



**IRAQ FINANCIAL MANAGEMENT INFORMATION
SYSTEM
CONCEPTUAL AND FUNCTIONAL DESIGN**

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Iraq Economic Governance II



Prepared For the Iraq Ministry of Finance

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1. INTRODUCTION

The Government of Iraq needs an automated nation-wide Financial Management Information System (FMIS) to modernize and reform its public expenditure management processes. The primary objectives being improved budget execution and introduction of international practices and standards. This report describes the conceptual design and functional requirements, including the business processes necessary for a modern FMIS, and seeks full agreement and support from the Ministry of Finance for that system. This report was prepared by BearingPoint under the USAID Iraq Economic Governance II Project.

USAID provided funding under its Iraq Economic Governance technical assistance program to procure and implement a comprehensive FMIS to enable the Ministry of Finance (MoF) to effectively execute the national budget. The functionality of the FMIS would satisfy the International Monetary Fund (IMF) recommendations for rebuilding public expenditure management in Iraq, specifically as they pertain to budget execution, as presented in the IMF July 31, 2003 report. The immediate objective of the FMIS project was to implement the core foundation components of the financial management system, which included expenditure controls and cash management, in the Ministry of Finance, line agencies and regional government entities.

The software chosen is *FreeBalance eFinancials*, a proven application used in many government institutions in Canada and the USA, as well as post conflict Kosovo, East Timor and Afghanistan. FreeBalance was also seen as an ideal solution in Iraq because on the experience of similar projects it is relatively quick to install and use compared to other major commercially available financial management packages, including SAP and Oracle, while providing the essential functionality of these systems. Much of the development and preparatory work in Iraq was conducted in early 2004 with an initial target 2005 timetable for the physical implementation, although largely due to the unpredictable and insecure local situation this has been extended to December 2005.

1.1. Purpose

Under the terms of the Statement of Work (SOW) agreed between USAID and BearingPoint the object of the project was to *“implement the core foundation components of the financial management system, which includes expenditure and cash management, in the Ministry of Finance, line agencies and regional government agencies”*. The purpose of this document is to define the business scope of the Iraq FMIS (IFMIS), specifically the conceptual and functional design of the proposed system. The IMF – World Bank (WB) Iraq Ensuring Sound Public Financial Management mission of February 2005, also identified the need for a Conceptual Design document.

This document describes the overall conceptual design of the proposed IFMIS and the detailed functionality of the core processes of the system that will be installed in 2005 for live operations in January 2006. The core processes include General Ledger, Accounts Payable and Cash Management. A follow-up paper dealing with the business functions of Accounts Receivable, Purchasing and Asset Management - the additional processes that will expand the system functionality after 2006 - will be issued at a later stage.

1.2. Approach

In normal circumstances, in the course of a project of this type, deliverables in the form of papers addressing the conceptual and functional design of a system are completed in the early development stages of the project. The unusual conditions in Iraq in the immediate aftermath of conventional hostilities in 2003 had a direct affect on donor-supported projects including the IFMIS. The exigent circumstances dictated an emergency response particularly in the first nine months of the Coalition Provisional Authority (CPA) administration, but gradually more longer-term sustainability policies emerged particularly towards the end of its term.

The IFMIS was at first perceived as an interim and immediate solution to improve controls over budget execution - a major concern of the CPA and the IMF. Like many decisions made at that time within the general climate of urgency under the CPA, the decision to install *FreeBalance* did not fully involve the Government of Iraq. Nevertheless the selected system has sufficient and proven functionality to meet and support priority needs for budget execution, including a treasury single account, cash management and a GFS compliant chart of accounts for 2006.

This document undertakes the earlier design phase of the project that was not formally completed as a deliverable. As requested by the IMF/WB 2005 mission this document will be presented to the Ministry of Finance for formal confirmation of the system. A Gap Analysis paper will be prepared from a comparison of this document with existing Iraqi data and functional requirements and will be used as the basis for amending or enhancing the existing systems and the *FreeBalance eFinancials™* software application as necessary.

1.3. Document Organization

This document is divided into the following main sections:

- Section 2, Business Definition Overview, consists of a description of the known business processes of the existing system, the business scope and processes, and an overview of the proposed system identifying the business domains or main functions that will be implemented in a phased approach.
- Section 3, Process Map, describes the alignment or relationship of the system to other systems or processes within the big picture of Iraq government fiscal management, and the internal relationship and dependences of the main processes or functional modules within the proposed system.
- Section 4, Application Software Requirements, describes the common requirements for the system across all functional modules.
- Sections 5 - 7, Business Domains, describes each functional module in detail and the main business processes that the system will need to accommodate in order to make the modules perform to requirements.
- Section 8, Technical Architecture, describes the main technical aspects of the system including communications and security.

1.4. Intended Audience

Although this document will have a wide audience, it is primarily intended for the Ministry of Finance to provide it with an overall understanding and acceptance of the new system. It will assist key counterparts in the MoF and other Iraqi central agencies to confirm the system's suitability as the main

tool that will support Iraq public expenditure management reform in the near and middle term, particularly in relation to budget execution. The document will also be instrumental in gaining acceptance and support for the project from all stakeholders with an interest in the progress of fiscal reform and reconstruction in Iraq, including international fiscal monitoring and donor organizations.

2. BUSINESS DEFINITION OVERVIEW

This section provides an overview of the business domains or main functional processes, the functions within the domains, roles of those in the business function, and the results or outputs of the business functions.

2.1. Scope

The following main functional processes are required to be supported by the IFMIS. Those marked * are core or foundation processes that are required initially. Each process is supported by a number of business functions. The business functions are based on an understanding of the known processes of the largely manual legacy accounting systems in Iraq, the 2004 Financial Management Law, the implementing regulations contained in Treasury Directions drafted by BearingPoint and reviewed by the Treasury Committee of the Directorate of Accounting in late 2004, and the functionality of the *FreeBalance eFinancials™* application provided under the USAID Iraq Economic Governance Project.

Business Domain ¹	Business Function	Product/Result
General Ledger*	Chart of Accounts Structure	Maintenance of Chart of Accounts to support budget and accounting, and future move to accruals.
	Financial Controls	Maintenance of annual appropriations and allocation limits including donor and other funds; verify, post, and report commitments, payments, revenues and journal vouchers..
	Commitment	All payments must have prior approved and recorded commitment.
	Financial Reporting.	Instant on-line and printable standard and user defined reports supporting budget execution, cash management and treasury operations for budget agencies, MoF regional treasuries and Central MoF.
Accounts Payable*	Payment Requests	Ability to track and manage invoices and purchase orders. (See Purchasing) and link to previous commitment, and system acceptance and verification of payment requests; At least two on-line approvals are required before payment is released.
	Payment Orders	Separate on-line release of cash payments and system control of check printing or direct deposit initiation.
Cash Management*	Bank account reconciliation	Ability to manage multiple bank accounts, conduct or facilitate account reconciliations, generate exception reports.
	Cash Flow analysis	Produce consolidated accounts, cash flow and estimated requirements reports.

¹ Business Domains or functional modules marked “*” form the core process requirements.

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Accounts Receivable	Receipt Issue	Point of sale or system generated receipts, reconciliation of collections, receipts reports.
	Revenue Recording	Recording of receipts data or summarized revenue, revenue reports.
Purchasing	Purchase Orders	System produced purchase orders in multiple currencies, vendor
	Vendor, invoice and purchase order control	Ability to record, track and report invoices and status of purchase orders and deliveries; maintenance of universal vendor database.
	Inventory control	Links to inventories to keep track of stock for reorder or replenishment.
Asset Management	Maintenance of Asset registers	Records of all fixed assets by spending organizations, including updating and reporting of changes in assets from purchasing and disposal.
	Revaluation and depreciation processes	Periodic and automatic revaluation or depreciation of asset values.

Business Scope

2.2. Additional Considerations

The regulatory framework underlying the operation and use of the IFMIS includes the Financial Management Law (CPA Order 95, June 2004) and draft Treasury Directions. The Financial Management Law defines and regulates the financial responsibilities and activities of the Minister of Finance and government budget funded agencies. It comprehensively covers budget preparation and execution, treasury and internal audit functions. As it is fundamentally a reform law introducing change there is risk, considering the unstable environment of present day Iraq, that not all of its provisions will be followed particularly in the short term.

The Treasury Directions are a set of regulations flowing from the Law that reform the accounting processes to meet international best practice and accounting standards primarily expenditure controls, as well as support the use of a modern automated financial system. The draft was developed and reviewed by BearingPoint advisors with a dedicated committee from the MoF in late 2004. The Treasury Directions must be approved and issued to spending agencies before live implementation of the IFMIS, however at the time of this report are still being considered by the MoF.

The system employs comprehensive audit trail capabilities. Every transaction, action, and decision made in and by the system is logged and stored for future audit review. This data can be accessed by Internal Audit and Supreme Audit organizations in addition to the financial information made available for compliance and performance audits.

The IFMIS uses sophisticated security procedures and protocols to control the flow of data to and from system, including proven modern firewall technology and multiple level user access security. The system is accessed only by those authorized to conduct designated roles and the right to access is restricted only to those users with specific tasks and responsibilities. For example a user in one organization will have access only to functions and data related to that organization and not to any other organization.

2.3. Roles

The following roles and responsibilities of people who will perform control and data entry actions in the system are drawn from the Treasury Directions:

- Approving Officer – someone appointed to be the delegate of the Chief Finance Officer to approve a proposal or request to spend government money, before the expenditure takes place.
- Finance Officer – someone appointed to conduct any financial task regarding government money, including the data entry of purchase orders, commitments, payments or receipts.
- Certifying Officer – someone who is appointed to certify the correctness and validity of a proposal or request to spend government money.
- Payment Officer – someone who authorizes a proposal or request to spend government money, or payment of money from a government account.

For the purposes of system control there are two Payment Officers, one in the spending agency site and one in the check issue site, which is assumed to be a MoF Treasury office. A person cannot be appointed to perform the duties of Approving Officer and those of Certifying or Payment Officer. These controls apply to the accounting process supporting the system, including the completion and signing of forms. The following are the roles and actions of people in the core system implementation:

Regulatory Role (Treasury Directions)	IFMIS Role	System Site	Supporting Role Action
Approving Officer	None	Spending Organization /Responsibility Center	Initial signature on supporting documents or accounting data entry forms
Finance Officer	Data Entry	Responsibility Center	None – notation on supporting data entry forms
Certifying Officer	Approval 1	Responsibility Center	Signature on supporting accounting data entry forms certifying to the correctness/verification of finance actions.
Payment Officer (1)	Approval 2	Responsibility Center	Signature on supporting accounting data entry forms authorizing action in system for spending agencies, especially payments.
Payment Officer (2)	Check Payment Release	Treasury (check printing site)	Notation on supporting accounting data entry forms.

