APPENDIX 6: FSIO REQUIREMENT DRAFTING GUIDELINES[1]

Our goal is to publish a comprehensive set of requirements that can be used by agencies and vendors in developing more effective financial systems. To help ensure that our efforts produce consistent and accurate requirements, we have adopted standard drafting guidelines.

6.1 REQUIREMENT INTRODUCTORY PHRASES

Our drafting guidelines call for starting every requirement with a standard phrase such as "The core financial system must provide automated functionality that…" Table 1 shows the standard phrases we used.

Table 1. Requirement Introductory Phrases

Introductory Phrase	Explanation of Use
The system must provide the capability to …	The capability must be delivered whether or not the agency chooses to use it. (The capability may or may not be used by all agencies in all implementations.)
The system must provide the automated capability to …	The automated capability must be delivered whether or not the agency chooses to use it. (The capability may or may not be used by all agencies in all implementations.) The requirement is to be performed by the system without manual intervention.
The system must provide automated functionality that …	The functionality must be delivered and performed by the system in all implementations, as it is inherent in a Federal implementation (e.g., prompt payment functionality). However, there may be conditions under which it is not applicable. The requirement is to be performed by the system without manual intervention.
The system must provide the capability to allow a user to …	The capability must be at the discretion of a user; user intervention is required.
The system must allow a qualified end user to …	Expert knowledge is required to effectively and correctly trigger the system operation.
The system must allow an authorized end user to …	Special authorization is required to simultaneously satisfy this requirement and system management and financial management internal control requirements.
The system must be delivered prepopulated with …	The requirement specifies governmentwide data values that must be provided with the product.

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[1] Reprinted from Core Financial System Requirements Exposure Draft July 2009, Appendix C (published by the Financial Systems Integration Office)

6.2   REQUIREMENT TYPES

The requirement types found in this document are as follows:

- *Configuration requirements* describe functionality needed by an agency to establish and maintain master data, access rights, and business rules.

- *Input requirements* describe the different types of information that is captured by the system. Input requirements cover individual data items and documents.

- *Process requirements* describe automated tasks performed on financial data as entered into the system. Processes include validating data, monitoring funds, notifying users, performing calculations, and distributing costs. Because process requirements cover a wide range of functionality, they are written using a variety of standard syntax rules.

- *Report requirements* describe system-generated outputs that are subject to defined form and content rules and queries used for accessing information in the system.

- *Interface requirements* define the need to exchange data internally within the agency or externally with a governmentwide system. An example of an internal interface is an acquisition system that generates transactions needed to establish commitments in the core financial system. An example of an external interface is the generation of a payment file suitable for transmission to Treasury's disbursing system.

6.3   KEY VERBS USED

In addition to starting every requirement with a standard phrase, our drafting guidelines call for the use of a standard verb.

The key verbs used in this document are explained in alphabetical order as follows.

- We use "*associate*" when referring to establishing a relationship (i.e., link) between data records. Associations are normally created automatically by the underlying database software when new records are added. For example:

  > *The system must provide the automated capability to associate each combination of the DUNS and DUNS+4 numbers with one and only one bank account for each CCR vendor. (PMA-09)*

- We use "*calculate*" when referring to system functionality needed to compute a result based on a defined arithmetic formula. For example:

  > *The system must provide automated functionality that calculates multiple due dates when lines on a payment request have different payment terms. (PMD-02)*

- We use "*capture*" when the intention of the requirement is to store new information or link other stored data to a new record. Captured data can be user entered or derived. The ability to subsequently retrieve, modify, or delete captured information is assumed. For example:

> *The system must provide the capability to capture payment terms on obligations that are different than those specified on the associated vendor record. (FME-36)*

- We use "***classify***" when referring to the capability to categorize financial transactions along various dimensions in order to enable retrieval, summarization, and reporting of information. For example:

> *The system must classify transactions by any element of the accounting classification structure, including any of the five agency mission-specific classification elements. (SMA-03)*

- We use "***customize***" when referring to the ability for an agency to enter new and modified displayed text, field labels, report titles, column headings, or user interface settings. For example:

> *The system must provide the capability to customize the text and data elements to be displayed on system-generated bills, by customer type, receivable type, or billing method. For example, a bill for the sale of goods and services would need to contain different supporting text than a bill to an employee for an overpayment. (RMB-11)*

- We use "***deactivate***" when referring to making a master data element or record inactive. For example:

> *The system must provide the capability to deactivate payees on demand or based on agency-specified length of time with no activity. (PMA-14)*

- We use "***define***" when the intention of the requirement is to allow a qualified end user to specify edits, business rules, workflows, code values, or other conditional processes. For example:

> *The system must provide the capability to allow a user to define payment methods as EFT, check, IPAC, or interfund transfer. (PMA-19)*

- We use "***deliver***" to specify nonfunctional features that must be included as part of the baseline product. For example:

> *The system must deliver the core financial system software prepopulated with the current published values for the USSGL chart of accounts. (GLA-09)*

- We use "***derive***" when referring to functionality the system uses in applying business rules. For example:

> *The system must provide the capability to capture or derive USSGL account attributes used to classify accounting transactions for reporting to Treasury systems (e.g., FACTS I, FACTS II, GFRS, or GTAS). (GLC-02)*

- We use "***determine***" when requiring the system to choose the appropriate action based on predefined business rules. For example:

> *The system must provide automated functionality that determines if upward and downward spending adjustments are to expired or to unexpired budget authority and uses*

that determination to derive and record the USSGL-prescribed spending adjustment entry. (GLD-03)

