Financial transaction processing provides accounting and control and is the basis for collecting and organizing financial data. The data collected from financial events is the basis for ensuring accountability and provides information in financial report format for decision makers. Evaluation of data processing reports checks recorded results against program purposes.

2.2.1.2 Automated systems - NASA's main financial business processing tools. These systems supply the business links between NASA and other government and commercial organizations through electronic data exchange, reporting, collections and disbursements. Automated systems control activity and use data to form understandable information and reports. Use of common financial data from disparate programs, processes, and systems occurs for different purposes by different systems through system processing. Financial systems must ensure data in systems and system processing accurately maintains the financial transactions of NASA. The NASA financial business system of record is the SAP Core Financial System.

2.2.2 Quality performance of financial business processes, financial information integrity, and data integrity are the ultimate goals of NASA financial systems. NASA policies ensure NASA systems perform at an effective and efficient level.

2.2.3 Framework for Financial Information Systems Integrity. To achieve the Agency's goals for financial systems, NASA shall adhere to the guidance as set forth in the FFMSR through its Office of the Chief Financial Officer (OCFO) Governance Process, and IEMP.

2.2.4 Basic Financial System Requirements. NASA management must establish and maintain financial systems that are compatible with all NASA systems and governmentwide financial systems. This requires NASA's systems, whether owned and operated by NASA or provided by cross servicers, to incorporate standard financial and standard data exchange formats. This sub section contains requirements for internal and external systems to help ensure adequate program delivery. NASA systems shall:

a. Collect accurate, timely, complete, reliable, and consistent information.

b. Provide for adequate Agency management reporting.

c. Support government-wide and Agency level policy decisions.

d. Support the preparation and execution of Agency budgets.

e. Facilitate the preparation of financial statements, and other financial reports in accordance with Federal accounting and reporting standards.

f. Provide information to central agencies for budgeting, analysis, and governmentwide reporting, including consolidated financial statements.

g. Provide a complete audit trail to facilitate audits.

h. Use integrated standard data classifications (definitions and formats) established for recording financial events.

i. Provide common processes used for processing similar kinds of transactions.

j. Abide by internal controls over data entry, transaction processing, and reporting.

k. Be designed to eliminate unnecessary duplication of transaction entry.

l. Provide for ad hoc inquiries.

m. Provide on-line instructions which are consistent with NASA policies and Federal regulations and authorities.

n. Provide for business warehousing of data and transactions.

o. Integrate common data from multiple services across the enterprise.

p. Maintain functions needed for NASA business purposes.

q. Satisfy requirements. Government Accountability Office (GAO) Checklist GAO-05-225G - Core Financial System Requirements Checklist. This checklist reflects FFMSR requirements for Core Financial Systems compliance review of Agency core systems and is designed to determine if the systems substantially comply with FFMSR.

2.2.5 Performance Goals of Financial Management Systems. NASA financial systems shall comply with the FFMSR identified performance goals applicable for all financial management systems as listed below:

a. Demonstrate compliance with accounting standards and requirements.

b. Provide timely, reliable, and complete financial management information for decision making at all levels of government.

c. Meet future information and reporting requirements with transaction processing data linked to transaction engines.

d. Accept and provide standard financial information electronically from and to other internal, government-wide, or private-sector processing environments.

e. Provide for "one-time" data entry and reuse of transaction data to support downstream integration, interfacing, or business and reporting requirements.

f. Build security, internal controls, and accountability into processes and provide an audit trail.

g. Be modular in design and built with reusability as an objective.

h. Meet the needs for greater transparency and the ability to share information in a timely manner.

i. Meet internal and external operational, reporting, and information requirements for NASA.

j. Incorporate internal controls in accordance with NASA NPR 9010.3, Financial Management Internal Control.

2.2.6 NASA Financial Management Business Process. NASA's policy is to maintain one centralized integrated financial management system that aligns with Agency financial business processes for which the CFO is the key business process owner. NASA's financial business processes are defined by the OCFO in accordance with the FFMSR, and are approved through the CFO Governance Process. If gaps are identified in the functionality provided by the central financial system, the OCFO may choose to establish additional systems to address these specific process needs. To reduce the risk that these subsystems may lead to inconsistent views of financial information, they must be designed so as not to house redundant financial data or call into question the authoritative source of any financial data. This section identifies the criteria for determining financial systems for which the NASA CFO is the business process owner.

2.2.7 CFO as Business Process Owner. The CFO is the key business process owner for the Core Financial System functions and elements of any system, subsystem, feeder system, or system routine that supports a NASA financial business process. Such systems include any that:

a. Support the direct business processes of the CFO.

b. Perform ancillary calculations, functions, tracking or other activities primarily for or related to the business processes of the CFO.

c. Perform functions to process data from other systems into financial systems performing the business processes of the CFO. This includes:

(1) Interfaces that extract data from an existing system.

(2) Process data within mixed system or interfaces that pertain to the CFO business process.

d. Provide information or data for the use of systems performing CFO business processes, such as, an edit table look up. The CFO is the key business owner and decision maker for mixed system processing that pertains to a CFO business process.

e. Process data from financial systems to use in other systems, reports, or to support other CFO business functions/business processes, including processes A through D above. NASA is committed to maintaining and using standard financial data that is reconcilable to an official system of record. Ensuring the integrity of data critical to management decision making--such as detailed and summary level financial management data--requires an Agency commitment to maintain one centralized data source. Replication of centrally managed data to other systems will be strictly limited to curtail manipulation of the data and the propagation of multiple, conflicting versions of the information. All requests for extracting financial data from the Core Financial System or the Business Warehouse for the purpose of loading the data into another system must be approved by the OCFO.

f. The CFO is the key business owner and decision maker for any extraction interface used to obtain data from CFO business process systems, including:

(1) Interfaces that extract data.