2.4. Assumptions and Dependencies

The system is to be installed in and used by each Iraqi budget funded agency. This includes ministries and statutory authorities, the designated sub-organizations of these organizations that operate their own budget

expenditure bank accounts and receive budget funding direct from the MoF, the Central Treasury and regional (governorate) Treasuries of the MoF.

The system is being implemented in three major Phases:

Phase 1 – *Roll Out for Pilot Operations*. By June 2005 the system will be installed in the Accounting Departments of 18 treasuries, 26 ministries, and 17 statutory authorities and independent budget spending agencies. Appendix D has a detailed list of Phase 1 installation sites.

Phase 2 – *Roll Out for Live Operations*. By December 2005 the system will be installed in the Accounting Departments of 127 decentralized agencies in Baghdad and regions throughout Iraq. Appendix D contains a detailed list of the Phase 2 installations.

Phase 3 – *Live Operations and Extended Functionality*. Live operations in parallel with the legacy manual system will commence from January 1 2006. Additional functional modules (Purchasing, Assets and Receipts) will be developed and installed by December 2006.

The system will be expected to operate within the core hours of business – from 8 AM – 4 PM, Sunday to Thursday, local time zone. The optimal system availability should be 7 days a week, 8 AM – 8 PM.

3. PROCESS MAP

3.1. Inter-application Process Map

The object of the IFMIS is to provide an automated and integrated solution for budget execution and associated accounting functions conducted by government. [Appendix A](#) displays the functional position of the IFMIS and shows the broad data flows and relationships of other processes and systems that make up government financial management in Iraq.

Essentially the IFMIS occupies the middle ground between the conception and formulation of the annual budget and the external entities that physically execute that budget, including the banks payment systems. It is essential that other external systems or processes, including a future Iraq-wide public service payroll system, debt management system, the Central Bank of Iraq's operational systems and the MoF budget preparation system, are all capable of interfacing or interchanging data with the IFMIS.

3.2. Intra-application Process Map

[Appendix B](#) contains a flow chart that displays the main business processes and functional modules required of the IFMIS. It also displays those modules covered by this project and installed during the implementation phases, and the processes that are excluded but should have links to the system. The flow chart also shows the core modules currently being installed in Phase 1 and those additional modules that will be installed in Phase 2 of the project.

4. APPLICATION SOFTWARE REQUIREMENTS

4.1. Application Description

The application software that runs the IFMIS has certain requirements that allow the operation of all functions within the system. These requirements are common to all functions including the controls and

maintenance of the system. This section should be read in conjunction with Section 8 Technical Architecture.

4.2. Application Common Requirements

The following are the common requirements across all business functions in the system. ...

Bus Req #	Application Common Requirement Description
1	The proposed application software solution must be based on a commercially available software package or a set of commercially available systems that are closely integrated.
2	In order to fulfill the essential functional requirements, the application system must contain the following main functional processes or modules: <ul style="list-style-type: none"> • General Ledger • Cash Management • Commitment Accounting • Purchasing • Accounts Payable • Revenue Management • Asset Management
	Each of the above processes and programs should be integrated and: <ul style="list-style-type: none"> • share a common database • share common functions and/or stored procedures • have common access control • allow the user to move within modules and applications via menu options without having to signing off on one application and logging on to another • allow user programmed data keys/clipboard be carried across from one application/module to another • permit a transaction to update core data across modules.
3	The application must provide the user a choice of an interface in Arabic, Kurdish ² and English.
4	The application software must support approximately 300 concurrent users and have the capacity to support a minimum of 1000 users nation-wide.
5	It is highly desirable that the system operates on IBM PC or compatible workstations as the front-end workstations.
6	The application software must use a standard relational database system (RDBMS).
7	The application should allow distributed processing at MoF regional treasury offices, Ministries' and other budget funded agencies agency central offices in Baghdad, and sub-organizations of these agencies in Baghdad and regions..
8	The system should have comprehensive on-line help text facilities.
9	It should be possible to handle table overflow and other error conditions by displaying an error or warning message and not by an abnormal termination of the program.

² It is assumed that the system will be required in Kurdish to facilitate implementation in areas of Iraq where that language is one of the official languages. It is not known at this time which Kurdish dialect will be used.

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10	The application must provide for real time data entry and editing of data, with a complete audit trail maintained.
11	The application user interface should be Graphic User Interface (GUI) based.
12	The application software must ensure data integrity in the event of a hardware or software failure, and must allow for recovery of processing after a hardware or software failure.
13	The system should provide control features such as input and update counts, batch totals, update audit listings, error report generation, etc.
	The application must provide a maximum of 3 second response time for 95% of the update and inquiry transactions. Response time is defined, for these purposes, as the time between the last character input causing processing to occur and the time when the first character is output after processing has been performed. The time for painting a screen is defined as the time between first character output and the system being ready to accept the next user input, having displayed all data to be output.
	The system must allow for the definition and maintenance of a unique identifier for each user at a location.
	Access to the system must require at least two separate identification components such as user code and password.
	User access to the system and to each function within a module must be controllable.
	The system should allow for separate categories of security: <ul style="list-style-type: none"> • for system administrators with unrestricted access; • for update (data entry); • access for approval or authorization; • access for delete; • access for inquiry only; • a combination of the above
	The system should log all unsuccessful user access attempts and in case of three consecutive unsuccessful user access attempts the system should close the session.
	Only users with system administrator access control should have the privileges to create or change a users access control.

5. GENERAL LEDGER

5.1. General Ledger Description

The *General Ledger* contains the Chart of Accounts and manages the storage, access and reporting of financial data.

The core of the Chart of Accounts in Phase 1 is the Budget Classification code structure that should closely follow the international GFS (2001) standard. Additional code structures for Accounting (Cash Asset and Liabilities) purposes are derived from this core chart of accounts. Additional chart of accounts components should enable the recording of budget projects and programs, donor funded projects, and

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other non-budgetary funded activities. The initial chart of accounts will be cash based but will be changed to an accruals based structure in the near to medium term.

The format of the core chart of accounts structure is the basis of the annual budget law that is the source of the annual appropriation of funds and periodic allotments of these funds. The core or budget chart of accounts is maintained by the Directorate of Budget in Central MoF and the detailed chart of accounts, including Accounting or Treasury coding requirements, is the responsibility of the Accounting Directorate.

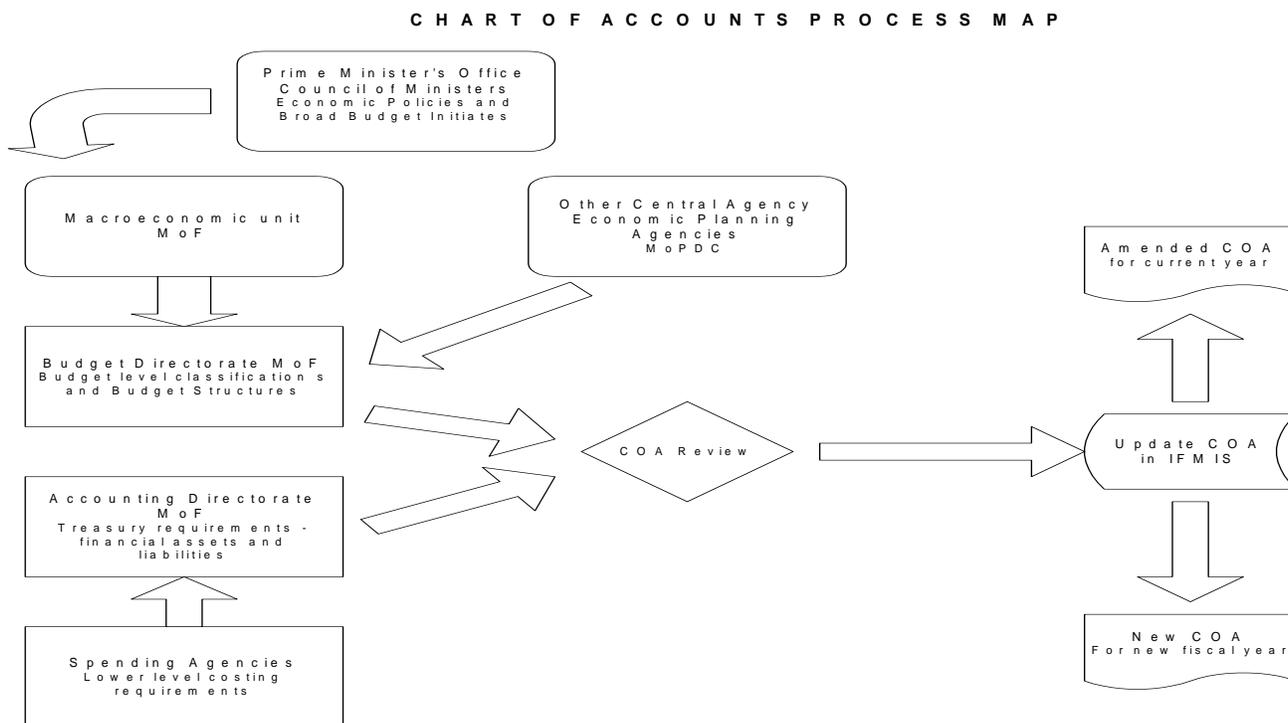
The General Ledger also supports the financial reporting function. This includes on-line or printed reports using either standard formats for periodic reporting or user defined ad hoc formats to meet special requests. The core financial reports must support the progress of budget execution, transaction and balance reports for user agencies, bank account reconciliation and balance sheets for the Treasury.

5.2. Chart of Accounts Business Function

The Chart of Accounts business function is to identify by a logical coding structure the financial transaction level and location of an authority within the overall operations of an organization (in this case the Government of Iraq). This detailed description of individual financial activities enables the generation of progress reports on budget execution therefore facilitating management oversight of government spending.

5.2.1. Chart of Accounts: Process Map

The diagram below shows the main process flows of the Chart of Accounts process.



5.2.2. Chart of Accounts: Business Requirements

Bus Req #	Chart of Accounts Requirement Description
1	The General Ledger System must have a flexible Chart of Accounts structure capable of generating output with respect to internal and external reporting requirements.
2	All the code elements must be alphanumeric.
3	It must be possible to hold a description field against each code (or element) in the chart of accounts and the application should use predetermined classifications for each account (e.g. income, expense, asset, liability,).
4	It should be possible for each of the elements to be further broken down into user-defined components.
5	It should be possible to define reconciliation account codes so that bank reconciliations and any other types of reconciliations can be performed within the system.
6	It should be possible to identify posting control account codes for automatically generating balancing entries.
7	It should be possible to revise code definitions and descriptions.
8	There should be controls to prevent deletion of an account if: <ul style="list-style-type: none"> • it has a current balance. • it has a zero balance but current period/year activity. • it is used by another module of an integrated system (e.g. Accounts Payable, Accounts Receivable).
9	The system should allow development of a new Chart of Accounts in conjunction with the current Chart of Accounts.
10	It should be possible to use one chart of accounts for all institutions using the system.
11	Entries to posting level codes should automatically roll-up to summary levels and the system should be structured over all fields and elements of the accounting key to provide consolidated data for reporting.
12	The system should be able to accommodate new General Ledger account types that can be defined in the future as per international standards, or to accommodate funds other than the main budget fund, e.g. donor funded projects.
13	The system should have the capability to define elements in a user defined variable accounting key.

