Jordan Customs Internal & External Communications: IT Framework & Requirements

Final Report

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Abstract

This report presents the findings of a consultancy undertaken by one of the AMIR Program's IT consultants in November/December 2003 and April/May 2004. It addresses a governance framework for information technology within the Jordan Customs Department as well as requirements for a proposed integrated document management system, which will be used to support document issuance, intelligence requirements, and inter-agency information exchanges and possibly as a platform to support automated external communications. The report provides a number of recommendations pertaining to each of these subject areas and represents background for subsequent engagements for the IT consultants in the AMIR Program's Customs Modernization and Reform Subcomponent work program over the medium term.

Abbreviations and Acronyms

AMIR	Achievement of Market-Friendly Initiatives and Results
API	Application Programming Interface
ASEZA	Aqaba Special Economic Zone Authority
ASYCUDA	Automated System for Customs Declaration
BMTF	Border Management Task Force
BPR	Business Process Re-engineering
CGM	Computer Graphics Metafile
CITS	Comprehensive Integrated Tariff System
CMR	Customs Management Reform
DB2	Database 2 (IBM)
Dewan	Records Management/Correspondence
DMS	Document Management System
ERMS	Electronic Records Management System
GUI	Graphical User Interface
HCDMS	Human Capital Development Management System
HS	Harmonized System
HTML	Hypertext Markup Language
HTTPS	Hypertext Transfer Protocol Secure Sockets
IDMS	Integrated Document Management System
ICR	Image Character Recognition
ISIS	Images & Scanners Interface Standard
IT	Information Technology
JCD	Jordan Customs Department
JISM	Jordan Institute for Standards & Metrology
JPEG	Joint Photographic Experts Group (file standard)
LAN	Local Area Network
LDAP	Lightweight Directory Access Protocol
MPEG	Moving Pictures Experts Group (file standard)
MS	Microsoft
MSDOS	Microsoft Disk Operating System
OCR	Optical Character Recognition
ODBC	Open Database Connectivity
ODMA	Open Document Management API
OLE	Object Linking & Embedding
OOMS	Object Oriented Management System
PSPI	Private Sector Programs Initiative
RDBMS	Relational Database Management System
RfP	Request for Proposal
RfQ	Request for Quote
QC	Quality Control
SAP	Systeme, Anwendungen, Produkte in der Datenverarbeitung (German ERM system)
SOW	Scope of Work
SQL	Structured Query Language
SSL	Secure Sockets Layer
TCP/IP	Transmission Control Protocol/Internet Protocol
TIFF	Tagged Image File Format
TWAIN	Scanner Interface standard
UNCTAD	United Nations Commission on Trade and Development
USAID	United States Agency for International Development

VERS	Victorian Electronic Registry System
WWW	World Wide Web
XML	Extensible Markup Language

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Executive Summary

This report was prepared in accordance with the scope of work agreed under activity number 560 Customs IT Solutions. It is based on discussions with a range of stakeholders within the Jordan Customs Department (JCD) and the AMIR program, which are listed in Annex A. The consultant was asked to address the scope of work included in Annex B. This scope was fully addressed with the following recommendations:

Recommendation 1: The IT governance material already presented to JCD should be translated into Arabic and aligned with an IT project management course to be provided by a suitable vendor identified through a request for quotes from the market.

Recommendation 2: Professional IT project management training for approximately 20 participants in the JCD IT Directorate, including the IT Director, should be provided and configured to support the proposed IT governance structure and templates provided in previous reports.

Recommendation 3: The proposed IT governance structure and use of templates should be accepted by the JCD IT Steering Committee and put into effect, preferably including an online version of the processes and templates to be delivered via the Customs Encyclopedia, once IT project management training is completed.

Recommendation 4: Review the Strategic Plan 2004-2006 and supporting initiatives against previous recommendations regarding IT and address any gaps.

Recommendation 5: Reconvene the IT Steering Committee to adopt and endorse the proposed governance structure, once IT project management training is finalized.

Recommendation 6: Delay development of a direct interface for automated filing of customs declarations until deployment date for ASYCUDA World is announced.

Recommendation 7: JCD should develop and adopt a comprehensive information management strategy that meets international best practice, which complements its knowledge management strategy and allows a logical path for adoption of technologies as the organization's requirements mature.

Recommendation 8: JCD should develop and adopt a comprehensive records/document management policy that meets international best practice.

Recommendation 9: That better training be provided to Dewan officers responsible for allocating correspondence and documents so that there is less scope for these to be mis-directed.

Recommendation 10: That all correspondence and documents should be scanned once they are received by Dewan and have appropriate metadata attributed to them for easier and faster retrieval.

Recommendation 11: That a document's location needs to be constantly tracked in the Dewan system, or its replacement. A set of policies and processes needs to be put in place making it mandatory for employees to record the name and location of officers to whom they

have subsequently passed on correspondence or documents, once they themselves have dealt with it.

Recommendation 12: A single, centralized register of correspondence and documents should be used to control the document's life cycle and distribution within the organization.

Recommendation 13: A document issuance system needs to be considered as part of a broader scope of requirements for an integrated document management system (IDMS).

Recommendation 14: Review the Memo System in more detail and determine whether it can be used for upstream as well as downstream communication and task tracking within JCD.

Recommendation 15: Some of the internal investigation requirements of the Intelligence Unit in JCD could be met by replacing Dewan with a modern IDMS.

Recommendation 16: An appropriate security classification system is an integral part of an IDMS. JCD needs to adopt an appropriate classification system to secure its data, information and communication flows both within and external to the organization.

Recommendation 17: That the scopes of the comprehensive integrated tariff system (CITS) project and the IDMS project be examined closely to determine which project best meets the requirements for interagency information exchange**.**

Recommendation 18: That the CITS project scope should include the requirement to support an informed voluntary compliance approach to client relations.

Recommendation 19: That a web interface to the current tariff rulings database be designed and developed using JCD in-house resources, and should that not prove viable, that the scope of the CITS project be expanded to include providing the public with tariff rulings, in both English and Arabic, sourced from the existing tariff rulings database.

Recommendation 20: Establish a JCD IDMS project team to be staffed by representatives of JCD and AMIR to review the generic IDMS requirements included in this report, review the recommendations of the Zadina and Hekala reports, and review the JISM IDMS projects in order to better determine requirements and benefit from any lessons learned.

Recommendation 21: That the 13 step agenda as part of the "discovery stage" of the IDMS project be addressed by the IDMS project team once it is established.

1. Introduction

1.1. Background

The following table includes the recommendations made in the report, *JCD External and Internal Communications Baseline Assessment*, prepared by B. Zadina and hereafter referred to as the Zadina report.[1]

Recommendation	*In Scope?*	*Comments*
1. Develop a comprehensive strategic communications plan that supports the overall goals of the department, sets priorities and budgets for activities, assigns responsibilities, and provides clear guidelines for the creation and dissemination of information materials and internal documentation.	Partially	This report focuses on the technical framework and requirements of internal and external communications. Such a system would need to support any guidelines and policies for internal and external communications that arise from a comprehensive communications strategy.
2. Establish a Communications Directorate 3. with central responsibility and authority to direct all communications activities, both internal and external, in a strategic and coordinated manner. This office would also have responsibility for working with other section directors to develop a coordinated communications strategy for the Department.	Yes	The Communications Directorate would be the obvious sponsor for an IDMS.
4. Dewan should create and maintain an online database of all communications that move through the system, for searchable access of documents by all JCD employees. This will require all internal documents to be produced and stored in electronic format.	Yes	This is a fundamental requirement of an IDMS. This feature is currently unavailable or has only limited functionality in Dewan. Refer to section 5 of this report.
5. Dewan should work with each section to create standard distribution lists for information on specific customs topics, which employees can sign up to receive if they are not on the normal distribution.	*Yes*	This would require only a small modification to the existing Dewan system and would be a standard feature for an IDMS.
6. Conduct an internal awareness campaign to teach all JCD employees about the existence, use and benefits of the Customs Encyclopedia.	No	This report focuses on the technical framework and requirements of internal and external communications. Internal awareness and training would be required for any modification or replacement of the Dewan system.

[1] Prepared for the AMIR Program, August 2004.

Recommendation	*In Scope?*	*Comments*
7. All JCD officers should have complete access to tariff decision history, to ensure proper application of the tariffs to JCD clients. To achieve this, the WCO rulings database should be summarized in Arabic and turned into a searchable online database; the pre-entry rulings database should have a proper search capability; and the Tariff Committee rulings database should be reinstated**.**	*No*	This recommendation belongs more properly to the integrated tariff project being addressed elsewhere. Advanced rulings have already been computerized but need to be made available to all JCD employees – the Customs Encyclopedia may have a role here.
8. The rulings database should be readily available to the public to ensure better initial declaration filings and transparency of rulings. In addition to classification rulings, valuation and origin rulings should be incorporated in the online database.		The integrated tariff project includes a proposal to develop a communications channel to the private sector and other government agencies, allowing a degree of public access to a tariff database.
9. JCD needs to standardize reporting methods for all JCD officers and link it to a performance reward system to ensure the capture of upward information within the organization.	*No*	This scope belongs to the human capital development and management system project being addressed elsewhere.
10. There should be a mechanism established for regular meetings with all JCD Center Directors, where they can share ideas and information on problems and solutions.	*No*	This is outside the scope of this report.
11. JCD needs a standard, written issuance system for the creation, documentation, storage and dissemination of information within the organization. JCD also needs a good performance assessment system, similar to that in the U.S. and Australia, to ensure proper implementation and accountability of employees in applying the system.	*Partially*	The requirements of a document issuance system can be met by an IDMS. Performance management is outside of the scope of this report and should be included in the HCDMS project scope.
12. Performance criteria should include standard operating procedures for information and document creation, as well as directives to use a central filing system on the JCD internal network for saving all documents in clearly named file folders to facilitate storage and retrieval.	Yes	Performance criteria such as these need to be included in requirements for an IDMS. See section 5.
13. A committee should compile the best practices already in use in Jordan and globally into the creation of a single JCD Issuance System. This system should be widely communicated through a strategic campaign to all JCD employees and clients.	*No*	This report focuses on the technical framework and requirements of internal and external communications.

Recommendation	*In Scope?*	*Comments*
The Centers of Excellence team at JCD would be a logical choice for this task.		

1.2. Objective

The objective of this scope of work is for the consultant to continue the work of computerization of the JCD operations by developing the specific areas of IT strategy that will support an overall better communication process by JCD with clients and other stakeholders.

1.3. Methodology

The methodology for this consultancy consisted of the following stages:

1. Review the reports listed in the scope of work (Annex B):
2. Identify and interview all stakeholders;
3. Benchmark JCD Dewan system against recommended minimum standards for an IDMS;
4. Address gaps in IDMS and related to requirements for document issuance; and
5. Provide options for a document issuance system in the context of overall organizational and inter-agency requirements for an electronic records management system IDMS.

2. IT Governance

TASK: In cooperation with the IT and Planning Director, define an appropriate governance structure for IT projects within JCD outlining roles, responsibilities, and processes to help better align JCD functions and objectives to IT spending and project development for communications strategies.

An appropriate governance structure for JCD IT management has already been defined in previous reports.[2] Arabic translations of some of the templates and the processes where they are used have already been undertaken. There are other documents that still need to be translated.

A Request for Quote has been drafted seeking a response from the market for IT project management training, specifically designed to support the templates and processes mentioned in the previous reports. The requirements for the RFQ are outlined in Annex C.

The IT governance structure outlined in these reports still requires implementation. Previous reports have referred to the fact that the IT Steering Committee does not meet regularly and has not met for some time. While the concept of IT governance is understood well by the Directors of IT and Planning and Organization, and is supported by them, sponsorship by the Director-General or his deputies is important if the governance model proposed is to be adopted.

Recommendation 1: The IT governance material already presented to JCD should be translated into Arabic and aligned with an IT project management course to be provided by a suitable vendor identified through a request for quotes from the market;

Recommendation 2: Professional IT project management training for approximately 20 participants in the JCD IT Directorate, including the IT Director, should be provided and configured to support the proposed IT governance structure and templates provided in previous reports;

Recommendation 3: The proposed IT governance structure and use of templates should be accepted by the JCD IT Steering Committee and put into effect, preferably including an online version of the processes and templates to be delivered via the Customs Encyclopedia, once IT project management training is completed.

[2] '*Jordan Customs – IT Governance, Strategic Planning, Intelligence, Risk Management and Competence-Based Human Resources Tracking System'* , prepared by A. Ford and L. Dvorsky for the AMIR Program, November 2003, and '*Jordan Customs – Strategy for Risk Systems Weighting and for Training Systems Management*,', prepared by A. Ford for the AMIR Program, December 2003.

3. Strategic Priorities & ASYCUDA

3.1. Strategic Priorities

TASK: Building on the outcomes of the study, technical recommendations and training workshop run by AMIR CMR consultants on communications address those strategic elements of highest priority for JCD and ensure an appropriate alignment of IT spending to enable automated support for internal and external communication.

The JCD Strategic Plan 2004-2006 has only recently been drafted by the Director, Planning & Organization. It still remains in draft stage awaiting review. The completed Strategic Plan 2004-2006 will need to be reviewed by AMIR staff against previous recommendations made by the Zadina and Hekala reports.[3]

In light of the new Strategic Plan 2004-2006, it may be the right time for the existing IT Steering Committee to reconvene and review the Strategic Plan, also in the context of previous recommendations made by the AMIR IT consultants. It would be useful for the IT Steering Committee to formally adopt and endorse the governance structure mentioned in the previous section. This would be particularly helpful at the same time that IT project management training is provided to the JCD IT Department.

The consultant endorses the recommendations made by the Zadina and Hekala reports relating to the development of a comprehensive strategic communications plan and the establishment of a Communications Directorate in JCD. The Communications Directorate would be the obvious sponsor for an IDMS mentioned in Section 7.

Recommendation 4: Review the Strategic Plan 2004-2006 and supporting initiatives against previous recommendations regarding IT and address any gaps.

Recommendation 5: Reconvene the IT Steering Committee to adopt and endorse the proposed governance structure, once IT project management training is finalized.

3.2. ASCYCUDA Modification for Direct Interface for Filing Customs Declarations

TASK: The consultancy will identify appropriate modifications to the ASYCUDA system to support the further development of a direct interface for the filing of customs declarations by the private sector directly through an automated declaration process.

The ASYCUDA ++ source code is closed and therefore any modification of the system to support a direct interface for filing customs declarations by the private sector is not possible. Declarations are currently made via trained customs brokers via an existing MSDOS interface to ASYCUDA ++. A direct Windows or browser interface could be provided by designing an appropriate front end to the underlying Oracle database included in ASYCUDA. JCD has the expertise to do this, but limited resources mean that other work will probably take priority. Additionally, while cumbersome, the current MSDOS interface works well and probably should not be tampered with at this stage given the effort taken to roll out ASYCUDA ++ to most of the JCD centers and to provide both JCD officers and brokers with training in use of the system.

[3] 'Communication Development for Jordan National Customs', prepared by W. Hekala for the AMIR Program, April 2004 (for details on recommendations presented in this report, see Annex D).

It makes sense to wait for the deployment of ASYCUDAWorld, which will provide a more streamlined interface for customs declarations rather than designing a separate interface at this time. ASYCUDAWorld is currently being beta tested by UNCTAD in a select number of sites around the world (including Estonia). Due to personnel changes, UNCTAD has experienced some delay in deploying the upgrade at beta sites. JCD has expressed an interest to UNCTAD that they wish to upgrade from ASYCUDA++ to ASYCUDAWorld once the solution has been successfully tested and is deployed globally. A request by Mr. Wafa for JCD to be included as a site for beta testing apparently failed.

Recommendation 6: Delay development of a direct interface for automated filing of customs declarations until deployment date for ASYCUDAWorld is announced.

4. Automated Support for Communications

TASK: Work with CRM Subcomponent Manager and CRM Communications Consultants to address the needs for an automated support of the JCD internal and external communications strategy.

4.1. Policy Requirements – Information Management

The recommendations presented in the Zadina and Hekala reports would all be significantly enabled and supported by the adoption of an appropriate IDMS. IDMS software, also referred to as document repository management, is a type middleware service for organizing electronic documents; managing content; enabling secure access to documents and unstructured data; routing documents and automating related tasks; and facilitating document distribution. IDMS products provide functionality for storing, locating and retrieving information through a document's life-cycle, i.e., from the time it is created to the time it is archived to offline storage media. Many IDMS vendors and products take this life cycle approach by addressing the following: authoring/creation, review and approval, distribution and archiving. Many products have adopted Web technologies and standards; the addition of Web publishing and enhanced resource discovery; and support for managing documents at a granular, component level.

However, prior to the adoption of an IDMS, it is essential that JCD develops an appropriate information management strategy. This would help map out a logical pathway to meet the organizations requirements for records management,[4] document management, web content management and knowledge management as JCD' requirements mature.

Both the Zadina and Hekala reports show that JCD' current information management environment is characterized by disparate systems; an absence of corporate level information management plans; a lack of any detailed records management policies, procedures and practices; no overall and consistent approach to the classifying, recording and storage of corporate information; and no single authority or oversight of information management.

The risks to JCD continuing these poor practices are high, particularly in terms of:

- legal liability,
- political exposure,
- responsiveness,
- accountability, and
- continuous improvement.

These risks will become more acute in an environment characterized by:

- increasing volumes of information;
- increasing amounts of information in electronic format;

[4] There is often some confusion between the terms record management and document management, particularly given the trend by vendors in both technology domains to meet both record and document management requirements. In the most general terms, a record is any information bearing media generated or received by an organization. This includes documents, spreadsheets, images, web pages and e-mail. Record management involves the systematic organization and managed storage of these diverse information sources through the end of their life cycle. Record management can be viewed as a subset of integrated document management and is on the five most important IDMS functions. The others are: check in/check out, version control, document level security and attribute, and full text search and retrieval.

- increasing requirements for information sharing, both within the organization as well as with external government agencies, e.g., the proposed Border Management Task Force (BMTF); and
- government directions supporting an information economy.

As Jordanian Government agencies move inexorably into electronically based information management, the need for consistency in policies and procedures is essential. As indicated above, the increasing volumes and diversity of information makes it impossible to articulate a single set of operational policies that can apply to all records in all situations. However, it is possible, and necessary, to articulate high-level, comprehensive framework to guide the organization to better information access and management, whilst protecting the legitimate interests of individuals, line areas, clients and the government itself.

Existing information management practices in JCD must be integrated into a framework of principles, policies, planning and collaborative mechanisms to ensure a whole-of-agency approach, through which we are able to meet the government's requirements for improved service delivery and client focus.

JCD needs to develop a corporately focused information management framework that supports current and future business processes and meets the organization's international and domestic obligations. This framework would articulate JCD's approach to information management. It should be conducted in close consultation with Dewan and the IT Department and incorporate the following characteristics:

- set a contextual background for information management in JCD including an assessment of the relevant internal and external drivers;
- allows coordinated and cost effective decisions to be made about JCD's information resources;
- allocate ongoing responsibilities for information management;
- provide an initial step towards integrating information management planning into the organization's broader strategic planning cycle; and
- present a workplan for future activities aimed at addressing any shortcomings identified.

Recommendation 7: JCD should develop and adopt a comprehensive information management strategy that meets international best practice, which complements its knowledge management strategy and allows a logical path for adoption of technologies as the organization's requirements mature.