- We use "*distribute*" when referring to allotting funds or the assignment of accumulated costs. For example:

    The system must provide the capability to distribute funds below the level at which they are controlled. (FMD-14)

- We use *"establish"* to specify functionality that allows direct entry or import of system referential data or master data. For example:

    The system must provide the capability to allow a user to establish and maintain reason codes and related descriptions to identify discrepancies related to the receipt and acceptance of goods and/or services. (PMB-08)

- We use "*export*" when the intention of the requirement is to generate and transport a transaction file external to the confines of the core system. For example:

    The system must provide automated functionality that generates and exports bulk files for intragovernmental payments and collections in the formats required by Treasury systems that perform intragovernmental transactions (e.g., IPAC). (RBC-07)

- We use "*generate*" when specifying requirements where the system must produce a formatted output. For example:

    The system must have the automated capability to generate check and EFT payment files in the current Treasury FMS-defined formats for both Treasury and non-Treasury disbursing offices. (PMD-20)

- We use "*identify*" to refer to the flagging or lookup/retrieval of information based on an entered parameter or defined rule. For example:

    The system must identify when posting transactions will invoke upward spending adjustments and apply the agency-defined funds control edits. (GLD-08)

- We use "*import*" when requiring the system to receive and process data originated in another financial or mixed system. For example:

    The system must provide the automated capability to import payment confirmation data from a Treasury governmentwide system (e.g., SPS, PAM, or GOALS II/IAS RFC Agency Link). (FBB-01)

- We use "*link*" when referring to establishing a relationship between data records. A link is normally created automatically by the underlying database software when new records are added. For example:

    The system must provide the automated capability to link multiple DUNS+4 numbers to a single DUNS number. (PMA-08)

- We use "*liquidate*" when the intent is to reduce or close a line item on a referenced document. For example:

  > *The system must provide automated functionality that liquidates individual disbursement-in-transit transactions and records confirmed disbursements upon receipt of payment confirmation from a Treasury governmentwide system (e.g., SPS, PAM, or GOALS II/IAS RFC Agency Link). (FBB-02)*

- We use "*maintain*" when requiring the system to store master data elements, business rules, or other data (e.g., spending plan data) used in the processing of transactions. For example:

  > *The system must provide the capability to allow a qualified end user to establish and maintain agency-specific obligation types to identify the activity that initiated the obligation such as a travel order, purchase order, grant award, task order, work order, or BPA call. (FME-22)*

- We use "*monitor*" to refer to the comparison of an accumulated amount against an established limit. For example:

  > *The system must provide automated functionality that monitors the cumulative amount billed for a given reimbursable agreement and applies the agency-defined validation edits (reject further attempts to bill, or warn the user) when the authorized amount (i.e., billing limit) on the reimbursable agreement has been or is about to be exceeded. (RBC-02)*

- We use "*notify*" ("notifies") when the requirement is for the system to issue an electronic message, such as an email or other online message to inform a user or external party of an event or processing exception. For example:

  > *The system must provide automated functionality that notifies the user when online documents fail funds control edits, transaction processing edits, or tolerance checks. The system must provide the notification on the document entry screen and include the nature of each error and the validation edit (rejection, warning, or information only). The system must retain errors with the document until they have been resolved. (SMB-12)*

- We use "*prevent*" when the system is required to stop a user from completing an entry or initiating a process. In some cases, actions that are prevented based on funds control or line item tolerance checks are subject to override. For example:

  > *The system must prevent unauthorized users from manually updating CCR-originated data in the payee information file. (PMA-06)*

- We use "*record*" when referring to the posting of transactions into the general ledger or journal. "Record" is usually followed by an accounting term such as assets, liabilities, accounts payable, equity, revenue, expenses, interest, depreciation, amortization, collections, receipts, payments, commitments, obligations, expenditures, authority, or appropriations. For example:

  > *The system must provide the capability to record transactions to any open accounting period and must provide the option to keep multiple accounting periods (minimum of two) open simultaneously. (GLF-02)*

- We use "*reference*" to refer to the association of document line items to prior document lines and their automatic liquidation. For example:

  > *The system must provide the capability to reference multiple documents, document lines, and accounting lines in a processing chain. For example, it must provide the capability for an obligating document to reference multiple commitment documents, commitment document lines, and commitment accounting lines. (SMC-08)*

- We use "*suspend*" when requiring the system to place a document or other work item into a holding queue subject to later retrieval, correction, and completed processing. For example:

  > *The system must provide the capability to suspend documents that fail transaction processing edits, funds control edits, or tolerance checks. (SMB-13)*

- We use "*update*" when requiring the system to automatically modify an existing data record or balance (e.g., funds availability or general ledger) or to allow a qualified end user to modify a record. For example:

  > *The system must provide automated functionality that updates payments with the paid schedule number, payment confirmation date, and check number or trace number upon receipt of confirmation data from a Treasury governmentwide system (e.g., SPS, PAM, or GOALS II/IAS RFC Agency Link). (FBB-03)*

- We use "*validate*" when requiring the system to confirm the validity of entered information against a defined business rule. For example:

  > *The system must validate USSGL account attributes on transactions (whether entered or derived) prior to the posting. (GLC-03)*

6.4   OTHER DRAFTING GUIDELINES

A key objective in drafting the requirements is to avoid ambiguous phrasing such as "as applicable," or "as appropriate."

Examples, when included in requirements, are not intended to be definitive. They are used only to help clarify the intent. Examples are identified with the lead-in phrase "for example" or "such as."

Definitions of other key terms that could affect an agency's interpretation of individual requirements can be found in Appendix E, Glossary.