Business Function: Requirements

5.2.3. Chart of Accounts Business Function: Assumptions

The IFMIS needs to be updated with amendments to the Chart of Accounts before any new structures can be used. Transactions using codes not set up in the system will be rejected.

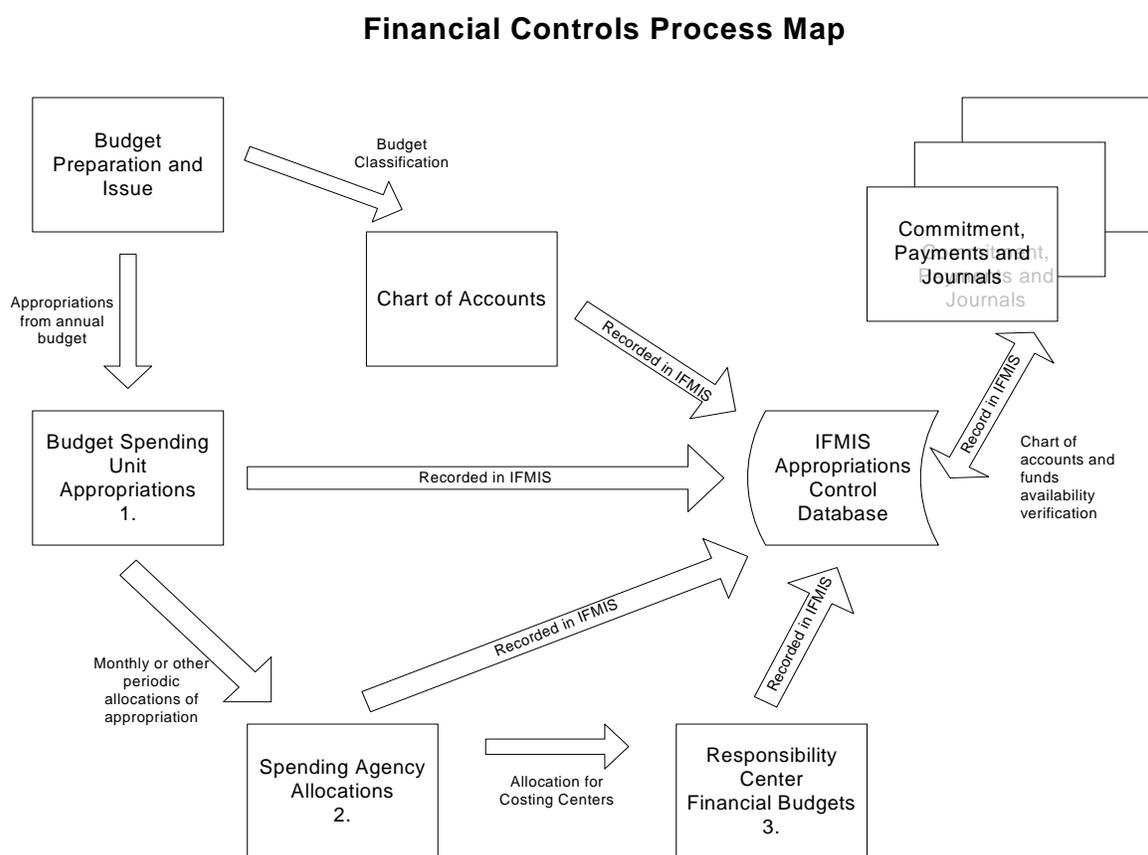
Structures for a new fiscal year must be entered into that year’s database before the new year commences. The annual budget cycle should include a period to allow timely update in the IFMIS and distribution of a code book to user agencies.

5.3. Financial Controls Business Function

This function includes the funds control processes and standards to be followed by the system. It describes the general parameters for recording transactions and the edits and reporting of data

5.3.1. Financial Controls: Process Map

The diagram below shows the main process flows of the Financial Controls process.



5.3.2. Financial Controls: Requirements

This table lists the main functional requirements for financial controls and records.

Bus Req #	Financial Controls Requirement Description
1	The system must be capable of recording different categories of funds at levels specified by users responsible for funding control, including donor or other external funds.

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2	The system must automatically check funds for out-of-balance conditions by budget agency and responsibility center (cost center).
3	The system must be capable of storing a monetary amount with a minimum field size of 15 significant digits and two places after the decimal (15.2).
4	It must be possible to maintain accounts concurrently: <ul style="list-style-type: none"> • on a cash basis. • on an accrual basis..
5	The system must store prior year account level summary or consolidated data for a minimum of five years, and transactional data for three years. It must be possible for the user to define the duration for which data will be stored.
6	The General Ledger should be capable of recording and storing data in both Iraqi Dinar and foreign currencies, including US Dollars and the Euro.
7	The system should be capable of linking to supporting transactions from other modules of the system and should include reconciliation facilities with other modules.
8	The system must allow General Ledger functions to be undertaken in a distributed environment and cater for multiple institutions and organizations within institutions. In this context, distributed environment means that processing can be undertaken in multiple locations by multiple users.
9	Each entity, as allowable within existing business rules, should be able to: <ul style="list-style-type: none"> • exercise independent control of its data entered into the system (using a separate range of journal numbers, batch control sequence, etc.). • select system features and options to meet its own specific needs. • maintain its own user-defined tables and procedures. • schedule processing to meet its own requirements. • extract and summarize its own data in the system through user-defined report formats. • maintain a different Chart of Accounts without impacting consolidated reporting capabilities, i.e. structure and logic.
10	On-line processing must be available for: <ul style="list-style-type: none"> • definition of application controls (e.g. calendars).code creation, amendment, and deletion. • definition of code structures. • journal input, validation and approval. • journal posting. • issue of warrants for allocation of funds to budget agencies. • funds checking against budgets during the warrant issue process and consequent updating of funds balances. • requesting reports
11	The system should allow for on-line transactions to be stored and be processed at a later point in time and it should allow for processing from one on-line session to be held for completion during a subsequent session (it should be possible for a transaction to be stored in an incomplete state).
12	Journal entries must be edited against funds control function to check/update available funds where required and the system must ensure that each journal entry is self-balancing.

13	The system should be capable of processing real-time edits for online journals. There should be options for an online interface for corrections, for error handling; and user defined edits.
14	The system should support the processing of manual adjusting journals, linked to the original transaction.
15	If the journal fails during verification, it should be possible for the entry to be suspended and corrected later.
16	The same reference data must be used for all validation processes and during on-line processing, all codes must be validated at the time of entry.
17	The system must support period end and year-end processing, including forward year commitments.
18	There should be standard procedures for end-of-period processing and end-of-year closing.
19	The system should allow processing year-end adjustments in the prior year accounts while the current year accounts are active.

5.4. Commitment Business Function

The *Commitment System* should be an integral part of the *General Ledger* with strong links with the *Accounts Payable* and *Purchasing systems*. Spending units, as part of their regular operations issue purchase orders, conduct the procurement process and make expenditures for various items. All payments regardless of their nature require a pre-approved commitment. At the beginning of the procurement process when the value of goods or services is estimated or there is an initial quote, a commitment is created by:

- Purchase Orders raised by spending units for procurement of goods and services; and
- Budget Commitment Requests initiated by spending agencies or Ministry of Finance for recurring expenditures such as payroll.

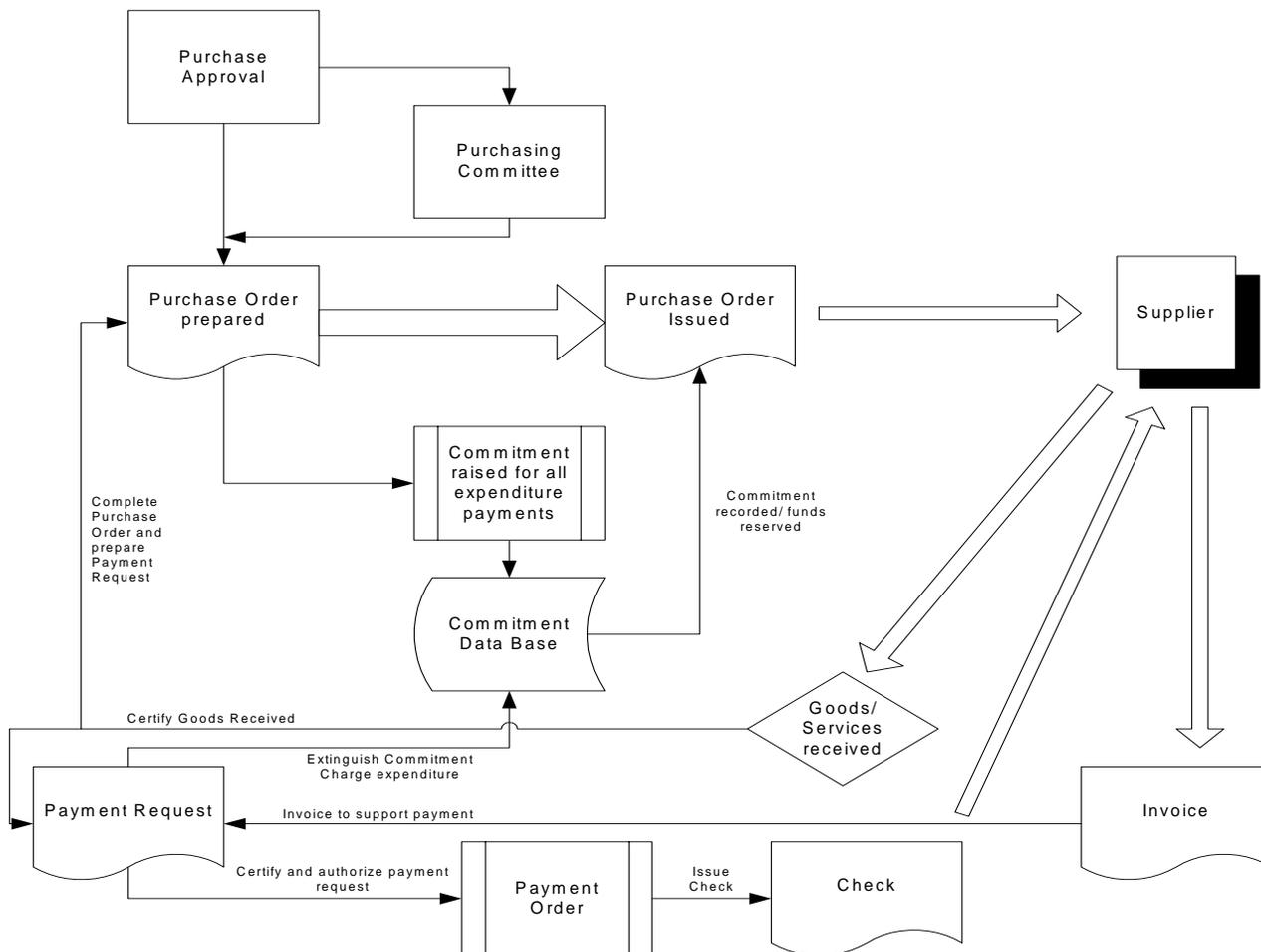
A commitment must be accepted and processed by the *Commitment System* before procurement can proceed or a payment made. Commitments are approved and recorded by Certifying Officers, who are generally located at Budget Offices or Accounting Departments of spending agencies, in the *Commitment System*. The unobligated balance of the affected commitment limit, which is linked to appropriation or funds allocation, (containing the related budget classification) is reduced by the amount approved on the Commitment Requisition. Commitment transactions may also include additional procurement data, such as invoice and vendor details. A Commitment Adjustment transaction is used to amend, complete or cancel a commitment. Automatic cancellation or liquidation of a commitment can occur during the payment process.