4.2. Policy Requirements – Records Management/Document Management

Whilst the Information Age and the Internet revolution are important to JCD, the organization will continue to grapple with the need to manage paper documents and meet international best practice concerning archiving requirements. At the moment JCD' Dewan system and set of processes is showing signs of stress: there is an inexorable increase in the volume of records, some weaknesses in existing records management processes, and a need to review, modify or replace the Dewan system to meet some of the mandatory components of an IDMS.

As discussed in the Zadina and Hekala reports, more urgent is the need for JCD to address a lack of policies, procedures and systems for electronic records/documents and the increasing use of e-mail for formal and informal communication. This trend leaves JCD vulnerable in terms of:

- legal liability;
- lost documents;
- lack of an audit path;
- loss of corporate memory;
- poor version control, leading to duplication and variation; and
- unclear ownership and 'sign-off'.

For example, the preference of JCD officers to use unofficial email accounts (Hot Mail, Yahoo, etc) rather than their customs.gov.jo accounts, to "stay off the record" exposes JCD to all of the risks mentioned above, and makes it impossible to audit officers' instructions and activities thereby curtailing JCD internal investigations and intelligence capabilities.

The organization of unstructured content within JCD has become critical to ensure consistency, reliability and accuracy of information supplied to officers, the senior management, clients and the public. Compared with other agencies, such as JISM, JCD appears not to be as advanced in records/document management and the growing pace of and demand for electronic information exchange will only serve to make it harder for the organization to work more effectively with other government agencies.

JCD has an urgent need for an overall and consistent approach to the classifying, recording and storage of corporate information in both hard and electronic formats. It would, no doubt, benefit from a records management vision articulating a direction for records/document management systems development - for example, that within five years JCD has seamless document handling procedures that fully integrates both paper and electronic documents.

An IDMS is a key component of any information management model. This type of information system tries to deal with what is essentially an organization's unstructured data (this includes items such as hard-copy documents, electronic documents, videos, etc).
In the absence of an IDMS, there is no systematic attention to the life cycle of a document, which begins with document creation and ends with document disposal. Similarly, there may be no naming convention and a lack of systematic metadata collection that could assist with resource discovery or better information management. File folders and taxonomies may be created idiosyncratically or on an ad hoc basis. Many records or documents may not be stored centrally leading to duplication and fragmentation. Lastly, important legal obligations associated with record and document management, version or authority may not be met in the absence of a good IDMS.

Recommendation 8: JCD should develop and adopt a comprehensive records/document management policy that meets international best practice.

4.3. Document Issuance & Intelligence Requirements

TASK: This task will include but not be limited to using automated approaches for the circulation of internal communications such as directives, policies and procedures, tracking all documents and prior issuances effected by new issuances; and an automated strategy for the collection and dissemination of intelligence.

4.3.1 Document Issuance

The Zadina Report acknowledged that JCD has no standardized, criteria-based, enforced system for the creation, storage and dissemination of knowledge. Nor does it have a JCD issuance system, defined as a system that covers all polices and procedures issued by the JCD

for internal management purposes that affect major organizational elements or groups of employees. A document issuance system should include a subject classification scheme, which lists and codifies the main functional activities in the JCD through a numbering system in order to facilitate filing, retrieval, indexing and referencing information.

A basic classification scheme exists in the form of a file reference schema for the Dewan System (refer to Annex E) and booklet published by the Planning and Organization Directorate entitled Correspondence Guidelines for the JCD for 2003. However, neither of these publications is widely distributed and many JCD officers remain unaware of the existence of these basic organizational taxonomies.

4.3.2 Role of Dewan

Documents, correspondence and downstream internal communications are currently handled by Dewan, the official Correspondence Section, and a Memo System, that has been developed to facilitate downstream tasking by managers to their subordinates within JCD.

Dewan is responsible for processing all of JCD incoming and outgoing correspondence and also manages the tracking and distribution of documents to all internal JCD employees and sections. Dewan issues all correspondence, letters, notifications, and other communications, and is responsible for both internal and external dissemination. A full description of the Dewan Section, its processes, and responsibilities is included in the Zadina report and need not be repeated here.

An Oracle database, with a detailed set of processes, has been developed to support Dewan. These processes are set out in Annex F. An overview of the tables included in the database, and their respective fields is set out in Annex G.

Interviews held with some users of the system indicate some substantial weaknesses in the Dewan system. These include the following:

- The Dewan officer processing correspondence as it is received is sometimes not sufficiently trained or abreast of the activities of the JCD to be able to determine the legal status, importance or the appropriate Directorate or Sections to which the correspondence should be directed.
- Some documents (roughly 1-2 percent of total correspondence received) are scanned for storage and retrieval on the system. It is not certain how priority is given for documents to be scanned or not.
- Some officers in the Tariff Section, as well as officers in other Directorates, complained of correspondence often “going missing” or arriving late, after they had been circulated to other officers or Sections in the JCD.
- While recipient officers, or their Directorates are tracked in the Dewan system as correspondence comes in, subsequent re-routing of this correspondence is not tracked and it is difficult to determine where a document may be once it has been circulated and on-routed.
- While Dewan liaison officers at each JCD Center download notifications from the online system and pass this information in hard copy to employees and brokers as they receive it, there is no electronic central file on the JCD network with all Dewan communications. Therefore, if a JCD official does not check email or receive a hard copy from Dewan, he may never see some new information.

Recommendation 9: That better training be provided to Dewan officers responsible for allocating correspondence and documents so that there is less scope for these to be mis-directed.

Recommendation 10: That all correspondence and documents should be scanned once they are received by Dewan and have appropriate metadata attributed to them for easier and faster retrieval.

Recommendation 11: That a document's location needs to be constantly tracked in the Dewan system, or its replacement. A set of policies and processes needs to be put in place making it mandatory for employees to record the name and location of officers to whom they have subsequently passed on correspondence or documents, once they themselves have dealt with it.

Recommendation 12: A single, centralized register of correspondence and documents should be used to control the document's life cycle and distribution within the organization.

4.3.3 Effectiveness of the Dewan System

A review of the Dewan system was undertaken, on the basis of interviews held with the designers of the Dewan system, against a set of criteria considered as a set of minimum requirements for international best-practice in record and document management systems. These criteria were compiled using the Victorian Electronics Records Strategy (VERS) and the UK Public Records Office Functional Requirements for Electronic Management Systems. These criteria were created taking into account the following principles:

- creating documents and records (either in–house or received from other agencies or individuals),
- describing (using metadata), organizing (using functional classification schemes or thesaurus keywords) and storing (using folders and a secure electronic document repository),
- reviewing and modifying documents (including version and access controls),
- discovery (based on either metadata, contents, explicit links or a combination),
- disposal of documents and records (based on official guidelines, and
- publishing (either to hard–copy or to the WWW).
- loosely defined, collaborative processes (e.g. policy development),
- simple administrative processes (e.g. internal resource requests), and
- well defined, core business critical processes that will make use of workflow automation (e.g. the processing of Development Applications).

The results of this review are included at Annex H. To summarize, the following can be said about the Dewan system in relation to best practice IDMS systems:

- Most of the basic requirements for an IDMS are met, given the flexibility inherent in the underlying functionality of the Oracle database;
- As a relational database built in Oracle, Dewan can link a document to other documents, including through a designated workflow (refer to the translated Dewan manual included in Annex F).
- Reporting capability is good, with a wide number of "canned" reports available to managers and the ability to generate ad hoc reports a possibility;

- Ability to change components of the system is possible given the excellent Oracle programming skills in the Department;
- A web interface to Dewan is currently not available limiting the ability to provide access to the system via a browser, both within and outside the organization;
- The most important weaknesses relate to deficiencies in the processes that the system is being used to support – for example, there are significant weaknesses in directing correspondence to the right person or the right Department within JCD once that correspondence is received. There is also an inability to track down a document once it has been received and subsequently distributed beyond the initial recipient in JCD;
- Other weakness includes inability to track changes to records/documents by the systems administrator or the IT Director, allowing for changes to records or record structures without an audit trail.

Recommendation 13: A document issuance system needs to be considered as part of a broader scope of requirements for an IDMS.

The Memo System, developed separately by the IT Directorate, specifically for the purpose of allowing managers to issue instructions to their subordinates and track progress of these tasks has been piloted in the IT Directorate and has been rolled out to the Director General's office, and is planned to be rolled out to the Planning & Organization Directorate, before being implemented elsewhere across the organization.

For inexplicable reasons, the ability to provide an upwards communication capability, allowing JCD employees to provide feedback and task managers on the basis of work being undertaken has been removed from the scope of the project, limiting the overall knowledge management capabilities of the application.

A more detailed review of the Memo System needs to take place, in addition to determining the ability to change some of the System's functionality prior to evaluating how useful it may be in terms of addressing some of the scope for document issuance and document management in JCD. From a cursory examination of the system, it appears to have been purpose-built for downstream tasking and is unlikely to meet even some of the requirements of an IDMS.

Recommendation 14: Review the Memo System in more detail and determine whether it can be used for upstream as well as downstream communication and task tracking within JCD.

4.3.4 Intelligence Requirements

The Zadina Report acknowledged that the capacity of the Intelligence Unit to perform its mission is seriously hampered by the absence of a clear JCD issuance system.

Given the current inability to "lock down" information on the Dewan System (using security classifications against which records/documents can be recorded), there is limited scope for the Intelligence Unit to use the Dewan system for collection purposes, analysis or distribution of its products.[5]

Similarly, the limitations of Dewan mentioned earlier mean that, for internal audit and investigation purposes, there is no paper trail for the Intelligence Unit to track and it is almost impossible to retrieve internal documents that are not shared within the organization, that may

[5] Although this could be feasible on a user-by-user basis using access control lists in the Oracle database.

not even be saved, or which are often simply lost. The ability to use audit access, use and modification to records and documents in an IDMS are fundamental to the internal investigation requirements of the Intelligence Unit. These capabilities are currently absent in the Dewan system but would be available if JCD were to acquire a modern replacement IDMS.

Recommendation 15: Some of the internal investigation requirements of the Intelligence Unit in JCD could be met by replacing Dewan with a modern IDMS.

The Intelligence Unit has created its own database, using Microsoft Access, and an AMIR consultant has been working with the Unit to determine requirements for a more advanced intelligence database to supercede the Access version currently being used. Any integration of this database with other systems in JCD would require an appropriate threat and risk assessment to be undertaken. However, information security is neglected in JCD – there is no disposal system, no burn bags, or shredders, and no information security classification system as such. A number of concerns and recommendations related to these issues, initially raised in the IT Strategic Plan written by AMIR consultants in November 2002 (refer Appendix Three of that document), remain unaddressed.

Recommendation 16: An appropriate security classification system is an integral part of an IDMS. JCD needs to adopt an appropriate classification system to secure its data, information and communication flows both within and external to the organization.

4.3.5 Interagency Information Exchanges

TASK: The consultancy will look at automated approaches for the interface of information exchange with other stakeholder government agencies involved at the border.

A modern IDMS should include a web-based interface[6], and an appropriate security and access control capability to allow access to the system by authorized external users, potentially including stakeholder government agencies. For example, it would be useful for an IDMS to contain the following features:

- Support all IDMS function access via a web browser;
- Search repositories using metadata and content via a web interface;
- Check in/check out via a web interface;
- Participate in workflows via a web interface;
- Publish documents from a repository to a web site;
- Manage external web site links and related objects into the IDMS;
- Manage web site documents within the IDMS repository;
- Convert metadata and content into HTML; and
- Provide full authentication and access control when the IDMS is accessed via the web.

Indeed, these requirements for this have been included in the Statement of Requirements prepared by the Jordan Institute of Standards and Metrology (JISM) for their document management system (refer to Annex J). IDMS vendors, such as Documentum, TowerSoft,

[6] Web capabilities have become essential for traditional IDMS vendors, and new products have emerged that are designed from the ground up to leverage the Internet infrastructure. Today, most IDMS products are built around n-tier architecture supporting Web servers and thin clients that provide access to the IDMS repository through web browsers. The IDM architecture is likely to continue to move toward a multi-tier (or n-tier) client/service architecture. Browser-based interfaces and Internet protocols are now the primary means of providing IDMS functionality.

OpenText, Hummingbird and FileNet are all expanding their application functionality to support web-based extranets, and information portals with web content management features allowing access for read, write and modification of content to authorized external users.

An interagency database is being considered elsewhere by AMIR and may be a more appropriate vehicle for interagency information exchange than a web-enabled IDMS considered here. A comprehensive integrated tariff system (CITS – refer to Annex J) is being proposed that would be a single and current reference point for all tariff and non-tariff measures to be applied by JCD and other government agencies to goods entering, exiting or transiting Jordan, including all governmental requirements to a specific commodity.

Risks to interagency communication using either system would be the same, namely:

- A need to define governance structures to ensure the upkeep and continuity of the content on the system. The Government of Jordan is in the process of forming a multi-agency Border Management Task Force that may be an appropriate group to begin addressing this issue. However, not all of the agencies with whom JCD needs to engage are represented on this task force.
- A need to formalize communication channels with other government agencies (OGAs) and JCD, identify owners of the communication channels and agree on processes for content upkeep; and
- A need to identify the sponsor for such a solution – if it is primarily related to providing information regarding tariffs, should it be owned by the Tariff Division, or if it is part of a broader communication vehicle for the JDC, should it be owned by the Communications Directorate as proposed by the Zadina and Hekala reports? Should the Communications Directorate prove non-viable, given the application of an IDMS across all of the JCD business lines, ownership might properly be vested in the existing Dewan Directorate or the Planning & Organization Directorate.

The respective scopes for both of these projects needs to be considered carefully by reviewing the requirements for both systems and determining whether it makes more sense to build or special-purpose application for the CITS or use an IDMS where the functionality of the selected solution can also meet the functional requirements of the CITS. This may particularly be the case where an IDMS supports access control, document life cycles and workflow, version control and all appropriate auditing and archiving requirements.

Recommendation 17: That the scopes of the CITS project and the IDMS project be examined closely to determine which project best meets the requirements for interagency information exchange.

4.3.6 Potential Applications for Automated External Communications

TASK: This task should address the ability of the JCD to communicate with private sector clients both in the filing of automated declarations and in the use of automated systems to support an informed voluntary compliance approach to client relations. As an illustrative example, the consultancy will examine the development of an automated rulings system for preliminary decisions (advanced rulings) and precedent agency rulings for valuation methodology, merchandise classification and determination of country of origin.

The IDMS recommended in section 7 below could be modified to accommodate the filing of automated declarations. However, the core functionality of an IDMS is to manage a document through its lifecycle – from creation to archiving. As such, its suitability for

automated declaration would be extremely limited. As mentioned in 5.2 above, it would be better delay the development of a direct interface for automated filing of customs declarations until a deployment date for ASYCUDA World is announced.

An IDMS could also be used to support an informed voluntary compliance approach to client relations, currently being considered by JCD. The workflow component of such an application could be used by external users (via a secure web-based interface) to follow a checklist of requirements ensuring full compliance to regulations, which could also be made available via the IDMS. However, this requirement probably more closely fits the scope for the CITS mentioned in section 6.3.3.

The absence of an IT security model in JCD will hamper the ability to treat both publicly available information and priviledged information. Once again, the scope of the CITS project could be examined where a suitable IT security model is proposed.

Recommendation 18: That the CITS project scope should include the requirement to support an informed voluntary compliance approach to client relations.

4.3.7 Automated Database for Rulings

The Zadina Report identified three separate databases being used by the Tariff Directorate to support advanced rulings. The first is a database of WCO decisions that is maintained by the Director of the Tariff Division. However, it is not shared beyond the section and so JCD officers at the JCD Centers do not have access to the information unless they maintain their own files. As the database is in English, many JCD officers not proficient in English would not use the database. The second database contains notifications of WCO tariff committee rulings which is communicated through the Dewan.

The third database in use was created in 1997 to provide pre-entry rulings where importers can get tariff rulings on goods before they arrive in the country. The Zadina Report stated that this database did not have a search capability. The consultant raised this issue with the IT Directorate who insisted that a search facility had been developed for the database. However, a lack of communication and an absence of training meant that the Tariff Directorate was completely unaware of this new functionality.

The consultant endorses the recommendations made in the Zadina report that all JCD officers should have complete access to the tariff decision history, to ensure proper application of tariffs to JCD clients. This database should be translated into Arabic, and better awareness and training in the existing search capability of the rulings database should be provided.

The consultant endorses the recommendation in the Zadina report that the rulings database should be made available to the public to ensure better declaration filing and transparency of rulings, and that classification rulings, valuation and origin of rulings should be incorporated into the online database – particularly given JCD's role as a World Customs Organization regional representative. The existing rulings database is built in Oracle and there is no reason why a web interface could not be designed and developed to provide public access to non-sensitive information in this database. This could be done using JCD in-house resources. An IDMS as recommended in section 7 could also be used to meet this requirement if it included a web-based interface, but it would also require all existing data, entities, tables and the relationship between these, to be migrated to the IDMS. The CITS project scope is probably closer to meeting this requirement that the scope of an IDMS, and should building a web-

based interface to the existing rulings database prove non-viable, it would be worthwhile expanding the scope of the CITS project to include providing the public with tariff rulings.

Recommendation 19: That a web interface to the current tariff rulings database be designed and developed using JCD in-house resources, and should that not prove viable, that the scope of the CITS project be expanded to include providing the public with tariff rulings, in both English and Arabic, sourced from the existing tariff rulings database.

5. Software for Communications Requirements

TASK: Based on the automated systems requirements, the consultant is to identify off-the-shelf support software that will further enhance the capacity of JCD to issue, track and retrieve through an automated process a document issuance system and support software for the establishment of an automated data base for rulings. The consultant will assist in the procurement by the AMIR Program of support software relevant to these two components of an internal and external communications strategy for JCD, not to exceed US$15,000

5.1. Automated Database for Rulings

As discussed in section 6.3.5 a web interface to the current tariff rulings database should be designed and developed using JCD in-house resources. Failing that, the scope of the CITS project more closely fits the requirement for an automated database for rulings than does the scope for an IDMS.

5.2. Requirements for an Automated System for Internal/External Communications

The consultant worked closely with Bill Cleary during his consultancy and asked that a detailed set of requirements for internal and external communication be provided as outcomes of that particular consultancy. This was not provided. In the absence of these detailed requirements, it is recommended that a generic set of IDMS requirements be reviewed by an IDMS project team to be staffed by representatives of AMIR and JCD. A set of these generic requirements in included at Annex I. Additional requirements, outside of the generic set specified could be added by carefully reviewing the Zadina and Hekala reports.

Additionally, there may be some value in reviewing the requirements established by JISM, used for the acquisition of an IDMS from a local Jordanian vendor (name and details to be provided by Rula Madanat). These requirements will need to be reviewed by JCD, but it is anticipated that few, if any, changes will need to be made to these requirements. These requirements are outline in Annex J. JISM has managed to acquire its IDMS for a price of JOD40,000 – which represents extraordinary value given that it also includes scanning two years of legacy data, to help initially populate the IDMS. However, since procuring the solution, JISM has experienced delays in implementation of the product, due to poor IT project management practices and a lack of resources on the part of the vendor. These are currently being addressed. The IDMS project team should be briefed by JISM to help in establishing their own detailed user requirements and benefit from any lessons learned in the JISM IDMS implementation.

Recommendation 20: Establish a JCD IDMS project team to be staffed by representatives of JCD and AMIR to review the generic IDMS requirements included in this report, review the recommendations of the Zadina and Hekala reports, and review the JISM IDMS projects in order to better determine requirements and benefit from any lessons learned.