(2) Processing routines within mixed systems or interfaces that extract data.

2.2.8 CFO Financial Management Business Processes. Whether the system performs a CFO business process determines if the CFO is the key decision maker for a system. The NASA CFO is responsible for:

a. Budget and Finance. The President and Congress require CFOs to manage the Federal budget process. The FFMSR uses the term "budget" to refer to planning and budget formulation, and "finance" to refer to budget execution. The NASA CFO responsibilities include managing activities that involve formulating and executing the

Agency budget as prescribed by legislation and Presidential policies.

b. Accounting. Accounting requires complex data classification and systems processing to keep the books, prepare financial statements and reports, and perform business functions. Accounting is fundamental to public fund stewardship and forms the basis for program performance measurement and information reporting. Accounting requires a complex system process involving many systems.

c. Collections and Receivables. Managing collections is a CFO accounting and control function to ensure standard transaction processing for collecting funds into the Treasury and NASA accounts in accordance with laws and applicable accounting standards. It encompasses the stewardship, governance, and infrastructure to support the constitutionally mandated function for collecting money to finance government into the Treasury through taxes, fines, fees, forfeitures, and donations. Funds are also collected through the sale of property, user fees, leases, royalties, etc., that result from government operations.

d. Payments. Payments are the disbursement of NASA funds through a variety of means to many different individuals and organizations to pay for goods and services or to distribute entitlements, benefits, grants, subsidies, loans, or claims. The NASA CFO is responsible to ensure control over NASA funds through standard transaction processing required by Treasury for disbursing funds.

e. Assets and liabilities. The CFO, in coordination with the Institutions and Management Mission Support Office, is responsible to ensure proper accounting and stewardship for assets and liabilities through accurate reporting.

f. Reporting and Information. The CFO is responsible for the integration of cash, accrual and cost accounting and reporting for internal performance management and external reporting; and, the integrity of financial reporting and information. Business processes, information flows, and data architecture must be brought together to meet information processing goals. This requires a collaborative effort between the OCFO, financial managers, program managers, and OCIO.

2.2.9 Integrated Financial Management Systems Architecture. NASA's policy is to develop and maintain a form of enterprise architecture for financial systems using the modular approach composed of an integral central core financial system and integration of subsystems, feeder systems, and related system processing necessary to satisfy FFMSR and FSIO requirements. This sub section identifies the form NASA financial systems must take. NASA systems shall uphold the requirements for integration cited in the FFMSR, including:

a. Abiding by a financial systems architecture design with modules that work together and with governmentwide systems so transactions are recorded consistently when and where needed. The following are effective design characteristics:

(1) Common Data Elements. NASA systems require use of standard data classification which requires:

(a) Developing standard definitions and formats for data recordation.

(b) Capturing, sharing and storing common data elements recorded through financial system processing events among systems for meeting reporting requirements and use in subsequent processing.

(c) Abiding by governmentwide information standards including the US Government Standard General Ledger and Treasury reporting requirements.

b. Common Transaction Processing. NASA systems shall use common processing techniques among systems for similar transactions. Such consistency streamlines subsequent processing efforts.

c. Consistent Internal Controls. NASA systems shall use internal controls for data entry, transaction processing, and reporting to ensure the integrity of data, information, and the protection of NASA resources.

d. Efficient Transaction Entry. The design of financial management systems shall accommodate single entry points across systems to eliminate duplicate data entry.

e. Integration. Integration refers to a system design which permits multiple points for users and other systems to access information. However, it does not mean that all information is physically located in the same database. Interfaces provide integration by allowing one system to share data with another system. NASA shall incorporate provisions to integrate systems during data processing as long as it does not disrupt normal business processes and is cost effective. Any decision concerning the integration of data into or out of the NASA financial systems will follow the governance process established by the OCFO and the IEMP Program Office. This governance process ensures the use of:

(1) A common integration framework.

(2) Standard integration patterns to protect data integrity.

(3) Established decision trees to ascertain the most efficient and reliable means of integration.

f. The NASA CIO is the key decision maker for the technical aspects for financial systems within the framework of

governmentwide and NASA CFO requirements, which includes decisions about system configuration, processing data through one centralized system or many systems, processing routines, and data organization.

g. The FFMSR integration criterion applies to all NASA systems, which includes in-house financial systems, outsourced financial business functions that are processed through a service provider system, and for the acceptance of new or changes to existing systems in the NASA architecture.

2.3 Roles and Responsibilities

2.3.1 Chief Financial Officer (CFO). OMB and Congress chartered the CFO with broad responsibilities for financial systems, making the CFO the key decision maker for managing and implementing changes to these systems. See Chapter 1.

2.3.2 Chief Information Officer (CIO). The CIO's focus is primarily with the technical aspects of NASA financial systems. OMB and Congress chartered the CIO to provide the leadership, vision, communication, coordination, and innovation necessary to maximize government effectiveness in using information technology. The NASA CIO is the key decision maker for technical judgments concerning financial systems. The CIO implements systems development and systems maintenance and support initiatives through the IEMP CC which coordinates with systems owners and user in the OCFO organization and NASA users in Centers and Headquarters. See Chapter 1.

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