...

5.4.1. Commitment: Process Map

The following diagram illustrates the main commitment and purchasing process. See also Accounts Payable process map at [Appendix C](#).

Commitment and Purchasing Process Map



5.4.2. Commitment: Requirements

This following table lists the main business functions for Commitment.

Bus Req #	Commitment Requirement Description
1	The system must be capable of recording commitment of funds for future use against anticipated expenditure.
2	The Commitment System must have a close interface with other functional modules, including General Ledger, Accounts Payable and Purchasing, to link appropriation/funds allocation, purchase orders, payments and cash limits with commitment.
3	The system must prevent commitment levels from exceeding appropriation or funds allocation limits, or user defined commitment limit, depending on commitment type.

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4	The module should have the capacity to operate in a devolved and decentralized environment where independent units exist and are responsible for their own purchasing activity.
5	The system should allow the entry of commitment for both current and forward years, and allow for the carry forward of outstanding commitment to the new year.
6	The system should allow adjustment to recorded commitment, including deletion. The adjustment can be manual or automatic.
7	The system should allow for the following information in the commitment transaction record: <ul style="list-style-type: none"> • manual or computer-generated sequential commitment number • commitment date • spending unit/agency and accounting office identification • brief description of the purpose • General Ledger and budget classification code • commitment amount • invoice and vendor identification details • particulars of expenditure • commitment status
8	Each entity/organization should be able to: <ul style="list-style-type: none"> • exercise independent control of its data entered into the system using a separate range of commitment numbers, batch control sequences etc. • specify system features and options to meet its own specific needs. • extract and process its own data using user-defined report generation parameters.
9	On-line processing should be available for: <ul style="list-style-type: none"> • commitment adjustment; commitment limit; • requesting reports; • definition of application controls (e.g. calendars, processing control parameters); • funds checking against appropriation warrants, • funds (cash) allocation or user defined commitment limits, • or combination of these.
10	The system should generate the commitment numbers sequentially.
11	The system should provide on-line inquiry and reporting on all associated commitments by: <ul style="list-style-type: none"> • budget classification code • General Ledger code • Vendor • Period • Status • agency/institution • amount range • any other appropriate user-defined criteria
12	The system should provide features to adjust the funds in case of cancellation of commitments and purchase orders.
13	The system should provide features to update the status of commitments and funds in case of revision of amount of a purchase order.

5.5. Financial Reporting Business Function

Financial reporting is the single most important business function in the IFMIS. In order to assess the health, overall status and future direction of a business, detailed, timely and accurate financial reporting is essential. Such reports include, but are not limited to, expenditures, revenues, asset appreciation and depreciation, financial liabilities and cash in hand. These reports can appear as cash flow, income statements and balance sheets.

5.5.1. Financial Reporting: Requirements

This table lists the functional requirements for financial reporting.

Bus Req #	Financial Reporting Requirement Description
1	The system must be capable of producing a suite of standard and statutory reports and support enquiries, including the ability to accommodate user-defined reports.
2	The system should be capable of producing consolidated reports in formats required by external organizations, including Parliament and international fiscal monitoring agencies.
3	The system must be capable of display reports on terminal screens.
4	The system must be capable of producing and displaying snap shot screens for enquiries on financial data.
5	The system must support the printing of financial reports at the request of users at user sites or centrally at the MoF.
6	The system should be capable of producing reports for Current Year and Prior Years' data.

6. ACCOUNTS PAYABLE

6.1. Accounts Payable Description

The Accounts Payable function manages the processes of payments from the system. As a result of successful accounts payable processing both the *Commitment System* and *General Ledger System* are updated with payment details data derived from the values against codes in the chart of accounts. Appendix C displays the process flow for the Accounts Payment Function.

6.2. Payment Request Business Function

After goods are determined to have been received or services rendered, invoices are received from the vendor. These are checked by the spending unit which, following certification and authorization, requests the appropriate Accounting Department to make payment to the vendor. Formal Payment Requests are prepared and submitted for processing. The Accounting Directorate confirms the payment authorization and processes the Payment Request in the *Accounts Payable System*, which conducts data edits and verifies the correctness of transactions and funds availability. All payments processed by the *Accounts Payable System* must be supported by current pre-accepted commitments.

6.2.1. Payment Request: Requirements

This table lists the main business function requirements for Payment Requests.

Bus Req #	Payment Request Requirement Description
1	The Accounts Payable system must process incoming invoices, in the form of payment requests, within agreed terms or credit, ensuring availability of funds and proper authorizations are obtained, and generate checks and electronic payments and produce “advice to payee” details.
2	The system must provide system controls to ensure that the same transactions or invoices are not processed twice.
3	The system must provide online checking for funds control, ensuring there is both a corresponding covering commitment and sufficient cash allocation.
	The system must be capable of producing transaction reports: <ul style="list-style-type: none"> • By date • By organization, • By Chart of Accounts code or Budget Classification • By location/ Accounting Office
	The Accounts Payable system should support online distributed processing.
	The system should allow users to track an invoice ³ throughout its life cycle: <ul style="list-style-type: none"> • invoice received but not approved; • invoice approved (certified) not yet paid; • invoice processed; • invoice suspended; • invoice paid (check dispatched/presented or electronic transfer complete); and • invoice cancelled.
	The system should provide features for the maintenance of the following information on the vendor record ⁴ : <ul style="list-style-type: none"> • vendor code, • vendor name, • vendor address, • vendor bank details, • credit and discount terms, • payment method, • vendor tax payer registration number, • vendor credit limit, • vendor monthly limit, • vendor invoice limit, • vendor history, and • vendor related suppliers (consolidation groups) reference data.
	It should be possible for the system to automatically generate the vendor code.
	It should be possible to import vendor data generated from other systems.

³ In an integrated system invoice data may be derived from a data table in a Purchasing Module.

⁴ Detailed vendor records are stored on data tables commonly used by Purchasing and Accounts Payable Modules.

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	It should be possible to export vendor data to other systems.
	It should be possible to send check payments to a different address from that on a purchase order or vendor record.
	<p>The system should allow for the following fields in the transaction record:</p> <ul style="list-style-type: none"> • vendor code • vendor reference/invoice number • transaction reference number for internal use. • posting date • gross amount • transaction currencyexchange rate • payment method • bank details • commitment number • history of payments on commitments including advance payments • General Ledger code • status code • spending unit and/or spending agency id. • Accounting Office id.
	<p>It is also desirable that the transaction record include the following fields:</p> <ul style="list-style-type: none"> • invoice type • terms • invoice date • invoice receipt date • due date • period • discount • net amount • VAT or other tax amount • contract reference number (where applicable) • retention amount • retention release date • quantity • unit price • commitment details • narrative • flag prepaid items whereabouts of invoice for tracking purposes
	The system should be able to uniquely identify each claim for payment (payment request).
	The system should provide online error correction or reversal of data entered for processing.
	The system should check for duplicate invoice numbers from the same vendor.
	The system should provide the ability to perform due date processing based on user defined business rules for the payment of invoices
	The system should have the facility to automatically prepare and make recurrent or installment payments with appropriate authorization controls, e.g. payroll or scheduled contract payments.

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	The system should allow for recurrent “no invoice” payments in respect of, for example, receipt of a fixed price service.
	The system should have provision to create a temporary creditor for a 'one off' payment subject to the existence of a strong audit trail.
	There should be a mechanism to stop recurrent payments at any time during their scheduled timeframe.
	It should be possible to associate a commitment with advance payment(s) and apply the advance payment(s) only to invoices matched to the associated commitment.
	It should allow one-to-many relationship between commitments and invoices, and allow the entry of multiple invoice details on a single payment.
	It should establish a complete audit trail on all transactions processed.
	There should be a facility to reconcile transactions that are processed in the Accounts Payable system and which are linked to other core FMIS modules.
	The system should provide the facility to code several different costings, or journals, to one payment.
	The system should automatically compute discounts based on standard terms.
	The system should provide features to handle discounts: <ul style="list-style-type: none"> • as an amount • as a percentage of individual invoice line items • as a percentage of invoice total.
	The system should accept discounts for partial payments.
	The system should be able to process credit notes.
	It should be possible to back-date transactions to: <ul style="list-style-type: none"> • previous period • previous year
	The system should update the Commitment Accounting system by: <ul style="list-style-type: none"> • allowing part payment against a commitment; • liquidating a commitment when an invoice is paid or at a user-defined stage in batch mode.
	The system should provide extensive search facilities.
	It should be possible to generate one payment order for more than one invoice, or payment request, for a vendor for the same organization, i.e. combine payments to suppliers and pay multiple invoices per payment order.
	It should be possible to stop payments to specific vendors.
	The system should make it possible to 'fast track' an urgent payment through the system.
	The system should provide for the inputting of transactions that have been previously paid through an external system, or a manual checkbook.
	There should be close integration with the Commitment, General Ledger and Accounts Receivable systems for data exchange and on-line updates.
	The system should provide a facility to record, monitor and reimburse standing (petty cash) advances.