5.3. Costs of Adopting an IDMS

Despite marked reductions in cost per user associated with the uptake of web-based applications and simplified pricing models, enterprise-wide IDM systems still tend to require heavy capital investment: typically more than US$1 million. Leading IDMS products from vendors such as Open Text, Hummingbird, Tower Software (TRIM), and IBM (Domino.Doc) per user prices range from US$200 to US$1,000 for high end systems like Documentum.

These are clearly outside of the US$15,000 budget constraint included in the scope of work for this consultancy and are therefore not considered here. This also makes the option selected by JISM of using a local vendor much more attractive.

In addition to the initial setup costs, there are usually implementation services required to develop the application and customize it, as well as ongoing maintenance costs. Implementation services either from the vendor or third parties can be expensive, depending on the amount of work that needs to be done. These services are often two to three times the cost of the software expenditure. Software maintenance is typically between 15 per cent and 18 per cent of total license cost per year.

5.4. Benefits of Adopting an IDMS

Most organizations understand intuitively that an IDMS is a good idea but need hard numbers to justify costs, presented in the form of a business case. The potential return on investment grows as the amount of document-based information outside automated systems grows. Gartner estimates that, on average, knowledge workers now waste 20-30 percent of their working hours managing document-based information outside of automated systems. The cost savings impact of IDM on an enterprise of roughly 2,000 users is potentially huge. Assuming an average compensation of JOD300 per month per user, the top ten ways time is wasted without an IDMS[7] would cost JOD315 per annum per user without IDM. On an aggregate basis, it wastes over JOD600,000 per year. As the volume and velocity of information increases, the problem becomes even more severe.

Expected and real benefits cited by enterprises that adopt IDMS include:

- Lowered document production costs, including reduced printing and storage costs, reduced clerical time and reduced reporting time;
- Avoidance of data duplication and reduced rework due to inaccurate or out-of-date documents;
- Promotion of data reuse, leading to lower costs and time for document production, repurposing and distribution;
- Reduced time spent searching for critical documents;
- Wider and easier access to documents to facilitate knowledge worker productivity;
- Elimination of paper copies and updating activities associated with multiple and fragmented collections
- An increase in data integrity;
- Better quality documents;
- Improved security through controlled access to sensitive documents;
- Enhanced communication and collaboration through shared information;
- Better support for mobile employees and those in the field;
- Better responses to inquiries;

[7] Gartner cites these as follows:

1. Documents are hard to find (1 hour wasted per week)
2. Content is hard to manipulate and repurpose (1.5 hours)
3. Documents are hard to update (1 hour)
4. Documents are hard to share (1 hour)
5. Content is hard to publish consistently (30 minutes)
6. Document creation is an ad hoc process (30 minutes)
7. Document review is an ad hoc process (30 minutes)
8. The importance of a document's content is not obvious (30 minutes)
9. Paper-based distribution and storage is costly in terms of storage, copying and printing (1 hour)
10. Paper –based archiving is expensive to maintain and inefficient for retrieval (30 minutes)

- Better decisions enabled by accurate, timely, accessible information;
- Slower growth in head count due to higher productivity; and
- Reduction in head count.

5.5. Next Steps

At mentioned in section 7.2, an IDMS project team should be established. Once established, the team should undertake the following 13 step agenda as part of a "discovery stage" required to pull together a business case and set of detailed user requirements prior to producing a request for tender, selecting an appropriate vendor and then going into the design and development stages:

1. Identify all IDM projects underway – the typical "bottom up" approach that has historically prevailed in IDM deployment leads to the introduction of multiple and fragmented systems (e.g., the CITS mentioned in 6.3.3 above);
2. Identify overlapping functional and technical requirements – as an extension of step 1, this helps avoid redundant and wasteful practices;
3. Identify integration requirements among IDM systems – typically a department will state that it never needs to share work-in-process documents with other departments; however, this is true only until the next enterprise reorganization takes place. Organizations need to anticipate IDMS integration issues and establish an integration action plan;
4. Establish a methodology and sponsor for document inventories – a document inventory can be used to identify document flow, retrieval and access patterns, volumes, and other important document population attributes, which help define the type and scale of the IDMS that will be required. This should also include a consideration of a document hierarchy;
5. Establish a dialog with business process re-engineering staff to ensure recognition of IDM's value in BPR projects – those in charge of BPR efforts may not have recognized IDM as an enabling technology for a departmental application. A major aspect of the IDMS adoption will be establishing IDM as part of the BPR toolkit;
6. Develop a document index data dictionary to facilitate information sharing and retrieval among IDM systems – like a database application data dictionary, organizations need a document index data dictionary – which establishes and maintains index fields and their values – to ensure IDMS integrity and interoperability;
7. Establish a clearinghouse of information on IDM and related technologies;
8. Coordinate with the IT Division to integrate document and output management technology and architecture planning issues – IDM requires significant integration with related technologies, such as imaging, workflow, records management, information retrieval and publishing systems;
9. Sponsor and establish an IDMS proof-of-concept environment – and IDM pilot provides a low risk environment to evaluate products and test architectural integrity and application interoperability;
10. Provide a detailed business case outlining in some detail the options, issues, risks and costs and benefits of introducing an IDMS into JCD;
11. Review the business and user requirements for an IDMS mentioned in 7.2 above
12. Produce a request for proposal (RFP) – the RFP should include sufficient detail to describe: the business objectives of the anticipated purchase; the number of users and job categories; hardware and infrastructure requirements; document types, volumes, life cycle and workflow; metadata; and document creation issues.
13. Pilot the chosen vendor(s) products and commit to the implementation of the solution following the IT processes included in section 4 of this report.

Recommendation 21: That the 13 step agenda as part of the "discovery stage" of the IDMS project be addressed by the IDMS project team once it is established.

Annex A: List of Stakeholders Interviewed

Date	Name	Position/Organization
16 Feb 2004	Marwan Gharabei	Director Planning and Organization, JCD
16 Feb 2004	Somaya al-Wahoush	Director IT, JCD
16 Feb 2004	Emad Arslan	Director, Integrated Tariff, JCD
23 Feb 2004	Khaldoun Momani	Head Programmer, IT Division, JCD
23 Feb 2004	Abdullah Jouda	Section Head, Integrated Tariff, JCD
24 Feb 2004	Ali abu Salim	Section Head, Tariff Procedures, JCD
26 Feb 2004	Barbara Zadina,	Communications, Chemonics
26 Feb 2004	William Cleary	Communications consultant, AMIR Program
29 Feb 2004	Marwan Gharabei	Director Planning and Organization, JCD
29 Feb 2004	Mansour abu Azam	Director Dewan System, JCD
2 Mar 2004	Mayyada Mekkala	Designer & Developer, JCD Memo System, JCD
3 Mar 2004	William Cleary	Communications consultant, AMIR Program
3 Mar 2004	Tayseer Shboul	Head of Intelligence Unit, JCD
3 Mar 2004	Somaya al-Wahoush	Director IT, JCD
7 Mar 2004	Mansour abu Azam	Director Dewan System, JCD
7 Mar 2004	Salah Maghaireh	Director of Judicial Affairs, JCD
9 Mar 2004	Somaya al-Wahoush	Director IT, JCD
11 Mar 2004	Mahmoud Abdulla Jabr	Director Computer & Information, Ministry of Finance
31 Mar 2004	Mahmoud Qataishat	Director General, JCD
5 Apr 2004	Rula Madanat	Director, Knowledge Management, Jordan Institute of Standards & Metrology
13 May 2004	Khaldoun Momani	Head Programmer, IT Division, JCD
23 May 2004	Khaldoun Momani	Head Programmer, IT Division, JCD

Annex B: Scope of Work

The consultant was asked to address the following Scope of Work:

1. In cooperation with the IT and Planning Directors, define an appropriate governance structure for IT projects within JCD outlining roles, responsibilities, and processes to help better align JCD functions and objectives to IT spending and project development for communications strategies.

2. Building on the outcomes of the study, technical recommendations and training workshop run by AMIR CRM Consultants on communications address those strategic elements of highest priority for JCD and ensure an appropriate alignment of IT spending to enable automated support for internal and external communications. The consultancy will identify appropriate modifications to the ASYCUDA system to support the further development of direct interface for the filing of customs declarations by the private sector directly through an automated declaration process.

3. Work with CRM Subcomponent Manager and CRM Communications Consultants to address the needs for an automated support of the JCD internal and external communications strategy. This task will include but not be limited to using automated approaches for the circulation of internal communications such as directives, polices and procedures; tracking all documents and prior issuances effected by new issuances; and an automated strategy for the collection and dissemination of intelligence. The consultancy will look at automated approaches for the interface of information exchange with other stakeholder government agencies involved at the borders. Additionally, this task should address the ability of the JCD to communicate with private sector clients both in the filing of automated declarations and in the use of automated systems to support an informed, voluntary compliance approach to client relations. As an illustrative example, the consultancy will examine the development of an automated rulings system for preliminary decisions (advanced rulings) and precedent agency rulings for valuation methodology, merchandise classification and determination of country of origin.

4. Based on the automated systems requirements, the consultant is to identify off-the-shelf support software that will further enhance the capacity of the National Custom to issue, track and retrieve through an automated process a document issuance system and support software for the establishment of an automated data base for rulings. The consultant will assist in the procurement by the AMIR Program of support software relevant to these two components of an internal and external communications strategy for JCD, not to exceed $15,000.

5. While in Jordan, the Consultant will be the CRM lead consultant on IT issues and may be required to provide technical expertise on matters outside the specific targeted activities of training and risk weighting.

Annex C: Request for Quote – IT Project Management Training

1. Provide JCD IT project managers and team members with an online help guide, based on the project management processes and templates already developed by AMIR, to become an easily accessible and user friendly reference for applying project management processes to their actual projects.

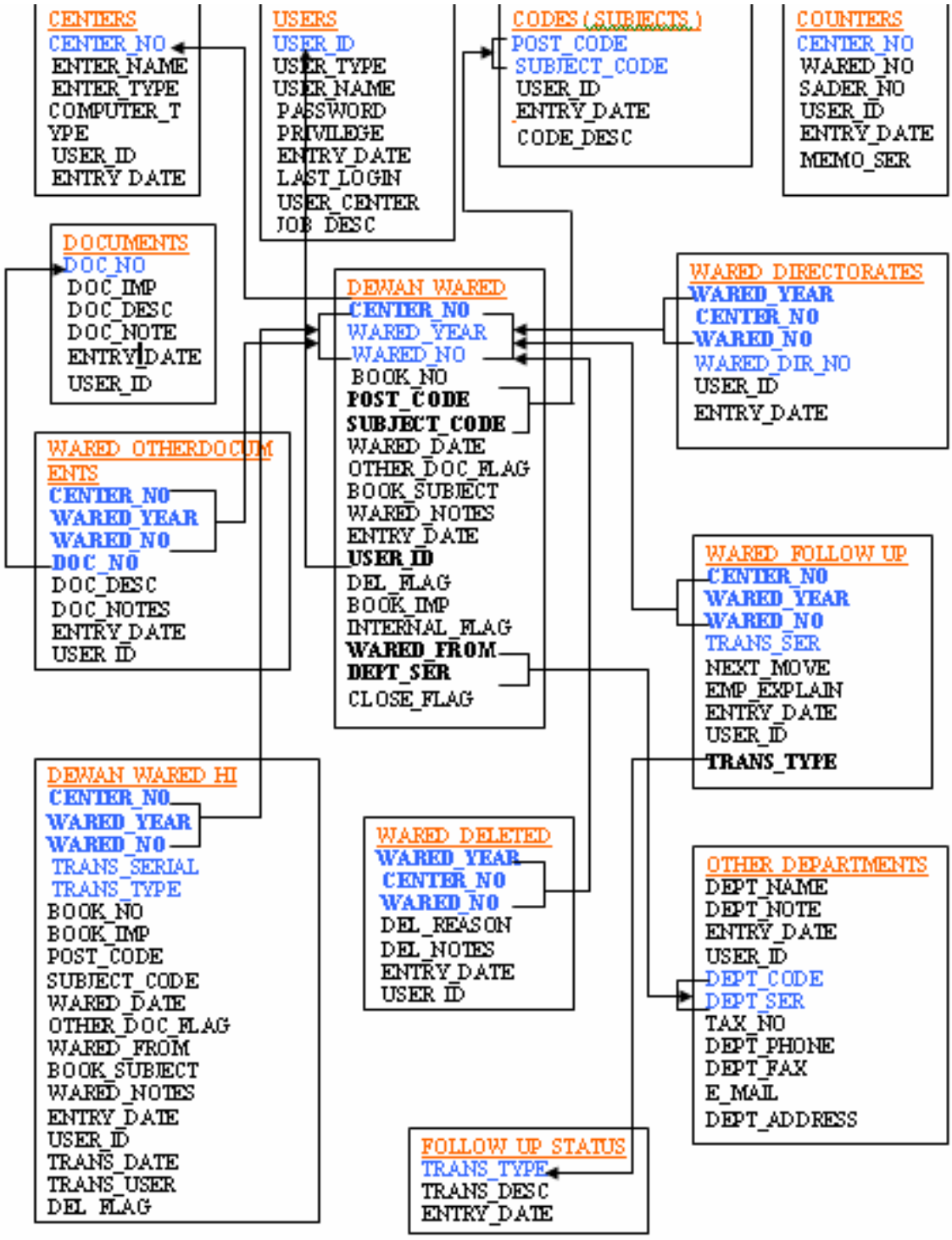
2. Deliver IT project management training to JCD IT Department staff (approximately 20 people) by applying the customized IT project management guidelines, already developed by AMIR, on the job to JCD projects.

3. Provide a training manual as a workbook for participants during the customized IT project management training. Include the design of the material based on the project management guidelines already developed by AMIR. Provide exercises and case studies for the training.

Annex D: Recommendations in Hekala's Report, 'Internal and External Communications Development'

1. Conduct a Weekly Issues/Management meeting
2. Produce a Weekly Issues/Management report
3. Publish a "Daily Update" consolidating current publications and tailored by profile as "required reading" for all employees and in a public access version posted to the JCD web site.
4. Assign responsibility for publishing a "Directives Alert" consolidating current products.
5. Charter a new Directorate of Communications based on a "mandate" which defines authority based on a set of agreed upon guidelines as proposed.
6. Conduct a Weekly News Briefing as 1) a focal point for an external communications program supporting "informed compliance" and other objectives, and 2) as a practical means reinforcing new standards among senior staff.
7. Link program and tasks with time allocation.
8. Develop a two-tier system to handle in- and out-bound inter-ministerial correspondence with designated working-level contacts.
9. Derive "positioning" supporting key messages from JCD' and directorates' business plans.
10. JCD needs a standard, written issuance system for the creation, documentation, storage and dissemination of information, plus other "systems" currently used, including those lacking formal recognition.
11. Establish an Implementation Task Force reporting to the Knowledge Management Committee.
12. Develop a pilot program to test customer service to support "informed compliance" objectives.
13. JCD should 1) include those needs previously identified in the Zadina report, 2) add others such as "timely response" to performance measurement criteria leading to 3) a new professional standard to both internal and external audiences.
14. A program leading to certification with periodic renewal 1) would introduce and maintain performance, and 2) when properly developed, "packaged" and promoted, 3) would lead to recognition, new respect, enhanced professional image among officers and the public consistent with vision statements.

Annex E: Dewan File Heading List



Annex F: Dewan Processes

Introduction:

In line with the instructions of HE the Director General to computerize all customs procedures and due to the importance of the Chief Bureau, and as the currently operated system needs to be re-designed to fulfill emerging requirements, a time table has been set to computerize all procedures of the General Chief Bureau in the Department and the other Customs Houses.

The General Chief Bureau is one of the vital and effective sections in the Department. It is the starting point and the ending point for any customs proceeding whether in the Department or the other customs houses. It is also the liaison between the Department, the customs houses, the governmental agencies and any other party.
It is also the reference for all correspondence, and proceedings related to the Department.

Organizational Structure of the General Chief Bureau
The General Chief Bureau is divided into several sections:

1- Incoming Mail
2- Outgoing mail
3- Filing
4- Photocopying
5- Follow up (debits)
6- Typing (Word Processing)

1- Incoming Mail

There are two types of mail in the Chief Bureau:

- Mail personally handed by the Client
- Internal mail of centers and governmental agencies.

Petitions and correspondence addressed to the Department by the Client or representatives of clearance agencies or representatives of governmental department and customs houses are received at the Bureau to undergo the following steps:

1- The concerned clerk or the index clerk studies the incoming mail to establish the legal status of the letter in terms of : stamps, seals and signatures , enclosures to be duly registered according to instructions.
2- The letter is stamped and inserted into the index (insert a symbol and number of the concerned party or concerned topic) to define the competent party.
3- Stamp the letter with the red stamp in case of being urgent or important.
4- The data entry clerk registers the letter in the current computerized system to give a serial number for easy reference and follow up later on.
5- The client takes the letter to the following stage with the competent directorate in case the letter is delivered by the client personally.
6- Letters received through the post are transferred to the incoming mail section.
7- Letters can be transferred to more than one directorate.

2- Outgoing Mail

Upon completion of required procedures by the competent party/parties in relation with the received letter whether through a client or through the incoming mail section, the letter is returned to the outgoing mail section in order to do the following:

- Data entry operator verifies the letter in terms of signatures, stamps and enclosures.

- Information of the letter are entered into the current system to get a serial number after assuring the accurate file number and the need to have the registration date as the same date of receipt.
- The letter is transferred to the assorting clerk in the outgoing section to have him do the following:
  (1) Verify the letter again to assure: outgoing reference number, date, enclosures, signatures and stamps.
  (2) Assort copies according to the agency to which the letter is forwarded by setting each copy in the required place.
  (3) The copies of the file are served to the filing section
  (4) Copies of the other directorates and exterior agencies (governmental agencies, ministries, centers and companies…etc) are transferred to the mail section.
  (5) If the letter is handed by the client, his own copy is delivered to him by hand.

3- Post (Mail) Section:

Following is a summary of this section's scope of work:

- Distribute incoming mail addressed to directorates at the lockers set for this purpose.
- Outgoing mail to customs houses is registered in the relevant books for each house so that the house representative would sign when collecting the letter as a proof. Should the mail be otherwise served as the representative cannot come, the dispatch receipt number is registered.
- Outgoing mail (addressed to exterior parties such as governmental agencies, ministries, banks, and companies…etc) must be put in envelopes and registered in special logs. Motorcycle drives working for the Department would then deliver it to such agencies. Mail to be served outside Amman shall be sent by surface mail.

4- Filing Section

- This section keeps all incoming and outgoing correspondence for the Department according to the file classification system currently followed in the Chief Bureau.
- Clerk at the filing section assorts the incoming mail from the outgoing mail section at defined locations according to the number and symbol of the file.
- Another clerk in the same section takes these copies from the mail trays and keeps them inside cabinets in the file having other letters with the same reference and number.
- In case a certain directorate requests a special file, another clerk gets the file and enters its number in a special log. However, the file must be returned during a set period of time. When returned, it must be opened to verify its content.

5- Photocopying Section
This Section photocopies official letters, their enclosures or circular letters in case the need arises for that.

6- Typing Section
In some cases, the outgoing letter is produced in blue print as the concerned directorate does not have typing facilities. In this case, the section types these blue prints using the letterhead of the Department for official dealing.