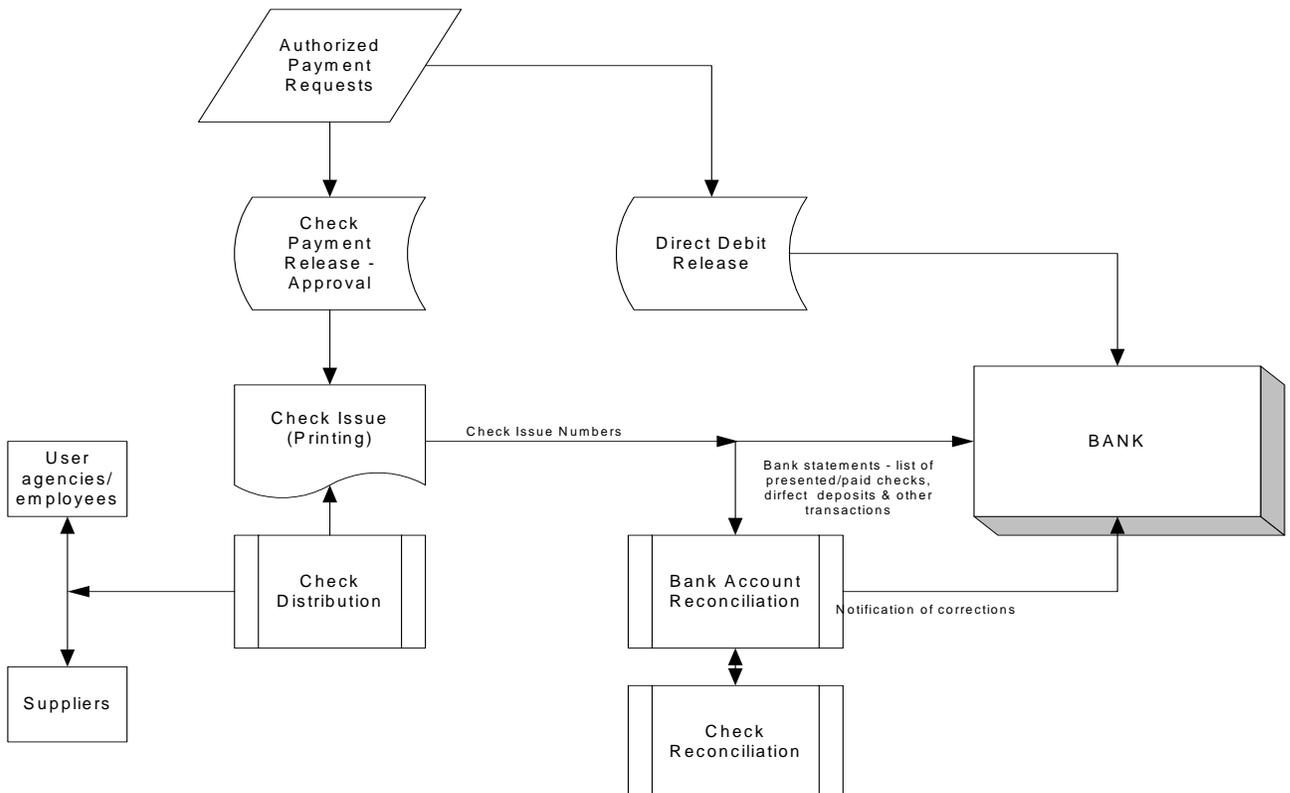
	The system should permit holds to be released by on-line approval of users appropriately authorized to approve expenditures.
	The system should track purging to history; and the history data should either be still available online; or should be a process defined to bring it on line. Similarly, archived data should be viewable online.

6.3. Payment Order Business Function

The *Accounts Payable System* produces payment orders that are executed by writing checks or requesting direct deposits by the respective servicing bank. At the end of each day, the servicing bank advises the Accounting Department, or the office responsible for cash management, of payments made on its behalf for reconciliation with the *Accounts Payable System*. This data can be uploaded into the system and used for bank account reconciliation including reconciliation of outstanding (un-presented) checks.

6.3.1. Payment Order: Process Map

PAYMENT ORDER PROCESS FLOW



6.3.2. Payment Order: Requirements

This table lists the main business function requirements for Payment Orders.

Bus Req #	Payment Order Requirement Description
1	The system should be capable of producing payment orders in either check or direct deposit formats.
2	The system should produce an output file of payment authorizations for direct deposit in: <ul style="list-style-type: none"> • Automated Clearing House (ACH) format, or • Other user specified formats.
3	The system should have the ability to print its own checks, or create a file for external check printing, and create a file for electronic funds transfer to one or more banks.
4	The Accounts Payable system should support a check production facility that includes: <ul style="list-style-type: none"> • allowance for user-defined frequency of check printing including the option of daily printing or on demand; • provision for automatic or manual check writing; • ability for users to nominate check printing site; • check registers for all checking accounts detailing check number, date of check, invoice or voucher being paid, amount of each check, account distribution, and whether check is cleared, voided, or open; • provision for automatic and manual check reprinting, voiding and tracking; • allowance for off-line signature and approval of checks above a specific amount; and • bank reconciliation function, including a generateable listing of presented checks and online facilities.
5	The system should have the ability to override automatic combining of checks so that individual checks can be printed.
6	The system should have the ability to override automatic combining of checks so that individual checks can be printed.
7	The system should have the ability to operate with multiple bank accounts.
8	The system should make provision for payment details, or remittance advice, to be displayed on check butts and Electronic Data Interchange (EDI), Electronic Funds Transfer (EFT) and Electronic Commerce (EC) payments.
9	It is desirable that the system includes a facility to provide electronic signatures on checks, and on EFT files.
10	The system should record individual contact details on remittance advices; and these should be defaulted from a table based on user defined business rules.
11	It should be possible to amend transactions between registration and final payment. Audit trail should be kept of these changes.
12	The system should have the ability to stop individual payments being made to a supplier with the ability to re-start payment on a user-defined date.
13	The system should have the ability to cancel claims for payment, reverse all General Ledger entries and produce appropriate audit trails, and also to handle void checks.

7. CASH MANAGEMENT

7.1. Cash Management Description

Cash Management is a fundamental activity of a Treasury encompassing all aspects of budget execution, including flows to and from the government accounts and operational activities in the collection and payment processes. Following the approval of the budget the Treasury has the task of controlling the release of funds, monitoring progress on budget implementation and managing the supporting cash resources of the government. The Treasury must secure complete, timely and accurate information, and must exercise control on all inflows and outflows in government accounts.

The Treasury’s responsibilities for the operational activities of cash management relate to the collection and payments processes including:

- the collection of taxes and other budgetary and extra-budgetary revenues;
- negotiations with the bank system on collection through the banks;
- monitoring and control of collections through the banking system;
- distribution of revenue among the various levels of Government (central and local), or to special programs;
- allocation of resources, or overall financial limits to spending units for the payment of expenditures; and
- authorization and processing of requests for payment of expenditures submitted by spending units.

The Cash Management Module of the IFMIS has the general objective of centrally maintaining an up-to-date picture of the Government’s liquidity position and cash requirements by:

- managing and consolidating government bank accounts
- forecasting cash availability for payments of expenditures, in order to allow orderly budget execution;
- identifying periods and extent of cash shortages;
- enabling timely debt servicing, correct reporting of all receipts and use of government borrowings, and administer government fiscal liquidity;
- maximizing the return to the Government for its cash holdings and to keep to a minimum funds lying idle in cash or in bank accounts; and
- assisting in reconciling Treasury Ledger cash accounts with bank statements to ensure accuracy and verify current financial position of the Government.

7.2. Bank Account Reconciliation Business Function

The bank account reconciliation function allows the performance of reconciling or balancing bank accounts with system cash transactions. Transactions that need to be reconciled include checks, deposits and other transactions, including transfers to and from accounts and adjustments. The process confirms payment order and deposit instructions to banks and identifies errors in both the bank and Treasury systems.

7.2.1. Bank Account Reconciliation: Requirements

This table lists the main business function requirements for Bank Account Reconciliation.

Bus Req #	Bank Account Reconciliation Requirement Description
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1	The system must be capable of importing data files by banks or allowing manual entry of bank accounts transactions and balances.
2	The system must be capable of managing and facilitating reconciling multiple bank accounts
3	The system should conduct automatic reconciliations, including comparisons between check issue and check presentation or paid transactions, and identification of differences and imbalances between bank data and system data.
4	The system should produce reports on reconciliations, including account balance, outstanding discrepancies and consolidation reports.
5	The system should allow necessary corrections to system data or preparation of notifications to banks for correction to account data.

7.3. Cash Flow Business Function

Cash Flow forecasting is part of the Treasury's centralized cash management responsibilities and is instrumental in supporting the budget process, including budget estimation and projection. Cash flow forecasting tools in the IFMIS will assist the management of the liquidity assets of the government by analyzing and reporting the flow of cash to and from government bank accounts. The system also assists the projection of future expenditure and revenue flows based on historical data and planned activity of spending agencies.

7.3.1. Cash Flow: Requirements

This table lists the main business function requirements for Cash Flow.

Bus Req #	Cash Flow Requirement Description
1	The system must be capable of storing and consolidating the balances of all government accounts, including multiple revenue collection and expenditure disbursement accounts held in various banks.
2	The system must be capable importing or recording external data supporting cash flows including debt management, tax and Central Bank data.
3	The system should be able to record and consolidate data from all transactions affecting government cash holdings including: <ul style="list-style-type: none"> • Invoices approved for payment but payment not made; • Invoices received but not yet approved for payment; • Goods received but not invoiced; • Debt transactions; • Recurring payments based on budget projections/prior accruals; • Revenue projections by type of revenue; and • Other external sources of financing.

4	<p>The system should produce the following reports:</p> <ul style="list-style-type: none">• Daily consolidated cash position (Treasury Single Account);• Monthly revenue forecasts;• Monthly expenditure forecasts;• Financial position statements;• Monthly funds requirements;• Monitoring of revenue collections against projections; and• Comparison of expenditure estimates and actuals with historical data.
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8. TECHNICAL ARCHITECTURE

The IFMIS is supported by a distributed technical architecture design that incorporates distributed data entry and functional access in spending agencies via primarily a satellite communications system to a central data base located in the MoF IT and Training Directorate, Baghdad. The MoF Data Center, located in Baghdad, is a critical facility designed and constructed to house computing resources related to both the operations of the MoF and IFMIS to support the Iraqi Federal Government budget execution system. These resources include computer servers, network switching equipment, satellite communication systems, monitoring devices, and supporting hardware and software. It is available for remote administration and access 24 hours 5 days per week through fail-over independent power systems. The MoF Data Center is a secured facility including 24 hour external paramilitary guard stations and internal locked rooms for servers and communications equipment.

IFMIS underlying technical architecture is divided into two specific layers. The infrastructure layer (1) and the application layer (2) have individual configurations with respect to security and service provisioning. The following sections provide summary information concerning the two layers. Detailed information is available in the technical documentation associated with the implementation of IFMIS.

8.1. Infrastructure Layer

The infrastructure layer is comprised of the physical systems that provide the FreeBalance eFinancials™ application to the users. It includes all operating systems, databases, servers, networking devices, firewalls, proxies, VPN appliances, and DR/COOP peripherals.

8.1.1. Security

Production edge access to the IFMIS infrastructure layer is provided through the combination of a SSL VPN appliance (F5 FirePass) and a Windows 2004 ISA Server. Port 443 is the only allowed inbound port and all traffic is scanned for malicious code. Authentication and authorization to infrastructure layer resources is persisted through integration to a centrally managed Windows Active Directory. Access to this layer is restricted to working hours only and user sessions are disconnected after 20 minutes of inactivity. Full logging is enabled for all traffic and security reports are audited daily.

The FirePass provides users a Windows Terminal Server Session via an encrypted SSL VPN tunnel. All traffic is 3DES encrypted and scanned for viruses or malicious code. This provides the bridge between to infrastructure layer and the application layer. Through the use of encrypted Terminal Server Sessions, no actual data is passed between the remote clients and the application. Traffic consists of commands to the

Terminal Server to complete data entry tasks. If traffic were to be intercepted and decrypted, the result would be nothing more than instructions like “move mouse” or “type the number 2”.

8.1.2. Service Provisioning

Users access the infrastructure layer through a public website. Upon authentication, role based authorization provides the user with a links to permitted infrastructure resources. In the case of basic IFMIS users, the only resource provided is the Windows Terminal Server. In the case of administrators, all network resources and four FreeBalance environments are provided.

Basic IFMIS users logon to the Terminal Server and initiate a FreeBalance eFinancials™ application session. At this point, security and service provisioning occurs at the application layer

All elements of the infrastructure layer are backed up daily and equipped for business continuity where possible.

8.2. Application Layer

The application layer consists of the FreeBalance eFinancials™ application environments. In accordance with industry standards, there are four distinct environments with four distinct purposes:

- FreeBalance Production – Main environment for basic IFMIS users. Contains all production level data and all production transactions
- FreeBalance Test – Mirrors production environment. Any planned changes to configuration are tested before rolling out to production
- FreeBalance Development – Application extensions and configuration changes are developed before rolling out to test
- FreeBalance Training – Provides a separate environment for training classes to use.

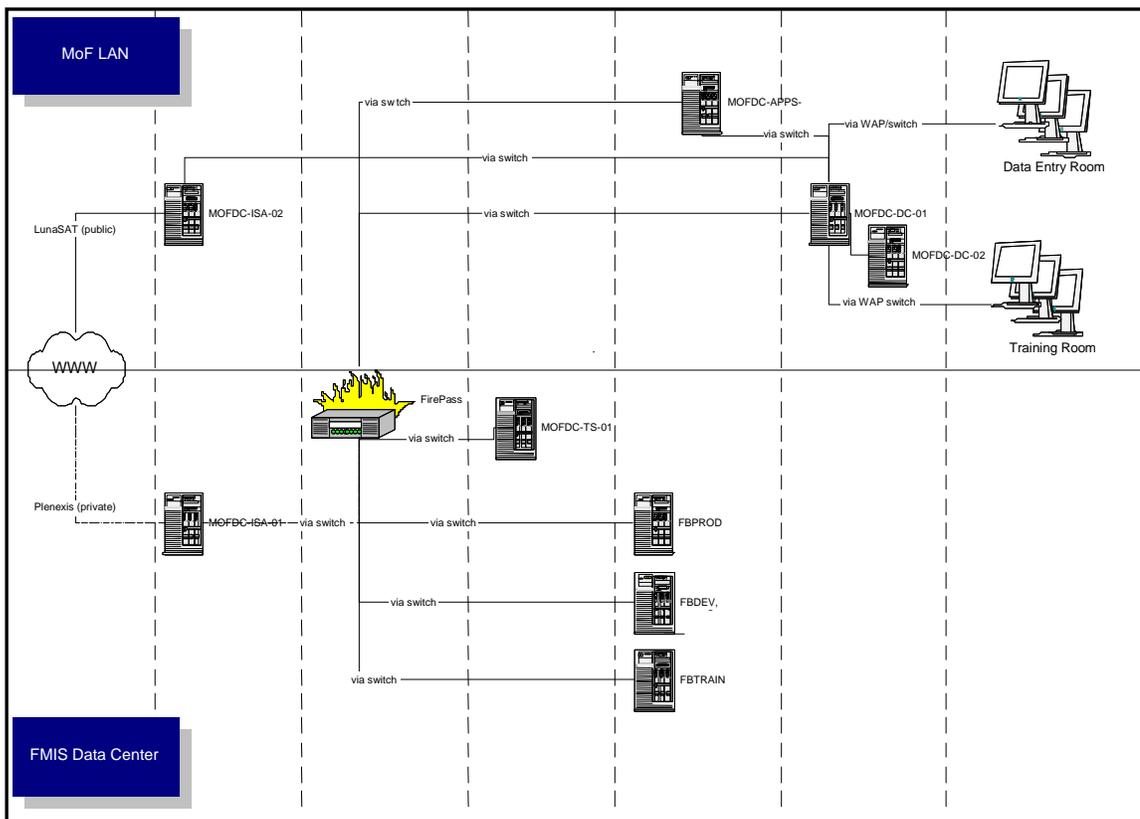
8.2.1. Security

FreeBalance eFinancials™ persists role-based authentication and authorization through an internal database. In order to allow conceptual single sign on, the usernames within this database match the usernames and passwords provided for the infrastructure layer. In order to allow users to only see appropriate elements, Access Control Lists are integrated into the Organization object of the Chart of Accounts. Thus, a user from the Ministry of Oil will not be able to see budget information for the Ministry of Agriculture.

8.2.2. Service Provisioning

The user experience is provided through the FreeBalance user interface brokered over an encrypted Windows Terminal Server Session. Depending on the level of authorization, users will have access to the various functional forms within the application.

IFMIS Technical Architecture Overview



9. DEFINITIONS, ACRONYMS, AND ABBREVIATIONS

The following is an alphabetical list of terms, acronyms, abbreviations and their meanings used in this document.

3DES – Triple Data Encryption Standard.

COA – Chart of Accounts

CPA – Coalition Provisional Authority – post war civilian administration installed in Iraq from April 2003 to June 2004.

DR/COOP – Disaster Recovery Continuity of Operations Plan

FB – FreeBalance – Name of company supplying IFMIS application software (*FreeBalance eFinancials™*)

FBPROD – FreeBalance Production system

FBDEV – FreeBalance Development System

FBTEST – FreeBalance Test System

FBTRAIN – FreeBalance Training System

FirePass™ – a controller that provides industry leading remote access security.

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GFS – Government Financial Statistics - Macroeconomic statistical system issued by the IMF designed to support fiscal analysis

IFMIS – Iraq Financial Management Information System – the computerized integrated accounting system.

IMF – International Monetary Fund –

ISA – Industry Standard Architecture

LAN – Local Area Network

MOF/MoF – Ministry of Finance – agency responsible for government budget and budget execution.

MOFDC – Ministry of Finance Domain Controller

MOPDC – Ministry of Planning and Development Coordination – central agency responsible for the capital budget.