7- Follow up Section (Debits)

This Section handles the internal incoming mail with the urgent or important status.
Important: **The document is a financial one (check, guarantee or a financial pledge), or the letter has a customs case enclosure, a customs proceeding, stamps or customs lead, or it is important as the dispatcher is important (royal court, prime ministry).**
Urgent: **The subject of the letter cannot be delayed. For instance, a conference will be held within two days or an official delegation will arrive in a short time.**
In some cases, the importance or urgency status is established upon the clerk discretion.
Incoming letters stamped with the red color (important) are registered in special register for each directorate so that they would be delivered to the competent directorate later on against a signature.

***** Types of Mail:

1- **Interior Mail**: It is the mail of directorates and the several parts of the department in addition to customs centers.
2- **Exterior Mail:** It is the mail related to exterior parties (other than the department) including governmental agencies, ministries, companies and banks…etc.
3- **Confidential Mail:** This mail has to do with the Director General and it is a confident ional mail with an incoming and an outgoing register. It has special files in the Chief Bureau-(Manual files) related to a certain employee in cooperation with the Office of the DG.

Features of the new System:
First: Provision of a centralized mechanism and a central database according to directives and procedures set by the Department in order to standardize these procedures within one centralized system.

Second: Make it easier for clients to implement their needs as the Chief Bureau is a main stage for any proceeding.

Third: Make it easier for clients by reducing the red tape between the Department and the other customs houses at borders or among these houses as such.

Fourth: An automatic connectivity with the computerized systems as well as the use of special mechanisms of direct payment through satellite communication.

Coding System:
A coding system that is underway will be used by the committee formed for this purpose. This system will incorporate the Chief Bureau System to be designed.
The proposed coding system aims at unifying codes and references of letters (outgoing and incoming) for the department and all the other customs houses so that it will be easy to search any letter and for easy reference in future. In addition, for easy distribution of the mail (incoming and outgoing) according to subjects and relevant parties.

2- General Terms:

Department	: **Public Customs Department**
Director General	**: HE Director General of the Customs Department**
Houses (Centers)	**: Customs Houses**
Employee	: **Employee at the Public Customs Department**
Letters	**: Official letters outgoing from or incoming into the Customs Dept And customs houses**
System	**: Chief Bureau System**
Mail	**: the set of calls or incoming letters to the Department through the national post**

The System vis-à-vis other systems
- The System is connected with all other systems in the Department.
- The System is connected to all directorates and divisions at the Department. No letter can be dispatched or received unless passing through the Chief Bureau and provided with a number for an official status.
- The System is connected to all customs houses.
- There is a particular status for the Director General Office and the Human Resource Directorate.

Director General Office:
- The debit mail (important mail) must be followed up and decided upon in the Chief Bureau by the office of the Director General.
- There is a special mail for the DG office that includes interior mail and fax letters. This mail is given a serial number for easy reference.

Objectives and requirements of new System:
a- The new system aims at the following**:**
1- To be central for easy follow up and to reduce correspondence between the customs houses and the Department
2- Facilitate procedures for clients who will have their files processed automatically and effectively and promptly.
3- Stop the use of manual registers and adopt the computerized data.
4- Standardize customs procedures at all the border centers using a central automatic system.
5- Standardize and organize codes and names of the system user.

b- Ridding the old system disadvantages:
1- Difficult follow up among directorates
2- Difficult archiving and indexing of the Chief Bureau files and proceedings.

3- Difficult inquiry to get an accurate and efficient answer about the outgoing/incoming mail.
4- Difficult production of statistics and accurate reports.

Requirements of the New System:

a- Work procedures:

1- It is a central system at the center's (house) level. There is a main database at each center. The System is operated against pre-set powers and authorities.
2- Preliminary application is done in the Department.
3- Centers are provided with the new system gradually according to priorities.
4- Interconnectivity methods available at the Department will be used when interconnecting centers.

b- Requirements to operate the system at the department and one of the customs houses in the first stage:

1- Equipment and tools:

- Main server to hold the data base (The equipment used for the ASYCUDA shall be used where it is operated in the Customs houses)
- Two machines for the outgoing mail section at the Chief Bureau in the Department with a printer (available)
- Two machines for the incoming mail section in the Chief Bureau with a printer (available)
- A machine for each directorate linked to the Chief Bureau (currently available machines can be used)
- A machine with a printer for each customs center (available).

2- Software for the Department and Customs Houses:

- Windows NT Server
- Oracle Server
- Windows
- Oracle Run Time

3- Training:

- Provide the concerned centers and divisions that will operate the System with instruction manuals.
- Train employees of centers and divisions on Windows applications.
- Train employees of centers and division on printing.
- Train centers and divisions on the new system.

Method of Application:

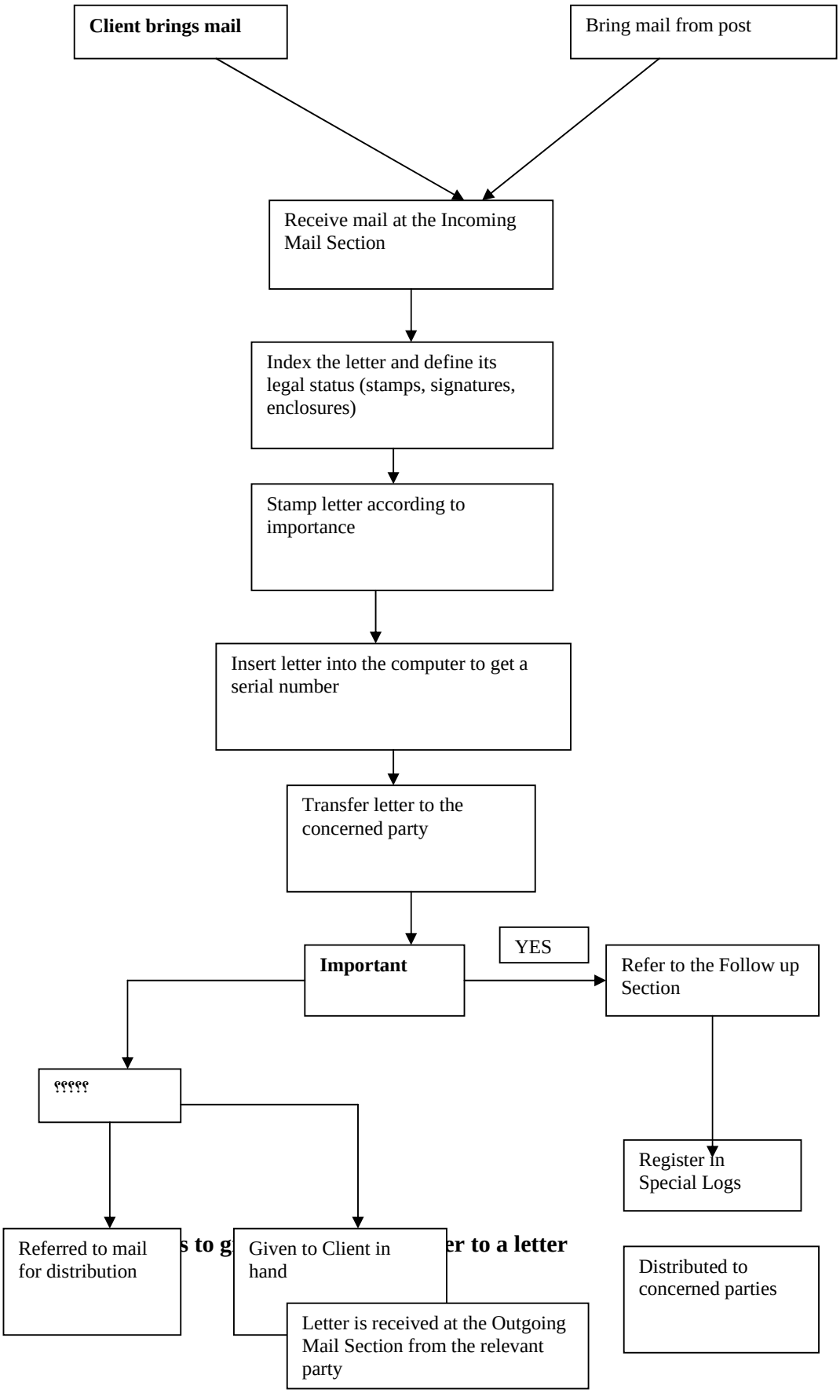
1- Pilot application at the Department at first.
2- Preliminary application in the Department and a customs center.
3- Data and old information are processed so that they can be treated within the new system scope.
4- The final stage is applied at all customs centers
5- When proved efficient and verify results, the manual operation of registers is stopped.

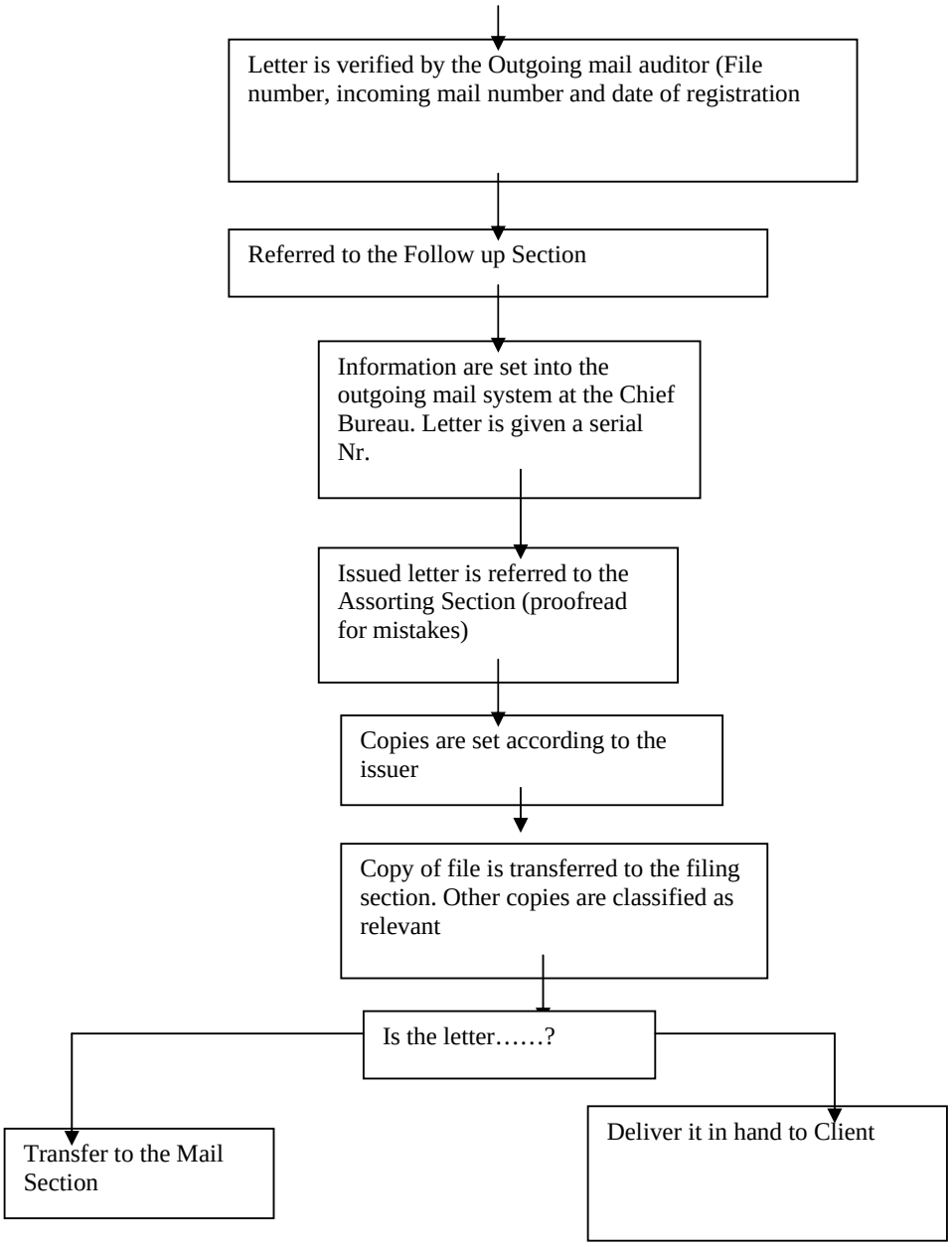
Several Statistics:

Rate of letters (outgoing/incoming) registered in the General Chief Bureau in the Department:

Customs House	**Daily rate of outgoing mail**	**Daily rate of incoming mail**	**Remarks**
Department			

Flow of Procedures:




Letter is verified by the Outgoing mail auditor (File number, incoming mail number and date of registration
Referred to the Follow up Section
Information are set into the outgoing mail system at the Chief Bureau. Letter is given a serial Nr.
Issued letter is referred to the Assorting Section (proofread for mistakes)
Copies are set according to the issuer
Copy of file is transferred to the filing section. Other copies are classified as relevant
Is the letter……?
Transfer to the Mail Section
Deliver it in hand to Client

3-13: Forms of Chief Bureau System Information Classification:

Department of Customs – Computer Directorate-Programming and Analysis Section
Form of Manual Information Processing

Directorate/Section	Chief Bureau	System	Chief Bureau System
Place	Headquarters	Register	Debit Log

Description of Register: The register is used for interior mail and exterior mail of the debit mail

Serial	Field	Type	Length	Remarks
1	Incoming Nr.	Figures	6	
2	Date of Delivery	Date	8	
3	Letter Nr.	Letters	30	
4	Sender	Letters	60	
5	Name of the person/party receiving the letter	Letters	30	

Department of Customs – Computer Directorate-Programming and Analysis Section
Form of Manual Information Processing

Directorate/Section	Chief Bureau	System	Chief Bureau System
Place	Headquarters	Register	Outgoing Paper Log

Description of Register: The register is used for interior mail and exterior mail of the debit mail

Serial	Field	Type	Length	Remarks
1	Serial Nr.	Figures	6	
2	Outgoing Paper Nr.	Figures	10	
3	Outgoing Paper Nr.	Date	8	
4	Date of Dispatch	Date	8	
5	Summary	Letters	80	
6	Department to which the correspondence is sent	Letters	30	
7	Party to take Procedure	Letters	30	
8	Signature	Letters	10	

IV. Ministry of Finance- Department of Customs –
V. Computer Directorate-Programming and Analysis Section
VI. Form of Manual Information Processing

Software in Operation

No. (10) **Date: / /2000**

Directorate/Center: Headquarters	System: Chief Bureau (outgoing/incoming)
Name of Programmer: **Hisham Zuhdi** Language: **Foxpro** Operation System: **DOS** Nr. Of users:**7** Nr. Of Machines:**7** Arabic Support: **Nafitha** Date of Commencement: **1/1/1997**	User supervising the system: **AbdulQader** Supervising Programmer: **Mayada Malkawi, Khaled Sami** Main Frame: **Server windows NT (IBM1)** Storage of data and reading: **IBM1/DEWAN/FULL PATH**

Date of Back up operation	Daily
Methods of Back up	Hard Disk
Is there a system documentation? Where?	Yes with Hisham Zuhdi
Are the source programs available and Where?	Available at path IBM1\DEWAN\PRG\ Full Path
Operation Command: Batch file name	DEWAN.BAT
Remarks of User: 1- 2- 3- 4-	
Remarks of Form Writer: 1- 2-	

VII. Ministry of Finance- Department of Customs –
VIII. Computer Directorate-Programming and Analysis Section
IX. Form of Manual Information Processing

Software in Operation

No. (10) **Date: / /2000**

Directorate/Center: Headquarters	System: Chief Bureau (outgoing/incoming)
Name of Programmer: **Hisham Zuhdi** Language: **Foxpro** Operation System: **DOS** Nr. Of users:**1** Nr. Of Machines:**1** Arabic Support: **Nafitha** Date of Commencement:	User supervising the system: **Yazid Kloub** Supervising Programmer: **Mayada Malkawi, Khaled Sami** Main Frame: **Individual PC** Storage of data and reading: **C:DEWAN: FULL PATH**

Date of Back up operation	Non defined
Methods of Back up	--
Is there a system documentation? Where?	Yes with Hisham Zuhdi
Are the source programs available and Where? Full Path	It seems that they're unavailable now.
Operation Command: Batch file name	DEWAN.BAT
Remarks of User: 1- 2- 3- 4-	
Remarks of Form Writer: 1- 2-	

Form No. (3)
Form of Screens of System

Name of Screen: Adding of incoming mail							
Screen Description: To add an incoming letter (Screen of Incoming Mail Registration)							
Serial	Field on Screen	Field name in File	Length	Type	File Name	Field Type	Other details
1-	Letter Nr.	BOOK_NUM	25	Letters	Dewan	Entry	Letter Nr. To be entered in the incoming mail log
2-	Letter Date	BOOK_DATE	8	Date	Dewan	Entry	Date of letter to be entered into the incoming log
3-	Incoming mail Nr.	WARED-NUM	6	Figures	Dewan+ Wared	Display	Serial Nr. To be given to incoming mail- serial per year and is given when storing
4-	Incoming Mail Date	WARED_DATE	8	Date	Dewan	Display	Date in Machine
5-	Letter importance	BOOK_IMP	1	Figures	Dewan	Entry	1- Important 2- Regular
6-	Sender	SOURCE_CODE	5	Figures	Dewan + Source	Entry	Sender (from symbols/codes file)
7-	File Nr.	FILE	15	Letters	Dewan + index	Entry + Display	File Nr. To be coded in incoming mail, name of file is taken from the file code
8-	Directorate	BRCH_CODE	3	Figures	Dewan+ dept	Entry	Directorate concerned with the incoming. It is taken from Directorate Code File
9-	Summary	REMARKS	140	Letters	Dewan	Entry	Summary of incoming letter is entered
10-	Hour			Date		Display	Display on screen taken from system date
11-	Year of incoming mail	Waren_year	4	Letters	Dewan	Display	Taken from system date

Form No. (3)
Form of Screens of System

Name of Screen: Amending an incoming letter							
Screen Description: information in an incoming letter for the Chief Bureau System is being amended							
Serial	Field on Screen	Field name in File	Length	Type	File Name	Field Type	Other details
1-	Date of Incoming	Wared_date	3	Date	Dewan	Display	
2-	Date of Incoming	Wared_num	2	Figures	Dewan	Display	
3-	Letter Nr.	Book-num	25	Figures	Dewan	Entry	Nr. With year is a single number
4-	Letter Date	Book_date	8	Date	Dewan	Entry	
5-	Sender	Source_code	5	Figures	Dewan+Source	Entry+ Display	
6-	File Nr.	File	15	Letters	Dewan	Entry + Display	
7-	Directorate	Brch_code	3	Figures	Dewan+dept	Entry	From Directorate Code File
8-	Importance of letter	Book_imp	1	Figures	Dewan	Entry	1- Important 2- Regular