SSL – Secure Sockets Layer

USAID – United States Agency for International Development

VPN – Virtual Private Network

WAP – Wireless Application Protocol

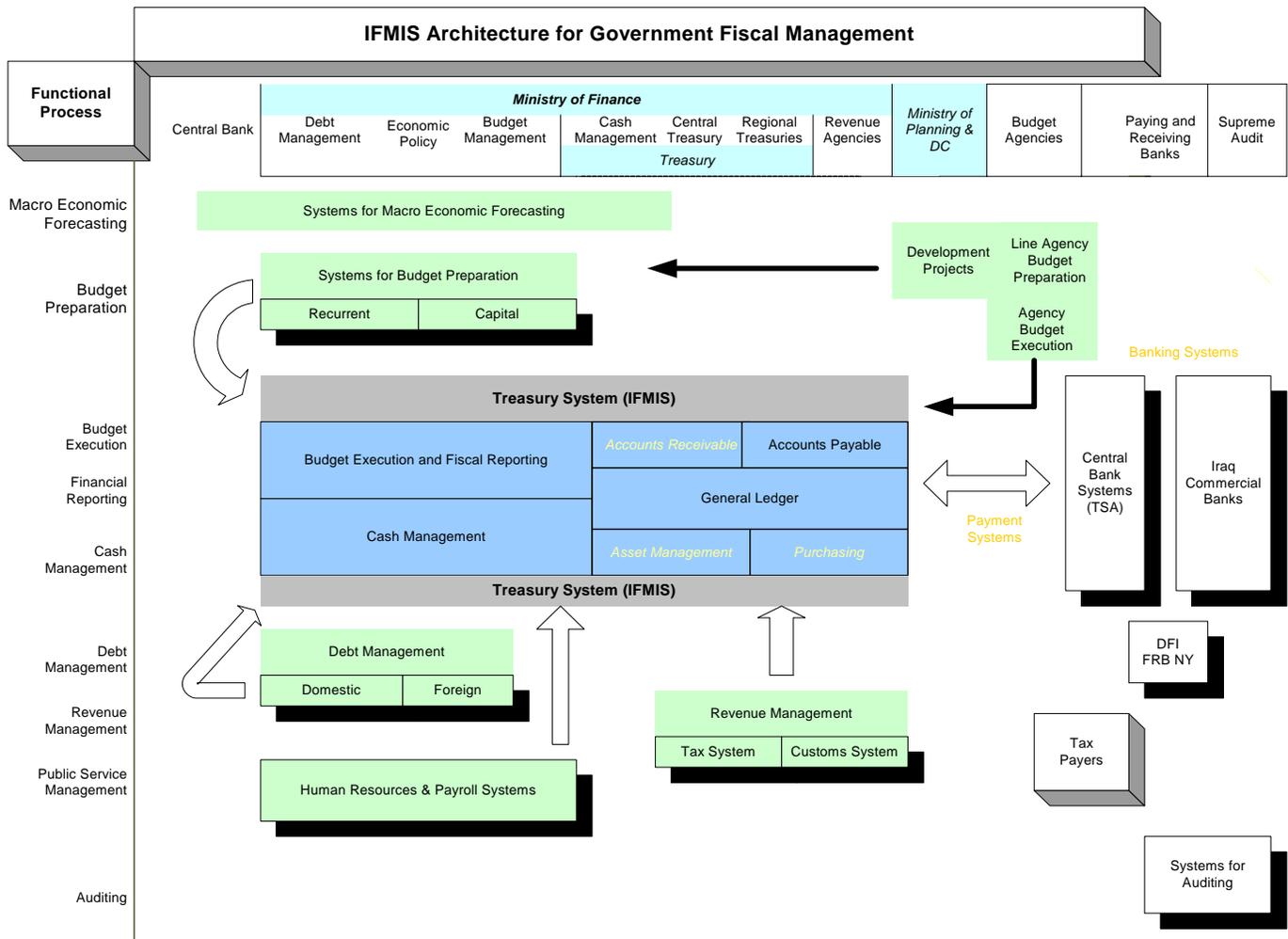
WB – World Bank

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APPENDICES

Appendix A – Inter-Application (Alignment) Process Map

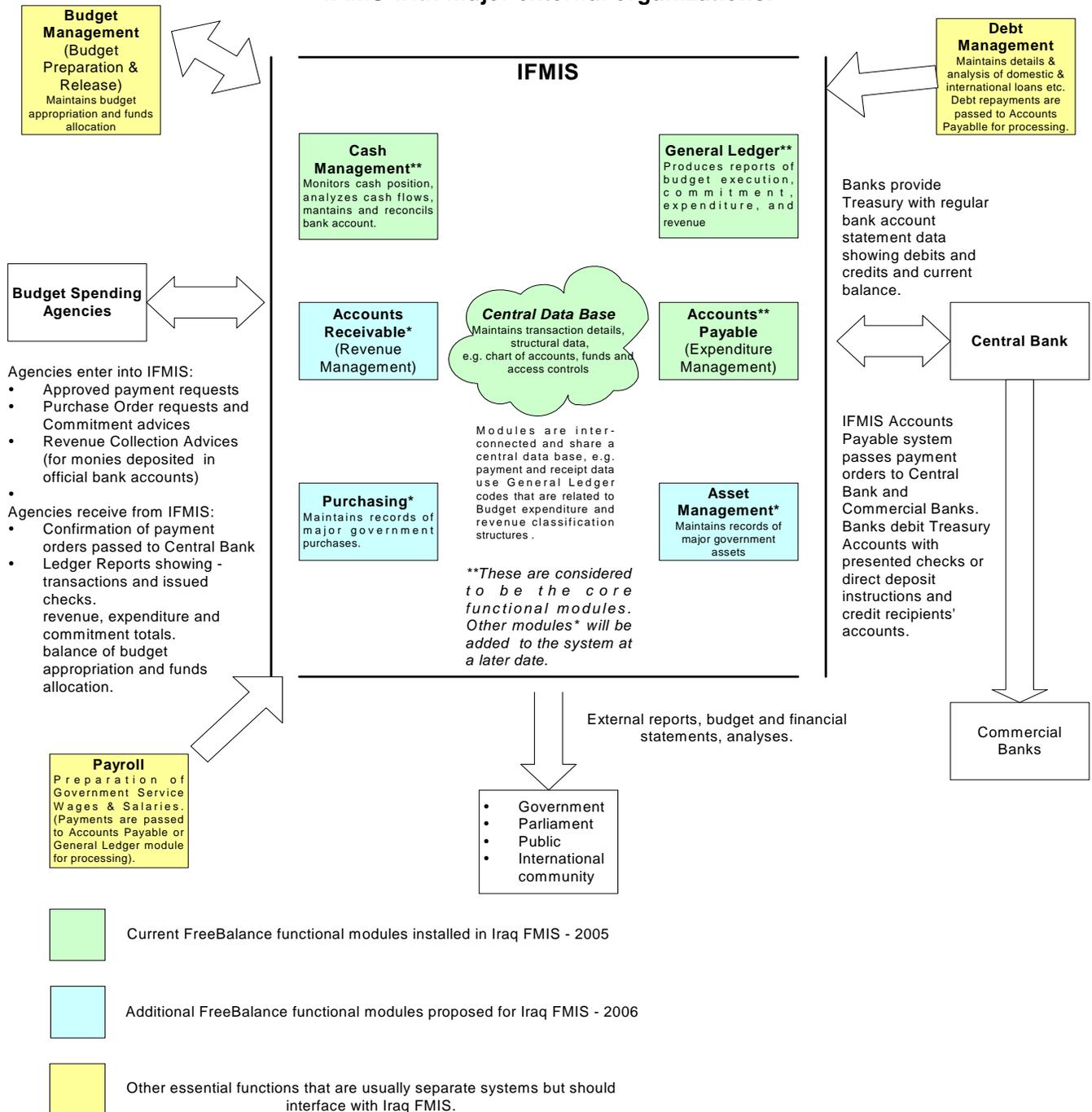
Conceptual Design - Inter-Application - IFMIS Alignment



Appendix B - Intra-Application (Functional Modules) Process Map

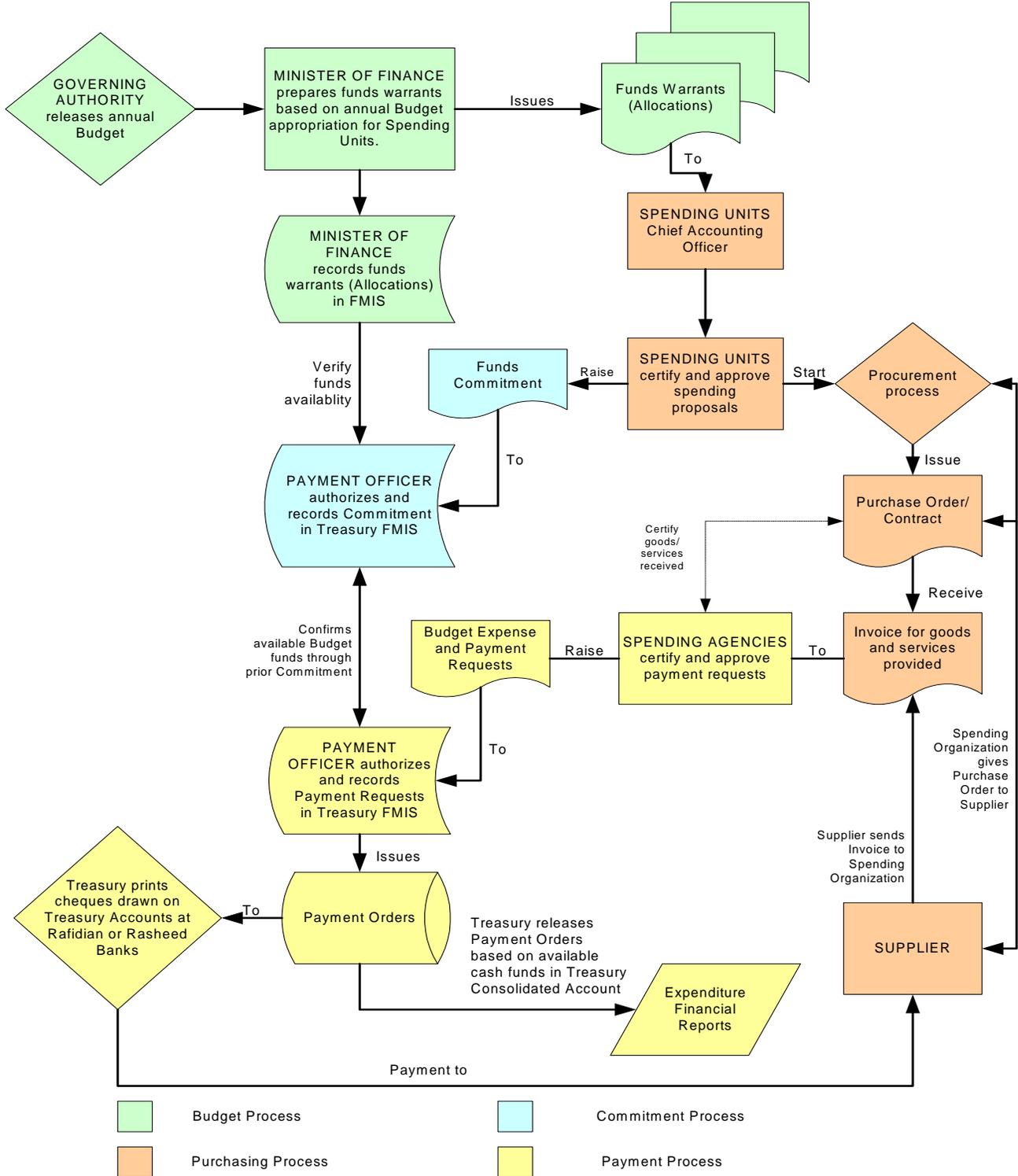
Intra-application Process Map

Schema showing functional modules of proposed Iraq Financial Information System (IFMIS) and relationship of IFMIS with major external organizations.



Appendix C - Accounts Payable Process Map

IFMIS ACCOUNTS PAYABLE
 Process Map



Appendix D – FreeBalance eFinancials™ Comparative Functionality

This section examines the functionality of the selected software for the Iraq FMIS, *FreeBalance eFinancials™ Foundations* suite, and compares it against the core functional requirements identified in the previous sections. The FreeBalance application, which includes the core functionality installed in Phase 1 and 2 of the FMIS implementation, consists of the following modules:

Controls

The Controls module enables configuration of the system to operate according to standard accounting policies, procedures and business rules. The module allows the construction of comprehensive relational charts of accounts and coding blocks, including roll ups for reporting requirements, data in tables for reference and data entry, definition of external system (e.g. report writers) to be used by the system, setting of periodic general functions (e.g. month end, year end), data import and/or export through interfaces with external systems (e.g. separate Payroll system, Central Bank system), check system integrity and reconstruct the database when required.

Appropriations

The Appropriations module provides full multi-year authority over appropriations, allocations and enhanced budget accountability, grants, trusts and other funds, with commitment/obligation control and forecasting capabilities. The module allows users to:

1. set one or two firm allotment levels that ensure spending limits are not exceeded;
2. define detailed individual budgets at the responsibility center level including program/project cost control;
3. enter monthly expenditure and revenue forecasting;
4. record commitments and obligations generated on a daily basis

Expenditures

The Expenditures Module defines and tracks expenditures and payment processing against corresponding commitment/obligations, and provides up-to-the-minute analysis of current cash flow. The module also manages the printing of checks, tracking of expenses, calculates interest and tax deductions, and manages foreign currency transactions. The Expenditures Module includes:

1. The ability to enter multiple items for each expense voucher.
2. Automatic liquidation of commitments/obligation items related to the expense that is entered.
3. Multiple currencies to handle foreign procurement
4. Two levels of taxation
5. Procedures to ensure that all expenses are properly authorized.
6. Release of payments on due dates, with the ability to handle cash discounts or interest charges.
7. Summary and detailed expense and payables control reports.
8. Cash receipt (cash sales) function.

General Ledger

The General Ledger (GL) module serves as the central repository of all transactions that have been entered into the system, whether they are expenses, revenues, purchasing accruals or others. The module allows users to create periodic financial reports to see where an organization stands financially up to a given date. The GL module also serves as the system's adjustment mechanism, allowing you to redistribute costs among accounts and to correct any posting errors through authorized adjusting journals.