Form No. (3)
Form of Screens of System

Name of Screen: Outgoing Letter Registration							
Screen Description: An outgoing letter is added to the Chief Bureau System							
Serial	Field on Screen	Field name in File	Length	Type	File Name	Field Type	Other details
1-	Date	Sader_date	8	Date	Sader	Display	
2-	Nr. Of Incoming letter	Wared_num	6	Figures	Dewan+sader	Entry+Display	
3-	Letter Nr.	Book-num	25	Letters	Dewan+sader	Display	
4-	Letter Date	Book_date	8	Date	Dewan+sader	display	
5-	Sender	Source_code	5	Figures	Dewan+source	Display	From code file
6-	File Nr.	File	15	Letters	Dewan+sad+index+er	Display	From code file
7-	Issuer	Brch_code	3	Figures	Sader+dept	Entry	From code file
8-	Addressee	Dest_code	3	Figures	Sader+source	Entry	From code file
9-	Summary	Remarks	140	Letters	Sader	Entry	
10-	Outgoing Nr.	Sader_num	6	Figures	+Sader sad_ser	Display	Serial per year/shows only in storage, serial is taken according to last number in serial file
11-	Year	Sader_year	4	Letters	Sader	Display	Taken from system date

Form No. (3)
Form of Screens of System

Name of Screen: Outgoing Letter Amdment							
Screen Description: Program of outgoing mail amendment							
Serial	Field on Screen	Field name in File	Length	Type	File Name	Field Type	Other details
1-	Date	Sader_date	8	Date	Sader	Display	
2-	Nr. Of outgoing letter	sader_num	6	Figures	sader	Display	
3-	Year	Sader_year	4	Letters	sader	Display	Year of Outgoing
4-	Incoming letter Nr.	Wared_nu	6	figures	sader	display	
5-	Year	Wared_year	4	letters	sader	Display	Year of Incoming
6-	Issuer	Brch_code	3	figures	Sader+dept	Display+Entry	Name is displayed in Directorate Code File
7-	Addressee	Dest_code	3	Figures	Sader+source		Name is displayed in Parties' Code File
8-	File Nr.	file	15	file	Sader+index		File description is displayed from File Code
9-	Remarks	Remarks	140	remarks	Sader		

Form No. (3)
Form of Screens of System

Name of Screen: Inquiry with a letter reference number							
Screen Description: Inquiry about information in an incoming letter per number							
Serial	Field on Screen	Field name in File	Length	Type	File Name	Field Type	Other details
1-	Letter Nr.	Book_num	25	Letters		Entry	Enter Nr. Of letter for inquiry; it is possible not to define a certain letter
2-	Period from	Book_date	8	Date		Entry	Starting of period to be inquired about
3-	To	Book_date	8	Date		Entry	End of inquiry period
4-	Letter Nr.	Book_num	25	Letters	dewan	Display	
5-	Letter Date	Mpdate	8	Date	dewan	Display	
6-	Incoming Nr.	Wared_num	6	Figures	dewan	Display	
7-	Date	Wared_date	8	Date	dewan	Display	
8-	Sender	Source_code	5	Figures	Dewan+source	Display	The party name is displayed from the Code file
9-	File Nr.	File	15	Letters	Dewan+index	Display	File description is displayed from the code file
10-	Directorate	Brch_code	3	Figures	Dewan+dept	Display	Directorate name is displayed from the Directorate Code file
11-	Summary	Remarks	140	Letters	dewan	Display	

Form No. (3)
Form of Screens of System

Name of Screen: Inquiry with the sender							
Screen Description: Inquiry about incoming letters according to sender parties							
Serial	Field on Screen	Field name in File	Length	Type	File Name	Field Type	Other details
1-	Code of Sender	Source_code	5	Figures	Dewan	Entry	Appears after exiting the field of Sender Nr.
2-	Period From	Wared_date	8	Date	Dewan	Entry	
3-	To	Wared_date	8	Date	Dewan	Entry	
4-	Incoming Nr.	Wared_num	6	Figures	Dewan	Display	
5-	Date	Wared-date	8	Date	Dewan	Display	
6-	Letter Ref.	Book_num	25	Letters	Dewan	Display	
7-	Directorate	Brch_code	3	Figures	Dewan	Display	

Form No. (3)
Form of Screens of System

Name of Screen: Inquiry with incoming summary							
Screen Description: Inquiry about incoming letters according summary							
Serial	Field on Screen	Field name in File	Length	Type	File Name	Field Type	Other details
1-	Summary	Remarks	140	Letters	Dewan	Entry	
2-	Date from	Wared_date	8	Date	Dewan	Entry	
3-	To	Wared_date	8	Date	Dewan	Entry	
4-	Date	Wared_date	8	Date	Dewan	Display	
5-	Letter Nr.	Book_nu	25	Letters	Dewan	Display	
6-	Letter Date	Book_date	8	Date	Dewan	Display	
7-	Incoming Nr.	Wared_num	6	Figures	Dewan	Display	
8-	Date	Wared_date	8	Figures	Dewan	Display	
9-	Sender	Source_date	5	Figures	Dewan+source	Display	Sender is displayed from parties' file
10-	File Nr.	File	15	Figures	Dewan+index	Display	From code file
11-	Directorate	Brch_code	3	Date	Dewan+dept	Display	From directorate code file
12-	Summary	Remarks	140	figures	Dewan	Display	

Form No. (3)
Form of Screens of System

Name of Screen: Inquiry with incoming Number							
Screen Description: Inquiry about incoming letters according to number							
Serial	Field on Screen	Field name in File	Length	Type	File Name	Field Type	Other details
1-	Date		8	Date		Display	Date of inquiry; it is the system date
2-	Incoming Nr.	Wared_num	6	Figures	Dewan	Entry	
3-	Year	Wared_date	8	Date		Entry	
4-	Letter Nr.	Book_num	25	Letters	Dewan	Display	
5-	Letter date	Book_date	8	Date	Dewan	Display	
6-	Sender	Source_code	5	Figures	Dewan+source	Display	Sender is displayed from the sender file
7-	File Nr.	File	15	Figures	Dewan+index	Display	From file codes
8-	Directorate	Brch_code	3	Date	Dewan+dept	Display	From directorate codes
9-	Summary	Remarks	140	figures	Dewan	Display	

Form No. (3)
Form of Screens of System

Name of Screen: Inquiry with outgoing Number							
Screen Description: Inquiry about incoming letters according to number of outgoing mail							
Serial	Field on Screen	Field name in File	Length	Type	File Name	Field Type	Other details
1-	Summary	RREMARKS	140	Letters	SADER	Entry	Any part of the Summary is entered
2-	Date from	SADER_DATE	8	Date	Sader_date	Entry	
3-	To	SADER_DATE	8	Date	Sader_date	Entry	
4-	Outgoing Nr.	SADER_num	6	Figures	SADER	Display	
5-	Year	SADER_YEAR	4	Letters	SADER	Display	
6-	Dept. Issuing the Letter	BRCH_CODE	3	Figures	SADER+dept	Display	From Directorates File
7-	Sent to	Source_code	5	Figures	SADER+source	Display	Name of addressee is displayed from the addressee's file
8-	File Nr.	File	15	Figures	SADER+index	Display	From the File Code
9-	Summary	Remarks	140	Figures	SADER	Display	

Form No. (3)
Form of Screens of System

Name of Screen: Inquiry with Summary/Outgoing							
Screen Description: Inquiry about incoming letters according to any part of outgoing summary							
Serial	Field on Screen	Field name in File	Length	Type	File Name	Field Type	Other details
1-	Summary		8	Date		Display	Date of Inquiry; which is the date of the System when inquiry
2-	Outgoing Date	SADER_num	6	Figures	SADER	Entry	
3-	Year	SADER_YEAR	4	Letters	SADER	Entry	
4-	Directorate Issuing the letter	BRCH_CODE	3	Figures	SADER+dept	Display	From Directorates File
5-	Addressee	Source_code	5	Figures	SADER+source	Display	Addressee is displayed from the addressee file
6-	Nr. Of File	File	15	Figures	SADER+index	Display	From File Codes
7-	Summary	Remarks	140	Figures	SADER	Display	

Form No. (3)
Form of Screens of System

Name of Screen: Last incoming/outgoing number							
Screen Description: To know the last serial number given in the outgoing or incoming file during current year							
Serial	Field on Screen	Field name in File	Length	Type	File Name	Field Type	Other details
1-	Last Incoming Nr.	SERIAL_NUM	6	Figures	WARED	Display	
2-	Last Outgoing Nr.	SERIAL_NUM	6	Figures	SADER_SER	Display	

Form No. (3)
Form of Screens of System

Name of Screen: Maintenance of Chief Bureau Index							
Screen Description: To add a code to the File Code File							
Serial	Field on Screen	Field name in File	Length	Type	File Name	Field Type	Other details
1-	Code	Code	15	Letters	Index	Entry	
2-	File	Name	60	Letters	Index	Entry	File to which the code indicates

Form No. (4)
Form of Report Analysis

Name of Report: Number of letters received during the period

Description of Report: This report is sent to the Administration upon request
Files used: DEWAN, DEPT.
Nr. Of Copies:……. Upon request Type of Form: Ready
People to receive copies…… upon request
Party requesting the report: Administration (Chief Bureau Head or Directorate Manager……
Frequency of request for the report: (daily, monthly, quarterly, annually, when necessary)

Fields of Report

Serial	Field on Report	Field name in File	File Used	Length	Type	Other details
1-	Period from	WARED_DATE	Ggmast	8	Date	For Display Only
2-	To	WARED_DATE	Ggmast	8	Date	End of Period
3-	Directorate Code	BRCH_CODE	DEWAN	3	Figures	
4-	Name of Directorate	NAME	DEPT	40	Letters	
5-	TOTAL for each directorate		DEWAN		Figures	A gathering field for some of incoming letters for each directorate during a certain period of time
6-	Grand Total		DEWAN		Numbers	A gathering field for some letters received at all directorates during said period

Form No. (4)
Form of Report Analysis

Name of Report: Number of letters issued during a period of time

Description of Report: Give a report on letters issued by each directorate in a certain period
Files used: SADER,DEPT
Nr. Of Copies:1 Upon request Type of Form: Ready
People to receive copies:…… upon request
Party requesting the report: Administration (Chief Bureau Head or Studies and Planning)
Frequency of request for the report: (daily, monthly, quarterly, annually, when necessary)

Fields of Report

Serial	Field on Report	Field name in File	File Used	Length	Type	Other details
1-	Period from	SADER_DATE	SADER	8	Date	
2-	To	SADER_DATE	SADER	8	Date	
3-	Directorate Name	NAME	DEPT	40	Letters	
4-	Nr. of letters		SADER		Figures	A gathering letter for a number of outgoing letters for each directorate during a period of time

Form No. (4)
Form of Report Analysis

Name of Report: A report on number of letters received during a certain period of time

Description of Report: Statistics of number o f letters received during a certain period of time for all directorates
Files used: SADER
Nr. Of Copies:1 Type of Form: Ready
People to receive copies:…… upon request
Party requesting the report: (Chief Bureau Head, Director or Studies and Planning)
Frequency of request for the report: (daily, monthly, quarterly, annually, when necessary)

Fields of Report

Serial	Field on Report	Field name in File	File Used	Length	Type	Other details
1-	Period from	DEWAN_DATE	DEWAN	8	Date	
2-	To	DEWAN_DATE	DEWAN	8	Date	
3-	Directorate Name	NAME	DEWAN		Figures	A gathering field for a number of letters received during a period of time

Form No. (4)
Form of Report Analysis

Name of Report: A report on number of letters issued during a certain period of time

Description of Report: Statistics of number o f letters issued during a certain period of time in the form of a single batch
Files used: SADER
Nr. Of Copies:1 Type of Form: Ready
People to receive copies:…… upon request
Party requesting the report: (Chief Bureau Head, Director or Studies and Planning)
Frequency of request for the report: (daily, monthly, quarterly, annually, when necessary)

Fields of Report

Serial	Field on Report	Field name in File	File Used	Length	Type	Other details
1-	Period from	Sader_date	Sader	8	Date	
2-	To	Sader_date	Sader	8	Date	
3-	TOTAL	NAME	Sader		Figures	

Form No. (4)
Form of Report Analysis

Name of Report: Number of incoming letters transferred to a certain directorate

Description of Report: Statistics of number o f letters transferred during a certain period of time to each directorate
Files used: dewan,dept
Nr. Of Copies:1 Type of Form: Ready
People to receive copies:…… upon request
Party requesting the report: (Chief Bureau Head, Director or Studies and Planning)
Frequency of request for the report: (daily, monthly, quarterly, annually, when necessary)

Fields of Report

Serial	Field on Report	Field name in File	File Used	Length	Type	Other details
1-	Period from	Wared_date	Dewan	8	Date	
2-	To	Wared_date	Dewan	8	Date	
3-	Directorate	Name	Dept	40	Letters	
4-	Nr. of letters		Dewan	6	Figures	A gathering field in the program to gather number of incoming letters for each directorate

Form No. (4)
Form of Report Analysis

Name of Report: Number of letters issued from a directorate

Description of Report: Statistics of letters issued during a certain period of time to all directorates
Files used: dewan,dept
Nr. Of Copies:1 Type of Form: Ready
People to receive copies:…… upon request
Party requesting the report: (Chief Bureau Head, Director or Studies and Planning)
Frequency of request for the report: (daily, monthly, quarterly, annually, when necessary)

Fields of Report

Serial	Field on Report	Field name in File	File Used	Length	Type	Other details
1-	Period from	Sader_date	Sader	8	Date	
2-	To	Sader_date	Sader	8	Date	
3-	Directorate Name	Name	Dept	40	Letters	A gathering field for a number of letters received by each directorate during a period of time
4-	Number of letters		sader	6	Number	

Form Nr. (5)
File Fields

SYSTEM NAME	General Chief Bureau	Description	Main File of Incoming Mail
FILE NAME	Dewan.DBF	Notes	

No.	Field Name	Data Type	Length	Description
1-	Wared_num	Figures	6	Serial Incoming Nr.
2-	Wared_date	Date	8	Incoming Date
3-	Wared_year	Letters	4	Incoming year
4-	Book_imp	Figures	1	Importance (1- important 2- regular)
5-	Book_num	Letters	25	Letter Nr.
6-	Book_date	Date	8	Letter Date
7-	Source_date	Figures	5	Sender
8-	File	Letters	15	File Code
9-	Brch_code	Figures	3	Directorate receiving the Letter
10-	Remarks	Letters	140	Remarks
11-	User_id	Letters	10	User Code
12-	Entry_date	Date	8	Date of Entry
Indies:				
TAG:ABED1 Key: WARED_DATE ------Unique Index				
TAG: BRCH_CODE Key: BRCH_CODE ----- Unique Index				
TAG:SOURC_CODE Key: SOURCE_CODE				
TAG: WARED_DATE Key: WARED_DATE				
TAG: WARED_YEAR Key: STR (WARED_NUM>6)+WARED_YEAR				
TAG: BOOK_NUM Key: BOOK_NUM+STR(SOURC_CODE,5)+SUBSTR(DTOS(BOOK_DATE)1,4)				
TAG:1MP_DATE Key: STR (BOOK_IMP)+DTOS(WARED_DATE)+ STR (BRCH_CODE)				
TAG:IMP_BRCH Key: STR(BOOK_IMP)+STR(BRCH_CODE)+DTOS (WARED_DATE)				

Form Nr. (5)
File Fields

SYSTEM NAME	General Chief Bureau	Description	Directorate File (Codes
FILE NAME	DEPT.DBF	Notes	

No.	Field Name	Data Type	Length	Description
1-	**No**	**Figures**	**3**	**Directorate Code**
2-	**Name**	**Letters**	**40**	**Directorate Name**
3-				
4-				
5-				
6-				
7-				
8-				
9-				
10-				
11-				
12-				
13-				
14-				
15-				
16-				
17-				
18-				
19-				
20-				
21-				
22-				
23-				
Indices:				
TAG:NO Key: NO ------Unique Index				
TAG: NAME Key: NAME				

Form Nr. (5)
File Fields

SYSTEM NAME	General Chief Bureau	Description	File Coding
FILE NAME	FILE_WOR.DBF	Notes	

No.	Field Name	Data Type	Length	Description
1-	**WORD**	**Letters**	**6**	**Part of a word**
2-	**WORD_Place**	**Letters**	**35**	**Location in Original File (INDEX)**
3-				
4-				
5-				
6-				
7-				
8-				
9-				
10-				
11-				
12-				
13-				
14-				
15-				
16-				
17-				
18-				
19-				
20-				
21-				
22-				
23-				
Indices:				
TAG:WORD Key: WORD ------Unique Index				
TAG: WORD_PLACE Key: WORD_PLACE				

Form Nr. (5)
File Fields

SYSTEM NAME	General Chief Bureau	Description	File Codes
FILE NAME	INDEX.DBF	Notes	

No.	Field Name	Data Type	Length	Description
1-	**CODE**	**Letters**	**5**	**Code (Total file Code)**
2-	**NAME**	**Letters**	**45**	**Name or description of File**
3-	**CODE1**	**Figures**	**3**	**First part of total file code**
4-	**CODE2**	**Figures**	**3**	**Second part of total file code**
5-	**CODE3**	**Figures**	**3**	**Third part of Total file code**
6-	**CODE4**	**Figures**	**3**	**Fourth part of total file code**
7-	**CODE5**	**Figures**	**3**	**Fifth part of total file code**
8-	**SER**	**figures**	**1**	**Serial in the same type of file code**
9-				
10-				
11-				
12-				
13-				
14-				
15-				
16-				
17-				
18-				
19-				
20-				
21-				
22-				
23-				
Indices:				
TAG:CODE Key: CODE				

Form Nr. (5)
File Fields

SYSTEM NAME	General Chief Bureau	Description	Directorate File (Codes
FILE NAME	SADER.DBF	Notes	

No.	Field Name	Data Type	Length	Description
1-	**SADER_NUM**	**Figures**	**6**	
2-	**SADER_DATE**	**Date**	**8**	
3-	**SADER_YEAR**	**Letters**	**4**	
4-	**WARED_NUM**	**Figures**	**5**	
5-	**WARED_YEAR**	**Letters**	**2**	
6-	**DEST_CODE**	**Figures**	**5**	
7-	**BRCH_CODE**	**Figures**	**3**	
8-	**FILE**	**Letters**	**15**	
9-	**REMARKS**	**Letters**	**140**	
10-	**USER_ID**	**Letters**	**10**	
11-	**ENTRY_DATE**	**date**	**8**	
12-				
13-				
14-				
15-				
16-				
17-				
18-				
19-				
20-				
21-				
Indices:				
TAG:SADER_NUM Key: STR(SADER_NUM.6)+SUBSTR (DTOS(SADER_DATE),1,4)				
TAG: BRCH_CODE Key: BRCH_CODE				
TAG:SADER_DATE Key: SADER_DATE				
TAF: DEST Key: DEST_CODE				
TAG:SADER_YEAR Key:STR(SADER_NUM.6)+SADER_YEAR				
TAG:DEST4 Key:STR (DEST_CODE.,5) +SUSTR (DTOS (SADER_DATE),1.4)				

Form Nr. (5)
File Fields

SYSTEM NAME	General Chief Bureau	Description	File of last Outgoing Nr. (Outgoing Serial)
FILE NAME	SAD_SER.DBF	Notes	

No.	Field Name	Data Type	Length	Description
1-	**SERIAL_NUM**	**Figures**	**6**	**Serial Nr. of Outgoing (Last Outgoing Nr.)**
2-				
3-				
4-				
5-				
6-				
7-				
8-				
9-				
10-				
11-				
12-				
13-				
14-				
15-				
16-				
17-				
18-				
19-				
20-				
21-				
22-				
23-				
Indices:				

Form Nr. (5)
File Fields

SYSTEM NAME	General Chief Bureau	Description	File Codes
FILE NAME	SOURCE.DBF	Notes	