All transactions entered into the system are automatically posted to the GL module, the coding block verified to the chart of accounts and expense values compared against available funds. In addition to the creation of journal vouchers for correction and adjustment, the GL also permits multiple entries under a single journal voucher. The system allows users to make on-line account inquiries to view up-to-date "snapshots" of specified accounts, and generate comprehensive user-defined financial statements and multi-dimensional analysis reports.

Additional FreeBalance eFinancials modules that are available and expected to be installed in the future are:

Purchasing

The Purchasing module is a complete integrated procurement solution that provides a streamlined ordering process and comprehensive goods receipt maintenance. The module can process multi-item requisitions and purchase orders over multiple fiscal years, track all goods or services received against related purchase orders and obligations, and produce procurement reports including up-to-date progress reports detailing the receipt or return status of orders. The Purchasing module includes:

1. Ability to prepare purchase requisitions and purchase orders for catalogue, non-catalogue and one-off unique items.
2. Ability to append standard or non-standard contract clauses to requisitions and purchase orders.
3. A vendor/item category cross-reference table, to help users determine potential vendors for the desired goods or services specified on the requisition.
4. The ability to create purchase orders with or without a related requisition having been previously entered.
5. Ability to create purchase orders with multiple requisitions, which in turn can be distributed over multiple fiscal years.
6. Ability to produce foreign currency purchase orders.
7. Ability to receive multiple shipments against a purchase order.
8. Automatic liquidation of commitments, upon acceptance of vendor invoices.
9. A goods receipt feature that allows users to track how many goods have been received and returned.
10. Comprehensive reports providing information such as purchase order status, workload summary and supplier performance.

Revenue

This module is a complete revenue management system that enables users to analyze sales or collection data and facilitates timely collection of amounts owing. The revenue module includes:

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1. Accounts received management, including cash sales and receipt issue
2. Billing functionality including sales invoices
3. Daily monitoring of cash receipts
4. Debit Note and Credit Note management
5. Calculation of interest charges for outstanding accounts
6. Collection management including daily status of individual customer accounts
7. Comprehensive reporting and inquiry capabilities

Assets

The Assets Module provides the necessary tools to establish and maintain controls over assets. It provides financial managers with accurate information and facilitates vital decision-making processes pertaining to an organization’s resources, including moveable and fixed assets as well as financial assets. The Assets Module includes the following features:

1. Security and Audit Trail capabilities customized to an organization’s business rules.
2. Interactively management of events/transactions pertaining to an asset record
3. Monitor physical attributes of an organization’s assets
4. Ability to define asset components
5. Manage depreciation
6. Manage renewal of services contracts related to assets
7. Manage warranty periods, services rendered on equipment, and software licensing
8. Inventory taking capabilities and ability to monitor inventory using optical bar coding readers

Comprehensive and flexible reporting capabilities for improved control and sound decision making tools.

Comparison of required business functions or processes and FreeBalance eFinancials functionality.

Required Business Function	FreeBalance	FreeBalance Module	Comments
Chart of Accounts	Yes	Controls	
Financial Controls and Records	Yes	Appropriations	
Commitment Control	Yes	Appropriations	
Financial Reporting	Yes	General Ledger	A reporting application <i>Crystal Reports™</i> will also be added to
Payment Requests	Yes	Expenditures	
Payment Orders	Yes	Expenditures	
Bank Account Reconciliation	Yes	General Ledger	

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Cash Flow Analysis	No	Appropriations/ Revenue	Appropriations module uses Financial Budgets function to manage expenditure projections. Revenue module reports support revenue flow projections. Data can be exported to spreadsheets for further analysis.
<i>Receipt Issue</i>	Yes	Revenue	
<i>Revenue Recording</i>	Yes	Revenue/General Ledger	Revenue may be entered into General Ledger by journal or as “cash sales”.
<i>Purchase Orders</i>	Yes	Purchasing	
<i>Vendor, Invoice and Purchase Order control</i>	Yes	Purchasing	
<i>Inventory Control</i>	Yes	Purchasing/Assets	
<i>Maintenance of Asset Registers</i>	Yes	Assets	

Appendix E – Installation Sites

	Ministry	Organization
1	Iraqi National Assembly	Iraqi National Assembly / Main office
2	Presidency	Presidency / Main office
3	The Cabinet	General Secretariat
4		Office of The Prime Minister
5		National Security Council
6		Public Integrity Commission
7		Iraqi Committee of Radiation
8		Energy Organization Board
9	Foreign Affairs	Ministry Center
10		Consulate and Political Rep
11	Finance	Ministry Center
12		Directorate of Pensions
13		Directorate of Government Real Estate
14		General Commission for Taxes
15		Centre of Fin and Training
-		Treasuries in The Governorates:
16		• Al-Muthanna
17		• Al-Qadissiya
18		• Al-Anbar
19		• Dyala
20		• Ninewa
21		• Salah Al-Din
22		• Tameem
23		• Al-Basra
24		• Babil
25		• An Najaf
26		• Dhi Qar
27		• Maysan
28		• Karbala
29		• Dahuk (Kurdistan)
30		• Irbil (" ")
31		• Sulaymaniyah (" ")
32		Customs General Directorate
33	Interior	Ministry Center
34		General Citizenship Directorate
35		Civil Defense General Direct
36		Police HQ
37		Border Forces General Direct
38		Traffic Police General Direct
39	Labor and Social Affairs	Ministry Center
40		Social Care Direct

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41		Labor & Social Security Direct
42		Employment & Training Center
43	Health	Ministry Center
44		Al Karkh Health Directorate
45		Al Rusafa Health Directorate
46		Medical City Directorate
47		Ninawa Health Directorate
48		Kirkuk (al Ta'amim) Health Directorate
49		Salah Al Din Health Directorate
50		Diyala Health Directorate
51		Al Anbar Health Directorate
52		Babil Health Directorate
53		Karbala Health Directorate
54		Najaf Health Directorate
55		Al Qadisiya Health Directorate
56		Wasit Health Directorate
57		Maysan Health Directorate
58		Al Muthanna Health Directorate
59		Dhi Qar Health Directorate
60		Basrah Health Directorate
61	Security Affairs and National Defense	Ministry Center
62	Justice	Ministry Center
63		Office of Foreign Litigation
64		Real Estate Registration Dir
65		Minor Care Directorate
66		Public Notary Directorate
67		Justice Institute
68		Iraqi Correction Facility
69		Enforcement directorate
70	Education	Ministry Center
71		General Directorate for Vocational Education
72		Fine Arts & Cent Instit
73		General Education Dir - Admin
74		Gen Education Dir - Secondary
75		Gen Educ Dir - Primary
76		Gen Educ Direct - Kindergarten
77		Baghdad College Secondary Sch
78	Youth and Sport	Ministry Center
79	Trade	Ministry Center
80	Culture	Ministry Center
81		Cultural Relationships
82		Musical Arts Directorate
83		Childrens Culture House
84		Ma'amoon House for Trans & Pub
85		Iraqi House for Fashion

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86		Archive - Books and Documents
87		Convention Center Directorate
88		Kurdish Culture & Publishing House
89		General Directorate of Archaeology and Heritage
90	Transportation	Ministry Center
91		Meteorological & Seismological Center
92		Gen Foundation for Civil Aviation
93		Al-Khaleej Academy for Navy studies
94	Municipalities and Public Work	Ministry Center
95		Construction Planning Direct
96		Planning and Follow Up Direct
97		Municipalities General Direct
98		General & Local Administration - Governorates
99	Housing & Reconstruction	Ministry Center
100		Housing Directorate
101		Nat Center for Construction Labs
102		Nat Center for Consultancies
103		Roads & Bridges General Commission
104		Buildings General Commission
105		Engineering Directorate
106		Military Works Directorate
107	Agriculture	Ministry Center
108		Baghdad Governorate Agriculture Directorate
110		Ninawa Governorate Agriculture Directorate
111		Kirkuk (al Ta'amim) Governorate Agriculture Directorate
112		Salah Al Din Agriculture Directorate
113		Diyala Governorate Agriculture Directorate
114		Al Anbar Governorate Agriculture Directorate
115		Babil Governorate Agriculture Directorate
116		Karbala Governorate Agriculture Directorate
117		Najaf Governorate Agriculture Directorate
118		Al Qadisiya Governorate Agriculture Directorate
119		Wasit Governorate Agriculture Directorate
120		Maysan Governorate Agriculture Directorate
121		Al Muthanna Governorate Agriculture Directorate
122		Dhi Qar Governorate Agriculture Directorate
123		Basrah Governorate Agriculture Directorate
124		Agric Lands General Comm
125		Guidance and Cooperat General Comm
126		Agricultural Researches General Comm
127		Plants Prevention Commission

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128		Seed Testing & Certification General Commission
129		General Comm for Organizing Agricultural Investmts
130		Iba Agricultural Research Inst
131	Water Resources	Ministry Center
132		general directorate for Drilling Water Wells
133		general directorate for Projects maintenance and Enforcement
134		general directorate for Survey
135		general directorate for Dams & Tanks
136		general directorate for the Engineering designs
137		general directorate for Projects operating & maintenance
138		general directorate for Rivers Dredging
139		general directorate for Water Resources Administration
140		general directorate for Irrigation Project Reclamation
141	Oil	Ministry Center
142	Planning & Development Cooperation	Ministry Center
143		Central System for Statistics and IT
144		Centre of Administrative Planning and Development
145		Central Organization for the Quality Control
146	Industry and Minerals	Ministry Center
147	Higher Education	Ministry Center
148		University of Baghdad
149		University of Basra
150		University of Mustansiriya
151		University of Technology
152		Institute of Technical Ed
153		University of Al Anbar
154		University of Kufa
155		University of Al Qadisiya
156		University of Tikrit
157		Medical Iraqi Commission
158		University of Babil
159		Center of Psychological Researches (Parapsychology)
160		Iraqi Commission for computers
161		Iraqi Center for Cancer
162		University of Diyala
163		University of Dhi Qar
164		University of Karbala
165		University of Wasit
166		University of Tamim

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167		University of Islamic Science
168		University of Al - Nahrain
169		University of Mosul
170	Electricity	Ministry Center
171	Science and Technology	Ministry Center
172		Main information office
173		Foundation for controlling weapons programs
174	Telecommunications	Ministry Center
175	Environment	Ministry Center
176	Displacement and Migration	Ministry Center
177	Human Rights & Transitional Justice	Ministry Center
-	Kurdistan region (see MoF)	Sulaymaniyah
-		Dohuk & Irbil
178	Board of Supreme Audit	Board center
179	Awqaf (Religious Endowments)	Suna Endowment Council
180		Sh'ia Endowment Council
181		Other Denominations Council
182	Iraqi Media Network	Iraqi Media Network
183	Supreme Court (Cassation court) & judicial council	Judicial Council
184		Supreme Court/cassation court

60	Phase one installation
124	Phase two installation