No.	Field Name	Data Type	Length	Description
1-	**No.**	**Figures**	**5**	
2-	**SNAME**	**Letters**	**40**	
3-	**ADDRESS**	**Letters**	**50**	
4-	**TEL_NUM**	**Figures**	**8**	
5-	**TEL2**	**Figures**	**8**	
6-	**PPOX**	**Letters**	**6**	
7-				
8-				
9-				
10-				
11-				
12-				
13-				
14-				
15-				
16-				
17-				
18-				
19-				
20-				
21-				
22-				
23-				
Indices:				
TAG:No. Key: No				
TAG:SNAME Key:SNAME				

Form Nr. (5)
File Fields

SYSTEM NAME	General Chief Bureau	Description	File of storing the last incoming serial number
FILE NAME	WARED.DBF	Notes	

No.	Field Name	Data Type	Length	Description
1-	**SERIAL_NUM**	**Figures**	**6**	**Last incoming serial number**
2-				
3-				
4-				
5-				
6-				
7-				
8-				
9-				
10-				
11-				
12-				
13-				
14-				
15-				
16-				
17-				
18-				
19-				
20-				
21-				
22-				
23-				
24-				
25-				
26-				
27-				
28-				
29-				

Form Nr. (5)
File Fields

SYSTEM NAME	General Chief Bureau	Description	File of Parties Coding
FILE NAME	WORD_RED.DBF	Notes	

No.	Field Name	Data Type	Length	Description
1-	**WORD**	**Letters**	**20**	**Part of word in name of the party in the Parties' File**
2-	**WORD_PLACE**	**Figures**	**5**	**Location of this part in the Parties' File**
3-				
4-				
5-				
6-				
7-				
8-				
9-				
10-				
11-				
12-				
13-				
14-				
15-				
16-				
17-				
18-				
19-				
20-				
21-				
22-				
23-				
Indices:				
TAG:WORD. Key: WORD				
TAG:WORD_PLACE Key:WORD_PLACE				

Form Nr. (5)
File Fields

SYSTEM NAME	General Chief Bureau	Description	File including parts of words in the parties' file
FILE NAME	WORDS.DBF	Notes	

No.	Field Name	Data Type	Length	Description
1-	**WORD**	**Letters**	**20**	**The word is divided from the code of the party in the Parties' File**
2-				
3-				
4-				
5-				
6-				
7-				
8-				
9-				
10-				
11-				
12-				
13-				
14-				
15-				
16-				
17-				
18-				
19-				
20-				
21-				
22-				
23-				
Indices:				
TAG:WORD.		**Key: WORD**		

Form Nr. (5)
File Fields

SYSTEM NAME	General Chief Bureau	Description	USERS FILE
FILE NAME	USERS.DBF	Notes	

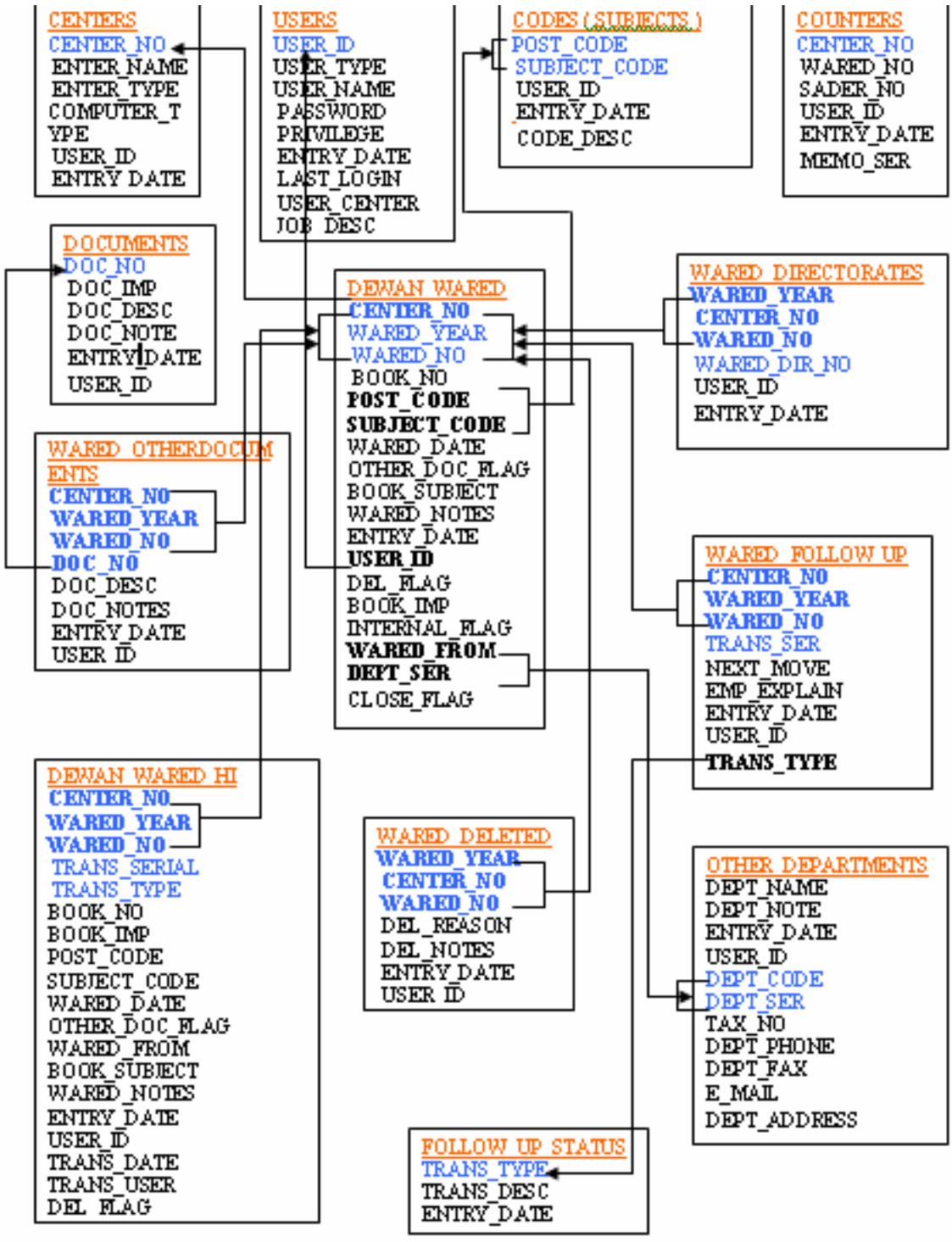
No.	Field Name	Data Type	Length	Description
1-	**USER_NAME**	**Letters**	**10**	**Name of User**
2-	**PASSWORD**	**Letters**	**10**	**Password**
3-	**CENT_NUM**	**Figures**	**3**	**Code of Center**
4-	**PRIV**	**Figures**	**1**	**Powers: 1- Regular User** **2- Chief**
5-				
6-				
7-				
8-				
9-				
10-				
11-				
12-				
13-				
14-				
15-				
16-				
17-				
18-				
19-				
20-				
21-				
22-				
23-				
Indices:				
TAG:USER_NAME Key: USER_NAME				

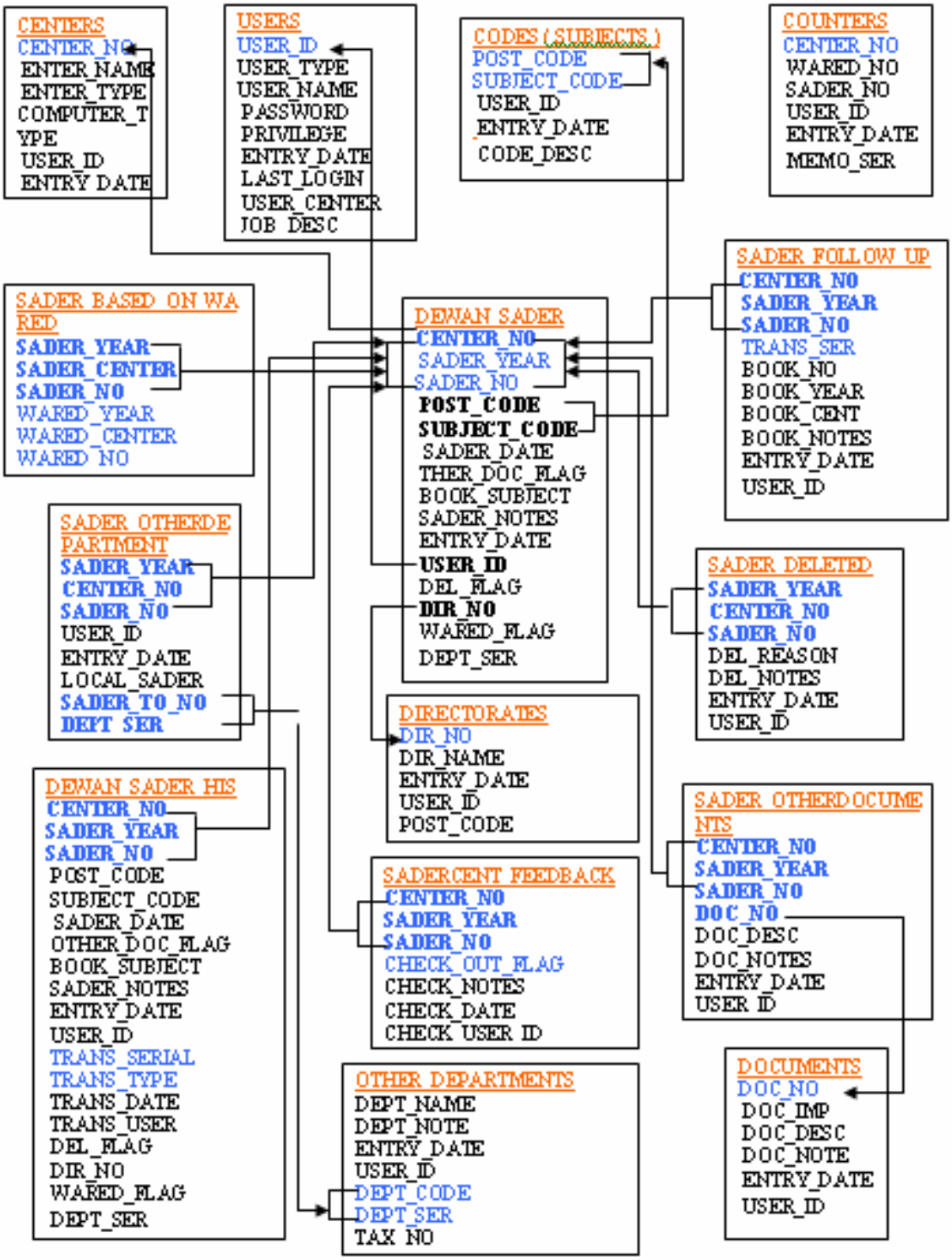
Form Nr. (5)
File Fields

SYSTEM NAME	General Chief Bureau	Description	CENTERS' FILE
FILE NAME	CENTER.DBF	Notes	

No.	Field Name	Data Type	Length	Description
1-	**CENT_NUM**	**Figures**	**3**	**Center's Code**
2-	**CENT_NUM**	**Letters**	**30**	**Center's name**
3-	**CENT_NUM**	**Letters**	**30**	**Name of Center's Director**
4-				
5-				
6-				
7-				
8-				
9-				
10-				
11-				
12-				
13-				
14-				
15-				
16-				
17-				
18-				
19-				
20-				
21-				
22-				
23-				
Indices:				
TAG:CENT_NUM Key: STR(CENT_NUM3.0)				
TAG:CENT_NAME Key:CENT_NAME				

Annex G: Dewan Tables and Data Elements




CENTERS
CENTER_NO
ENTER_NAME
ENTER_TYPE
COMPUTER_TYPE
USER_ID
ENTRY_DATE
USERS
USER_ID
USER_TYPE
USER_NAME
PASSWORD
PRIVILEGE
ENTRY_DATE
LAST_LOGIN
USER_CENTER
JOB_DESC
CODES(SUBJECTS)
POST_CODE
SUBJECT_CODE
USER_ID
ENTRY_DATE
CODE_DESC
COUNTERS
CENTER_NO
WARED_NO
SADER_NO
USER_ID
ENTRY_DATE
MEMO_SER
SADER_FOLLOW_UP
CENTER_NO
SADER_YEAR
SADER_NO
TRANS_SER
BOOK_NO
BOOK_YEAR
BOOK_CENT
BOOK_NOTES
ENTRY_DATE
USER_ID
SADER_BASED_ON_WARED
SADER_YEAR
SADER_CENTER
SADER_NO
WARED_YEAR
WARED_CENTER
WARED_NO
DEWAN_SADER
CENTER_NO
SADER_YEAR
SADER_NO
POST_CODE
SUBJECT_CODE
SADER_DATE
THER_DOC_FLAG
BOOK_SUBJECT
SADER_NOTES
ENTRY_DATE
USER_ID
DEL_FLAG
DIR_NO
WARED_FLAG
DEPT_SER
SADER_OTHERDEPARTMENT
SADER_YEAR
CENTER_NO
SADER_NO
USER_ID
ENTRY_DATE
LOCAL_SADER
SADER_TO_NO
DEPT_SER
SADER_DELETED
SADER_YEAR
CENTER_NO
SADER_NO
DEL_REASON
DEL_NOTES
ENTRY_DATE
USER_ID
DIRECTORATES
DIR_NO
DIR_NAME
ENTRY_DATE
USER_ID
POST_CODE
DEWAN_SADER_HIS
CENTER_NO
SADER_YEAR
SADER_NO
POST_CODE
SUBJECT_CODE
SADER_DATE
OTHER_DOC_FLAG
BOOK_SUBJECT
SADER_NOTES
ENTRY_DATE
USER_ID
TRANS_SERIAL
TRANS_TYPE
TRANS_DATE
TRANS_USER
DEL_FLAG
DIR_NO
WARED_FLAG
DEPT_SER
SADERCENT_FEEDBACK
CENTER_NO
SADER_YEAR
SADER_NO
CHECK_OUT_FLAG
CHECK_NOTES
CHECK_DATE
CHECK_USER_ID
SADER_OTHERDOCUMENTS
CENTER_NO
SADER_YEAR
SADER_NO
DOC_NO
DOC_DESC
DOC_NOTES
ENTRY_DATE
USER_ID
OTHER_DEPARTMENTS
DEPT_NAME
DEPT_NOTE
ENTRY_DATE
USER_ID
DEPT_CODE
DEPT_SER
TAX_NO
DOCUMENTS
DOC_NO
DOC_IMP
DOC_DESC
DOC_NOTE
ENTRY_DATE
USER_ID

Annex H: High Level Business Requirements for an IDMS – Jordan National Customs Compliance

Description of Element	Complies – Fully (F), Partially (P), No compliance (N)			Comments
	F	P	N	
Record Authenticity				
The record keeping system must be capable of demonstrating that a record is authentic; that is, the system must prove that the content is what it appears to be, who created it, and when it was created.		✓		Underlying Oracle database can be changed at any time by systems administrator
The record keeping system must record the identity of the user creating the record and the time it was created.	✓			
This information must not be forgeable or capable of being altered by either users or system administrators.			✓	All changes are registered in a history file but system administrator and Director IT can change records in both system and in the history files.
The system must have the capability to generate Record and Folder identifiers that are unique to Jordan National Customs.	✓			Unique serial number is generated for each record by the Dewan system, either in the central office or in each Customs house
Record Integrity				
The record keeping system must be capable of proving that a record has integrity; that is, that any alterations to the record are authorized and documented.	✓			
Records must be protected against undocumented modification by normal users, records managers, and system administrators.		✓		Records can be changed by a systems administrator and Director IT; no other user has privileged access. Changes are recorded manually
It must not be possible, outside the normal disposal function, for records to be destroyed or deleted except by authorized users.	✓			
All destruction or deletion of records must be recorded.		✓		Destruction and deletions are recorded in the Oracle history files. Systems administrator or Director IT can modify records of deletion.
The system must be capable of verifying whether a record has retained its integrity.	✓			Oracle history tables maintain record integrity.
The system must be capable of auditing the integrity of a random sample of records.	✓			A form can be generated to query the history tables, including samples of serial numbers. It is possible to do this but it is not actually done in practice.
Any failure to verify a record must be logged and immediately brought to the attention of the system administrator			✓	This was supposed to be captured when the system was designed but was never actually applied. Ratio of mistakes to records is high – would be difficult to capture all of these on the system.
The system must be capable of recording all events that affect records, it must not be possible to modify the audit log and all accesses to Records must be capable of being logged.		✓		System administrator or Director IT can modify audit log
The system must not lose records			✓	System administrator or Director IT can delete records.

Description of Element	Complies – Fully (F), Partially (P), No compliance (N)			Comments
	F	P	N	
Any record that is analogous to a paper document (e.g., report, memo, email, drawing) must be captured in the standard document format.			✓	Not done, but would be technically feasible if substantial redesign of Dewan was undertaken.
Record Conversion				
Record content must be converted to one of the standard long-term preservation formats			✓	There is no archiving system.
Metadata Capture				
A record keeping system must capture or generate the mandatory metadata specified		✓		Every record in Dewan should have title (searchable), directorate, destination, source, user, date, time and subject code added. Only metadata is kept on Dewan.
The record capture system must be able to limit the metadata entered into a metadata element to those values specified	✓			
The record capture system should be able to control the metadata entered by users during record creation.	✓			
Modifying Information				
It must be possible to modify the information associated with electronic records or folders without compromising the integrity of the record or folder.	✓			
Types of modifications that may supported include: • modifying the metadata associated with the record or folder • adding or deleting the documents associated with a record • modifying the metadata associated with a document • adding or deleting encoding associated with a document • modifying the metadata associated with a encoding.			✓	Metadata can be modified only
Documenting History				
The system must be capable of recording all events that affect records.	✓			
All accesses to records or folders must be capable of being logged.		✓		Access by systems administrator and Director IT is not logged, or log data can be eliminated.
It must not be possible for any users, records managers, or system administrators to modify the audit log without a record being made of the modification.		✓		Systems administrator and Director IT can modify audit log.
Reliability				
The system must not lose records or folders once they have been registered with the record keeping system.	✓			Maintenance section in IT Directorate is responsible for rolling backup and data integrity.

Description of Element	Complies – Fully (F), Partially (P), No compliance (N)			Comments
	F	P	N	
Records or folders must not be lost due to catastrophic failure of the system, media failure, or physical disaster (e.g. fire).		✓		Data is backed up on a daily basis – at most only 8 hours of data is likely to be lost in the event of catastrophic failure.
The accuracy of any copy must be verified by ensuring that all records or folders which have not been marked for destruction have been copied, and that the contents of the records or folders have been copied accurately.	✓			
Media Refreshing				
The system must have the ability to refresh the media on which records and folders are stored.	✓			
The accuracy of the refresh must be verified by ensuring that all records and folders (except those which have been disposed of) have been copied, and that the contents of the records and folders have been copied accurately.	✓			Controlled by Oracle functionality.
If records and folders are stored on removable media (e.g. CDs), the system must have the capability to manage the media, including generating media identifiers that are unique within the system.		✓		Functionally possible but it needs procedures to be put in place to prepare the Oracle database for refresh and to import records from a dump file into production.
Record export				
Records and folders must be capable of being exported from a record keeping system.	✓			Export possible via SQL or ODBC
Custody of records must be capable of being transferred from the system where they were created to other systems and off-line.	✓			Everything associated with the record can be exported. A schedule for export and import can be done.
Imports or exporting of records from a system must be recorded.		✓		Not possible – in Oracle it is a log file that records exports and imports.
An export of records or folders from a record keeping system is not complete until the receiving system has acknowledged that the record or folder was exported without error and the receiving system has accepted responsibility for the record or folder.	✓			Registered on Oracle file itself.
Importing or exporting of records and folders from a record keeping system must be documented.		✓		Name of person who does the import/export is not recorded.
The system must be capable of exporting the records and folders: in the standardized format containing at least the mandatory metadata given	✓			Included in the dump file is all the records, all the metadata and all corresponding data.

Description of Element	Complies – Fully (F), Partially (P), No compliance (N)			Comments
	F	P	N	
It is optional, but highly desirable, that the record keeping system be capable of importing records and folders from compliant systems.	✓			
Documenting history				
The system must be capable of recording all events that affect records and folders.	✓			
Events that must be capable of being recorded include: creation (registration) of records import of records into the system any modifications that affect the content of records (for example addition, deletion or modification of content) any modifications that affect the metadata of a record (for example changing the description of a record) changes in the classification of a folder or refiling of a record sentencing and disposal/destruction of folders or records, export (transfer) of records from the system.		✓		It is possible, although some of these things are done manually only.
Events that are optional but should be capable of being recorded include: any preservation actions on a record, such as migration, conversion to another format, or refreshing any changes in policies that affect records or folders (e.g. changes in disposal or access control policies) any decisions taken about records or folders, even if they do not result in a change (e.g. the result of a disposal review even if the decision is to keep the records or folders).		✓		Not all of these can be captured.
An audit trail must be maintained even if the records are protected by a digital signature, as the signature only protects the integrity of the record, while the audit log provides evidence if the record is destroyed.	✓			
In systems where the records are not protected by a digital signature the audit log also provides the evidence of integrity.			✓	Systems administrator and Director IT can access without records on audit log and can modify audit log.
The audit trail may be destroyed once the record has been disposed of (by destruction or transfer), but the fate of the record must be documented. This documentation will include the officer authorizing the disposal, when the record was disposed of, and details of its fate (e.g. where the record was transferred to). This may be done at a summary level; for example, the fate of all the records in a folder may be documented in the folder history.			✓	This is not possible in Dewan – only in ASYCUDA is this done.

Description of Element	Complies – Fully (F), Partially (P), No compliance (N)			Comments
	F	P	N	
When a record keeping system is decommissioned, the fate of all the records and folders held by it may be documented in a report held as a record in another record keeping system.			✓	There is no capability in Dewan for this – querying the old Dewan (in FoxPro) is possible, although this is very limited. Format differences make this very difficult.
All accesses to records or folders must be capable of being logged.			✓	No history of accesses is kept.
The log will include what records or folders were retrieved, the identity of the user retrieving the records or folders, and the time of retrieval. This allows unauthorized access to records or folders to be detected.			✓	See above.
It must not be possible for any users, records managers, or system administrators to modify the audit log without a record being made of the modification.			✓	This would be technically possible but is not being done now.
If an audit log can be modified without a record being kept of this modification, no trust could be placed in the audit trail. Modifications include complete or partial deletion of the audit log.			✓	As above.
Record Linking				
When records are created, the records capture system must allow users to easily link the newly created records with other records in the Archive.	✓			Can be done via native Oracle functionality.
Automated Record Creation				
An agency may require the automatic creation of records without any user intervention. Automatic reaction can form part of a workflow system (e.g., a document is converted to a record at the approval step of a particular workflow process) or part of a batch system (e.g., capturing transactional records as part of the 'end of the month' processing of a financial system.	✓			Automation can be scripted using history tables related to trigger events. This is already being done with the Guarantee System – automated record generation is being done between Dewan and the Guarantee System.
Searching				
The system must support both searching and browsing for folders and records	✓			Native Oracle functionality
The system must support hyper-linking of records		✓		This can be done using Oracle functionality – underlying relational database. But not via a browser.
Verification				

Description of Element	Complies – Fully (F), Partially (P), No compliance (N)			Comments
	F	P	N	
The system must be capable of verifying the digital signature associated with a record.	✓			
Rendering				
The system must be capable of displaying the record as it appeared to the original creator of the record.		✓		This is mostly adhered to.
Disposal				
It must be possible to appraise (that is, evaluate and determine the records status), and where authorized, transfer or destroy records in a controlled manner (that is, to dispose of records).	✓			
The system must have the ability to purge destroyed records from the system.	✓			Can be done by system administrator
The system must allow the inclusion of records disposal authorities.			✓	This is technically possible but has never been applied (for example, ASYCUDA includes rules to burn all declaration after 5 years – there is no equivalent set of rules for Dewan).

Annex I: Generic Statement of Requirements for an IDMS

No.	Description	Mandatory (M) Desirable (D) Highly Desirable (HD)	Section Weighting (percent)
1	**Input and Processing**		
1.1	**Create**		
1.1.1	Does your product support MS Office ODMA compliant applications?		
1.1.2	Is the DMS ODMA compliant?		
1.1.3	Is the DMS ODMA version 1 compliant?		
1.1.4	Is the DMS ODMA version 2 compliant?		
1.1.5	Routines are provided for batch import with full validation of metadata and full logging of the import process?		
1.1.6	Support of application integration via other mechanisms		
1.1.7	Create an abstract or summary of the document		
	Section Score		
	Weighted Section Score		
1.2	**Validation of data**		
1.2.1	Standard & customs attributes can be mandatory		
1.2.2	Attributes can be set to contain only unique values		
1.2.3	Maintenance of controlled lists via standard GUI available for authorized users.		
1.2.4	Default values may be set for standard and custom attributes		
1.2.5	Automatically fill attributes based on users sign on		
1.2.6	Controlled lists of terms for attributes can be applied at both input and retrieval		
1.2.7	Unique number generated for every document entered into the system and accessible for validation or other routines.		
1.2.8	Attribute dependencies – Values available for attribute B depend on value of attribute A.		
1.2.9	Individual fields may have (multi value attributes) repeating attribute values.		
1.9.10	Support the sue of a thesaurus against content		
1.9.11	Thesaurus may contain values defined by user		
1.9.12	Attribute value may be concatenation of previously entered attribute values		
1.9.13	Document may inherit meta data from container		
1.9.14	Meta data can be automatically inherited from location in the hierarchy or logical structure		
1.9.15	An attribute may be set to be written to once and be read only thereafter		
1.9.16	Support the use of a thesaurus against meta data		
1.9.17	Other RDBMS's lookup tables can be accessed by the product offering		
1.9.18	Spell checking for textual attributes		
	Section Score		
	Weighted Section Score		
1.3	**Version Control**		
1.3.1	Version control can be configured		
1.3.2	Modification of a previous version always begins a new version chain		
1.3.3	Unlimited number of versions supported		
1.3.4	User can be forced to create a new version on check in		
1.3.5	User with appropriate authority can overwrite previous version		
1.3.6	Meta data can be versioned		
1.3.7	Checked out version can be locked		
1.3.8	User selectable major or minor version numbering		
1.3.9	Can selected versions can be purged		

No.	Description	Mandatory (M) Desirable (D) Highly Desirable (HD)	Section Weighting (percent)
1.3.10	New document always begins a new version chain		
	Section Score		
	Weighted Section Score		
1.4	**Logical Structure**		
1.4.1	The IDMS must provide a logical structure for the storage of documents		
1.4.2	Documents can be linked to more than one folder/container		
1.4.3	Can all users view objects using the logical structure via all client interfaces		
1.4.4	Documents can be stored in more than one folder/container		
	Section Score		
	Weighted Section Score		
1.5	**Compound Document Metaphor**		
1.5.1	Restrict deletion of a document while it is part of any form of compound document		
1.5.2	Create a container which may have multiple document components		
1.5.3	Allow container and linked components to be versioned as a single entity.		
1.5.4	Maintain a single unique document entity regardless of the number of times it is a component or is the initiator or target of a link		
1.5.5	Recognize and manage the referential integrity of compound documents created by using OLE links		
1.5.6	Create bi-directional links between documents in the DMS and manage the referential integrity requirement		
1.5.7	Allow links to begin and end within specific parts of the document (hypertext links).		
1.5.8	Allow users to observe all of a document's links both initiated and received.		
	Section Score		
	Weighted Section Score		
1.6	**Integration with Authoring Applications**		
1.6.1	Allow repository meta data to be attached to documents		
1.6.2	Send documents from repository as attachments		
1.6.3	Send documents from repository as referees		
1.6.4	Save messages with attachments as compound documents		
1.6.5	Extract meta data from document using registration		
1.6.6	Save Exchange/Outlook messages with attachments as linked documents		
1.6.7	Save Exchange/Outlook messages with attachments as separate documents		
	Section Score		
	Weighted Section Score		
2	**Retrieval and Display**		
2.1	**Retrieval of both Meta Data and Content**		
2.1.1	Search across all meta data and indexed content in a repository		
2.1.2	Search all objects e.g., documents, folders, containers		
2.1.3	Allow searches across multiple repositories and return a consolidated result		
2.1.4	Range searching		
2.1.5	Return results in sets		
2.1.6	Allow a saved search to be made available to defined sets of users		
2.1.7	Combine meta data and content in a single search		
2.1.8	Allow nested searches		
2.1.9	Allow both stem and root searching		

No.	Description	Mandatory (M) Desirable (D) Highly Desirable (HD)	Section Weighting (percent)
2.1.10	View indexed terms for an attribute and see the number of hits for each term		
2.1.11	Allow use of wild cards with search terms		
2.1.12	Allow searches to be saved and reused		
2.1.13	Search from an index		
2.1.14	Toggle case sensitivity for searches		
	Section Score		
	Weighted Section Score		
2.2	**Meta data**		
2.2.1	Search by phrase in textual attributes		
2.2.2	Use Boolean logic in text attribute searches		
2.2.3	Search by word in textual attributes		
2.2.4	Allow searches on null values		
2.2.5	Allow the use of comparison operators		
2.2.6	Search for a number of values stored in repeating fields		
2.2.7	Textual meta data can be full text indexed		
2.2.8	Query via attributes in addition to cross repository searches		
2.2.9	Support custom thesaurus control of search items		
	Section Score		
	Weighted Section Score		
2.3	**Content**		
2.3.1	Search on individual words		
2.3.2	Search on phrases		
2.3.3	Use complex Boolean logic (AND, OR, NOT)		
2.3.4	In proximity searches allow the user to define the order		
2.3.5	Use Near in searches and allow the user to define the distance		
2.3.6	Highlight terms in the result set		
2.3.7	Search for terms in the same sentence		
2.3.8	Search for terms in the same paragraph		
2.3.9	Fuzzy logic searching to search for words like		
2.3.10	Scroll from hit to hit in the result set		
	Section Score		
	Weighted Section Score		
2.4	**Display**		
2.4.1	User can check out a retrieved document		
2.4.2	View a document that has been checked out and locked by another user		
2.4.3	Checking out a document locks it against other attempts to edit it.		
2.4.4	User informed of checked out owner		
2.4.5	Checkout can be cancelled by user		
2.4.6	Default to current version on display		
2.4.7	Able to display a list of all versions and view those versions		
2.4.8	Within defined access controls a user may select any version and view it or check it out.		
2.4.9	Print attributes		
2.4.10	When multiple documents are retrieved display appropriate attribute details for a selected document		
2.4.11	Checkout can be cancelled by the Systems Administrator		
2.4.12	Allow editing of checked out document on undocked laptop		
2.4.13	Show relevance ranking after content search		
2.4.14	Sort by all applicable attributes and combinations of the same		
2.4.15	Print/export profile attribute data from search		
	Section Score		
	Weighted Section Score		
2.5	**Renditions**		

No.	Description	Mandatory (M) Desirable (D) Highly Desirable (HD)	Section Weighting (percent)
2.5.1	Maintain multiple renditions of a document		
2.5.2	Renditions must be linked to a version		
2.5.3	Able to list and view all renditions		
	Section Score		
	Weighted Section Score		
2.6	**Client/server Functionality**		
2.6.1	Tabbed or other multiple page profile metaphor		
2.6.2	Attribute details can be modified with the appropriate security level		
2.6.3	Context sensitive help available		
2.6.4	Customs help files can be integrated with user designed profiles		
2.6.5	System may contain different attribute groupings to reflect different document types and multiple profiles		
2.6.6	User can control configuration of attributes displayed and sort order of result sets		
2.6.7	Drag and drop capability for importing and exporting documents		
2.6.8	Support construction of a logical structure for display of documents, e.g., folder metaphor		
2.6.9	Help system can contain customs help file		
2.6.10	Number of attributes for a document type not limited by screen space		
	Section Score		
	Weighted Section Score		
2.7	**Web Interface Metaphor**		
2.7.1	Tabbed or other multiple page profile metaphor		
2.7.2	Attribute details can be modified with the appropriate security level		
2.7.3	Context sensitive help available		
2.7.4	Custom help files can be integrated with user designed profiles		
2.7.5	System may contain different attribute groupings to reflect different document types. System may contain multiple profiles		
2.7.6	User can control configuration of attributes displayed and sort order of results set		
2.7.7	Drag and drop capabilities for importing and exporting documents		
2.7.8	Support construction of a logical structure for display of documents, e.g., folder metaphor		
2.7.9	Help system can contain custom help files		
2.7.10	Number of attributes for a document type not limited by screen space		
2.7.11	Screen can be automatically configured for screen size and resolution		
	Section Score		
	Weighted Section Score		
3	**Architecture and Storage**		
3.1	**Audit Trail**		
3.1.1	Record all actions performed on a document and by who or what process and timestamp (e.g., print, check in, check out, copy, archive or delete)		
3.1.2	Audit trails are immutable		
3.1.3	Audit trail data may be extracted for management purposes		
	Section Score		
	Weighted Section Score		
3.2	**Full Text Indexing**		
3.2.1	Indexes can be restored or resynchronized within the IDMS		

No.	Description	Mandatory (M) Desirable (D) Highly Desirable (HD)	Section Weighting (percent)
3.2.2	Constant or periodic update at System Administrator discretion		
3.2.3	Full text indexes can be moved		
3.2.4	Specific components of the logical structure be reindexed		
3.2.5	The indexing software indexes other repositories		
3.2.6	System management facilitates full text indexes		
3.2.7	Full text index database size is less than 30% of text content		
3.2.8	Multiple text indexes can be administered from a single location		
	Section Score		
	Weighted Section Score		
3.3	**Physical Documents**		
3.3.1	System allows physical documents to be accorded the same meta data and profiles as electronic documents		
	Section Score		
	Weighted Section Score		
3.4	**Security Model**		
3.4.1	Set default access according to defined criteria		
3.4.2	Enable security access for users and groups to view meta data only, view meta data and content, modify meta data only, modify meta data and content, delete		
3.4.3	Security rights can be inherited based on belong to a group		
3.4.4	Security rights can be set at the folder level		
3.4.5	Security rights can be set at the document level		
3.4.6	Allow user groups within groups		
3.4.7	Access to content files and meta data via the IDMS only		
3.4.8	User will be forced to change their passwords on a regular basis		
3.4.9	Searching will not return any documents residing in a folder to which the user does not have access		
3.4.10	User authentication via standard system login		
3.4.11	System can set access/rights according to defined parameters		
3.4.12	The user interface of the security model for the general user is intuitive and easy to apply		
	Section Score		
	Weighted Section Score		
3.5	**Web Integration**		
3.5.1	Support all IDMS function access via web browser		
3.5.2	Search repository using meta data and content via web interface		
3.5.3	Check in/check out via web interface		
3.5.4	Participate in workflow via web interface		
3.5.5	Publish documents from repository to website		
3.5.6	Product must provide full functionality within a browser interface for multiple platforms		
3.5.7	Manage external website links into the IDMS		
3.5.8	Manage the website links to objects within the IDMS		
3.5.9	Manage website documents within the IDMS repository		
3.5.10	Product must provide full functionality using browser interface		
3.5.11	Convert meta data and content to HTML		
3.5.12	Full authentication and access control when the IDMS is accessed via the web		
	Section Score		
	Weighted Section Score		
3.6	**Client**		
3.6.1	Product must operate on Windows NT, Windows 2000, Unix workstations		
	Section Score		
	Weighed Section Score		
3.7	**Servers**		

No.	Description	Mandatory (M) Desirable (D) Highly Desirable (HD)	Section Weighting (percent)
3.7.1	Server software must run on Windows NT 4.0 or greater, Unix including <hardware included here>, SUN, etc.		
	Section Score		
	Weighted Section Score		
3.8	**Communication**		
3.8.1	System must work over TCP/IP network		
3.8.2	The OOMS must facilitate a user logging on to OOMS via a remote network access facility		
	Section Score		
	Weighted Section Score		
3.9	**Databases**		
3.9.1	Product must support relational databases, e.g., Oracle, SQL and DB2		
	Section Score		
	Weighted Section Score		
3.10	**Mobile Computing**		
3.10.1	Provides check in/check out facility with secure local storage for mobile users with notification to other users of check out		
3.10.2	Subset of IDMS technical functions available on checked out documents		
3.10.3	Security profile applied to documents copied to the local disk		
	Section Score		
	Weighted Section Score		
4	**Systems Administration**		
4.1	**General**		
4.1.1	Administer system from an integrated graphic user interface		
4.1.2	Systems Administrator can add and delete users and modify user profiles		
4.1.3	Control operation of full text indexing engine		
4.1.4	Create new hierarchical views of the data		
4.4.5	Create new document types		
4.4.6	Create new attributes		
4.4.7	Build and drop indexes for meta data and content		
4.4.8	Administer multiple repositories from single login		
4.4.9	Administer distributed system from a central point		
4.4.10	Move repositories transparently to the user		
4.4.11	Alert on systems functions		
4.4.12	New document types create a new relational table in the underlying RDBMS		
4.4.13	Monitor performance and tune system		
	Section Score		
	Weighted Section Score		
4.2	**Backup and Recovery**		
4.2.1	Synchronize recovery of meta data, and document and index content backup		
4.2.2	Integrated recovery tools		
4.2.3	Recover selected documents and meta data from backup in a timely manner		
	Section Score		
	Weighted Section Score		
4.3	**Archive and Restore**		
4.3.1	Ability to apply retention details based on individual or group basis		
4.3.2	Ability to support unattended backup processes		
4.3.3	Ability to create automated archiving processes according to defined criteria, e.g., dates, or no. of versions		
4.3.4	Ability to apply retention details to individual documents		

No.	Description	Mandatory (M) Desirable (D) Highly Desirable (HD)	Section Weighting (percent)
4.3.5	Ability to apply retention details to individual folders and subfolders		
4.3.6	Selective restore at a document level		
4.3.7	Selective restore at a folder level		
4.3.8	Ability for the system to be fully restored		
4.3.9	Attributes profiles of achieved document remain searchable and users are notified if they request archived documents		
4.3.10	System Administrator is automatically notified of a user request for an archived document		
4.3.11	Restoration of an archived document after a user request can be automated		
4.3.12	Select documents for archiving with full query functionality		
4.3.13	Ability to apply retention details based on document type		
	Sections Score		
	Weighted Section Score		
5	**Scanning/Imaging**		
5.1	Efficient bulk entry of scanned multi-page documents		
5.2	Support industry format standards, TIFF, JPEG, MPEG, etc		
5.3	Recognize, interpret and associated alphanumeric barcode		
5.4	Multi-page scanned document stored and managed as a single entity		
5.5	Updated images can be correctly positioned in multi page file		
5.6	Clean up		
5.7	Deskew		
5.8	Despeckle		
5.9	Support OCR, including for foreign language content		
5.10	Support ICR		
5.11	Raster to vector conversion		
5.12	Support scanner standards, e.g., ISIS, TWAIN		
5.13	Scanner software supports double sided scanning		
5.14	Ability to scan, store and display color images		
	Section Score		
	Weighted Section Score		
6	**Printing**		
6.1	Supports remote printing		
6.2	Print part of a document		
6.3	Printing banners and other dynamic data		
6.4	Print from viewing tool		
6.5	Supports batch printing		
6.6	Automated printing of compound documents		
6.7	Print from preview		
	Section Score		
	Weighted Section Score		
7	**Viewing**		
7.1	Viewing supports multiple document formats		
7.2	Viewer supports viewing of multiple pages of a document		
7.3	Page rotation		
7.4	Straighten/deskew		
7.5	Sharpen and smooth		
7.6	Tile/cascade windows each containing a viewed document		
7.7	Viewer supports A3 sized documents		
7.8	Viewer supports A0 sized documents		
7.9	View supports long and narrow images		
7.10	Copy/paste contents into another document		
7.11	Multiple file types supported by viewer (e.g., CGM, etc)		
7.12	Change margins		

No.	Description	Mandatory (M) Desirable (D) Highly Desirable (HD)	Section Weighting (percent)
7.13	Pan in any direction		
7.14	Zoom in/out first, last and "go to" specific location		
	Section Score		
	Weighted Section Score		
8	**Workflow/Routing**		
8.1	**Workflow Design**		
8.1.1	Individual or multiple documents/containers may be processed		
8.1.2	Support conditional logic applied to process elements (e.g., AND, OR splits and joins)		
8.1.3	Graphical workflow design tool		
8.1.4	Tasks may be assigned to roles rather than individuals		
8.1.5	Supports parallel routing		
8.1.6	User with appropriate rights may modify a workflow in progress		
8.1.7	Save workflows		
8.1.8	Users may create ad hoc workflows and workflow tasks		
8.1.9	A workflow owner can monitor and modify a workflow in progress		
8.1.10	Workflow tasks can be written in standard programming language (e.g., Visual Basic)		
8.1.11	Workflow and IDMS must be tightly integrated to enable IDMS documents to be automatically inserted into workflow		
	Section Score		
	Weighted Section Score		
8.2	**Workflow Monitoring/Reporting**		
8.2.1	System has administration and monitoring tools		
8.2.2	Users can view allocated tasks		
8.2.3	Any user can view the current status of the workflow at any point		
8.2.4	Audit trail of workflow actions		
8.2.5	Workflow administrator can be notified of overdue tasks		
8.2.6	Users will be notified of overdue tasks		
	Section Score		
	Weighted Section Score		
8.3	**Workflow Integration**		
8.3.1	Process elements may be automated and without user interaction		
8.3.2	Time based scheduling		
8.3.3	Workflow product support can be integrated with third party products		
8.3.4	Workflow product supports integration		
	Section Score		
	Weighed Section Score		
8.4	**Notification**		
8.4.1	Users notified of a task via IDMS in tray or email		
8.4.2	Workflow administrator can be notified of overdue tasks		
8.4.3	Users will be notified of overdue tasks		
8.4.4	Notify a specific user when a new folder is created		
8.4.5	Notify a specific user when a new document type is created		
	Section Score		
	Weighted Section Score		
9	**Annotations/Reading**		
9.1	View/display annotations		
9.2	Search annotations		
9.3	Annotations passed with document on check out		
9.4	Annotations not associated with revised document on check in		

No.	Description	Mandatory (M) Desirable (D) Highly Desirable (HD)	Section Weighting (percent)
9.5	Viewing of annotations by multiple concurrent users		
9.6	View author of text annotations, date created, date modified		
9.7	View all annotations by one author		
9.8	Easy location of annotations within document		
9.9	Search annotations via document library		
9.10	Search on type of annotation/content of text		
9.11	Create annotations of different types		
9.12	Delete annotations		
9.13	Delete annotations with security		
9.14	Enable non destructive markup, redefining of any viewable document		
9.15	Annotations associated with a document		
9.16	Annotations associated with a particular version of a document		
9.17	Each annotation managed as separate object in the document		
9.18	Copy annotations		
9.19	Unlimited markup/annotations for a document		
	Section Score		
	Weighed Section Score		
10	**Distributed Operations**		
10.1	Supports central meta data store with distributed content stores with local content indexes		
10.2	Supports distributed meta data and content stores with local indexes		
10.3	Supports distributed locking of records		
10.4	Supports 24X7 operation and therefore must be available at all time even during backup processes		
10.5	Supports the use of LDAP		
10.6	Supports selective replication of meta data and content between locations		
	Section Score		
	Weighted Section Score		
11	**External Interfaces**		
11.1	Supports integration with hierarchical storage management system		
11.2	Supports integration with optical storage devices		
11.3	Supports interface with fax gateway		
11.4	Supports incoming faxes sent to one person for routing		
11.5	Incoming faxes routed automatically depending on number dialed		
11.6	Outgoing faxes supports all MS Office file formats		
11.7	Outgoing faxes supports all image formats		
11.8	Supports bi-directional interface to SAP or other ERMS		
11.9	Supports direct integration with other business-critical applications		
11.10	Supports the management of the hierarchical storage management system		
11.11	Incoming faxes routed on ICR details		
11.12	Outgoing faxes supports all compound documents		
	Section Score		
	Weighted Section Score		
12	**Digital Signatures**		
12.1	Create master digital signatures		
12.2	Support encrypted and unencrypted digital signatures		
12.3	Restricted, secure owner access to signature for document approval		
12.4	Restricted, secure user access to signature for review		
12.5	Deletion of master digital signature restricted to owner		

No.	Description	Mandatory (M) Desirable (D) Highly Desirable (HD)	Section Weighting (percent)
12.6	Deletion of master signature does not remove signatures existing on documents in repository		
12.7	Password authentication		
	Section Score		
	Weighted Section Score		
13	**Publishing/Distribution**		
13.1	Manage distribution lists		
13.2	Manage transmittals		
13.3	Ability to register the locations of all controlled copies of a physical document		
	Section Score		
	Weighed Section Score		
14	**Records Management**		
14.1	Retention and disposal schedule integration		
14.2	Scheduling of records for review, archiving and disposal (this is a separate process from the archive and restore in storage management)		
14.3	Ability to set disposal dates with notification		
14.4	Integration of review and disposal regime with record types so that such routines can be automated		
14.5	Integration of records management activities into the audit trail		
14.6	Notification of records for review with option to reclassify a record		
	Section Score		
	Weighted Sections Score		
15	**Customization**		
15.1	Feature support for Rapid Application Development toolkits.		
15.2	Support object reusability paradigms.		
15.3	Documented and published API toolkit		
15.4	Well integrated API toolkit		
15.5	Well supported API toolkit		
	Section Score		
	Weighted Section Score		
16	**Collaboration**		
16.1	Seamless integration with collaborative tools		
16.2	Seamless integration with standard operating environment		
16.3	Support web enabled collaborative tools		
16.4	Supports a rich API to enable a tight integration with various components of the collaborative toolkit including the IDMS		
16.5	Supports a rich security model to manage groups or project based groups. External third parties may interact with groups or projects		
16.6	Supports standards – LDAP, HTML, XML, etc.		
16.7	Supports the subscription to topics of interest regardless of their source		
16.8	Supports a consistent interface to all of the collaborative tools		
16.9	Supports the use of shared folders		
16.10	Supports the creation of customized interface, e.g., personalized web pages or organizational standards		
16.11	Supports the creation, management and publication of information regarding individual details, skills and significant projects		
16.12	Provides the user defined capability to apply a hierarchy to support the management of any object regardless of source		
16.13	Supports the ability to establish and maintain locators to various information sources, e.g., internet, databases, etc		
16.14	Supports the groups working across multiple time zones		

No.	Description	Mandatory (M) Desirable (D) Highly Desirable (HD)	Section Weighting (percent)
16.15	Provides ongoing global maintenance and support		
16.16	Provides consulting services to assist with the implementation of collaborative systems		
	Section Score		
	Weighted Section Score		
16.1	**Email and Messaging**		
16.1.1	Supports the application of filters		
16.1.2	Supports the application of agents		
16.1.3	Supports the automatic routing of information and documents		
16.1.4	Supports structured communications messages requiring stipulated information		
16.1.5	Supports newsgroups where messages are shown to users when they are explicitly requested for example, “on-demand” service		
16.1.6	Supports mailing lists where messages are distributed among large groups of people and the messages are delivered as soon as they become available		
16.1.7	Supports the ability to conduct and comment on threaded discussions		
	Section Score		
	Weighted Section Score		
16.2	**Group Calendaring and Scheduling**		
16.2.1	Group calendars that support scheduling, project management, and coordination among multiple people or equipment		
16.2.2	Group calendar detects when schedules conflict for people or equipment		
16.2.3	Personal calendars can be protected with security		
16.2.4	Supports group working across multiple time zones, e.g., time date stamps		
	Section Score		
	Weighed Section Score		
16.3	**Electronic Meeting Systems**		
16.3.1	Integration with group scheduling tools		
16.3.2	Supports the application and follow-up of post-meeting actions, e.g., action items and commitments		
16.3.3	Supports desktop conferences, e.g., NetMeeting		
16.3.4	Supports multiple location video group conferences		
16.3.5	Supports the application and capture of voting decisions		
16.3.6	Supports the transfer of control between users		
16.3.7	Provides facilitation tools		
16.3.8	Operates within the security requirement of the organization		
	Section Score		
	Weighted Section Score		
16.4	**Desktop or Real Time Data Conferencing (Synchronous)**		
16.4.1	Documents can be viewed and worked on by different users during the same session		
16.4.2	Supports viewing and working with documents by different users during the same session		
16.4.3	Supports shared whiteboards allowing two or more people to view and draw on a shared drawing surface even when at a distance		
16.4.4	Supports shared whiteboards that indicates each person is drawing or pointing by showing telepointers which are color coded or labeled to identify each person		
16.4.5	Supports the role of a facilitator		
16.4.6	Supports chat systems where multiple users in real time can write messages in a public space, usually in a typewritten text		
16.4.7	Supports the ability for rooms to be identified by name,		

No.	Description	Mandatory (M) Desirable (D) Highly Desirable (HD)	Section Weighting (percent)
	location, number of people, topic of discussion, etc		
16.4.8	Supports the use of chat rooms for chat groups		
16.4.9	Supports more than five users conferencing efficiently		
	Section Score		
	Weighted Section Score		
16.5	**Non Real Time Conferencing (Bulletin Board)**		
16.5.1	Supports messages in public environment to be replied to at user convenience, e.g., newsgroups		
16.5.2	Supports distributed geographical locations		
16.5.3	Supports collaborative writing tools that provide asynchronous support by showing authorship and allowing users to track changes and make annotations to documents		
	Section Score		
	Weighted Section Score		
16.6	**Document Handling**		
16.6.1	Support linking text documents to each other and viewing who has visited a certain page or link		
16.6.2	Support linking text documents to each other and viewing how often a link has been used		
16.6.3	Support linking of text documents from any page so that other viewers can add additional links and can be informed if there are other relevant links that the original author was unaware of at time of publishing		
16.6.4	Supports collaborative writing tools that plan and coordinate the authoring process, such as methods for locking parts of the document or linking separately-authored documents		
16.6.5	Supports collaborative writing tools that provide synchronous support that allows authors to see each other's changes as they make it, and provides additional communication channel to the authors as they work, such as videophones or chat		
16.6.6	Supports compression utilities		
16.6.7	Supports the application of chronological ordering of documents and objects		
	Section Score		
	Weighted Section Score		
	Overall Score		

Annex J: Statement of Requirements for an IDMS for the Jordan Institute of Standards & Metrology

General Overview

Specific business/functional requirements are tabulated in the following sections and the vendor is expected to provide responses to all the questions.

Guidelines for Responding to Requirements

Please respond to all of the following business/functional requirements, indicating the score in the "RATING" column, and description of how that rating is achieved in "Comments" column or if preferred, attach any supporting documentation.

Vendor Response
All the responses should be given a rating, between 1-5; 5 being the maximum.

Hardware Requirements

Scanners: three scanners of the following specifications:

- Complies with TWAIN/ ISIS
- The ability to scan paper sizes from business card to A3
- Scan Speed no less than 25 page per minute.
- Automatic document feeders as standard
- Simplex/ duplex scanning
- Color Scanning capability as well as in black/white or grayscale.
- Image enhancement for poor quality/mixed color documents.
- Complementary technologies across a broad range
- SCSI & USB models

Software Requirements

NO.	REQUIREMENT	RATING	CUSTOMIZATION REQUIRED	COMMENTS
A. Document Capture				
Document Scanning / Capture Software				
S1	Capture Software must allow unlimited scanning per day and not restricted in any way.			
S2	Ability to remove blank pages			
S3	Capture Software should have capability to specify mandatory fields for indexing scanned documents.			

NO.	REQUIREMENT	RATING	CUSTOMIZATION REQUIRED	COMMENTS
S4	Scanning support for different popular scanners and standard scanning protocols like TWAIN And ISIS.			
S5	Scanning support for local and remote sites.			
S6	The support of scanning and handling different page standard sizes like A4, A3.			
S7	The support of scanning and handling both Arabic and English documents			
S8	Automatic Document Feeder (ADF) and flatbed scanning (i.e. the ability to detect the different paper sizes)			
S9	Simplex and duplex scanning			
S10	Support for simple and batch scanning			
S11	Barcode scanning			
S12	Batch scanning to capture a batch of documents with ability to separate documents based on number of pages, bar code, blank page separator, or patch code.			
Quality Assurance				
S13	System should provide a mechanism to allow multiple QC and indexing operator connect to and participate in the same batch and reject any unaccepted document page. Rejected pages should be forwarded to rescanning.			
Document Indexing				
S14	Multiple users can connect concurrently on the same batch of scanned document to perform documents indexing			
S15	Each document type could have its			

NO.	REQUIREMENT	RATING	CUSTOMIZATION REQUIRED	COMMENTS
	own set of indexing attributes and consequently indexing form			
S16	The document attributes can be configured to be captured automatically from Bar code fields in the input documents			
S17	Document attribute could be marked as unique so not more than one document can have the same value for this attribute			
S18	Document attribute must have some validation rules to insure the correct entry of indexing data.			
Release				
S19	System should provide a release script for releasing images along with its index values into EDMS			
S20	System should provide a release script for releasing images that are PDF and single/multi-page TIF, along with its index values into EDMS			
Images viewing				
S21	System should accept the industry standard TIF image format			
S22	Image rotations, stretch, magnify, zoom-in and out, inverting, hide part, thumbnails and enlarging portion of the image			
S23	The ability to add, update, change, and move the annotations on a document			
S24	Support different image annotation types including highlighting, free drawing, sticky notes. With the ability to set security on those annotations.			
B. Electronic Document				

NO.	REQUIREMENT	RATING	CUSTOMIZATION REQUIRED	COMMENTS
S25	The system should be capable of storing and retrieving any document type, especially those created with all versions of Microsoft Word, Excel, PowerPoint and PDF, including scanned documents			
S26	Ability to provide native application support for Microsoft Word, PowerPoint and Excel, at a minimum			
S27	Support the concept of document grouping (e.g., in folders). A folder should have the ability to contain documents or other folders			
S28	It should be possible to assign a document to multiple folders without replicating its contents.			
S29	Scheduled uploading and uploading from directories			
S30	Uploading of Email and Print Jobs			
S31	Upload Images through HTTP and LAN			
S32	An intuitive interface should support the following actions: • Copying of a document to another folder • Linking of a document to another folder • Moving of a document to another folder • Deletion of a document from within a folder • Copy / Move Folder to another Folder			
C. Indexing/Attributes (Metadata)				
S33	The system should be able to define user-specific attributes and documents.			
S34	The user defined data index fields			

NO.	REQUIREMENT	RATING	CUSTOMIZATION REQUIRED	COMMENTS
	should include (Numeric, Date , text) data types.			
S35	Ability to validate attributes and flag if the requirement is not met.			
S36	Support field default values			
D. DMS Server Software				
General				
S37	The system should be able to work with industry standard database systems such as Oracle and Microsoft SQL Server.			
S38	DMS Server software should support both Windows and Web clients.			
S39	Access to Images managed by the DMS server Software should be accessed using TCP/IP. Sharing the storage path on the server will not be accepted for security reasons.			
S40	Supports SSL/HTTPS for secure transmission			
S41	Multi-tier architecture with each tier fully independent			
S42	Support for multiple databases and multi-site deployment			
Concurrency				
S43	The system ability to manage the concurrent document viewing and editing by concurrent users by using techniques like locking/unlocking			
S44	The automatic refreshment so different users can be updated frequently by changes made by other users			
Version Control				

NO.	REQUIREMENT	RATING	CUSTOMIZATION REQUIRED	COMMENTS
S45	Ability to generate multiple versions of the same document			
S46	Ability to retrieve any old versions when needed			
S47	When a new document or modified document is checked in, the system should automatically apply version control. Documents should automatically be assigned new version numbers by the system.			
S48	The version control system should act as a change control system. It should support the management of multiple versions of documents and preserve consistency of versions for the users of the systems.			
S49	The system default should be set to always display the latest version, or the default version, of a document upon retrieval.			
S50	The system should maintain an audit trail of all versions of a document. This audit trail should include all the version metadata.			
Check-Out / Check-In				
S51	System control over documents locking by handling checking-out documents to be edited and then check-in back to the server.			
S52	Once a document is checked out, no other user should be allowed to edit the same document, except to view the document			
S53	The check-in function should enable the import of a single document or a group of selected documents			
S54	Once a document is under the management of the system, a user must be required to use the check-			

	out function in order to modify the content of the document/object or replace it by another document/object			
S55	It should be possible for the user to modify a document in several steps over time, all that while keeping the document checked out			
S56	The system should automatically recognize the document and activate the indexing and version control functions to ensure that the document is properly categorized in the system.			
S57	It should be easy for all users to identify any checked-out documents.			
S58	Ability to maintain an audit trail of all check-in and checkout actions for a document. This audit trail should identify who performed each action and when.			
S59	Access provided to the system via MS Office Applications. ODMA Compliance			
Performance & Scalability, Reliability				
S60	Reliable system performance in searching millions of document			
S61	Number of documents is expected to grow very fast, so the system performance should not degrade to unacceptable levels.			
S62	The system should be able to scale on more powerful H/W servers or distributed on more servers (Distributed Architecture) to give better performance.			
S63	The ability to create multiple repositories and search in different repositories.			
E. Workflow				
Document Workflow				

S64	Workflow features for routing and tracking of documents, messages and forms			
S65	Collaborative working on documents and folders			
S66	Searching, reporting and monitoring of work process and status			
S67	Create Ad-hoc or predefined routes for automatic document routing			
S68	Support for both sequential and parallel routes			
S69	Route of Work items to users for their action			
S70	Support for forward, return or completion of Work items			
S71	Support for referring Work-items to other users outside the pre-defined route			
S72	Diversion of Work items to other users for delegating or substituting			
S73	Time-based and event-based reminders			
S74	Users can collaborate on a Work item through shared and secure notes			
S75	Task assignment for each user			

F. Search & Retrieving				
S76	The system should provide powerful search capability—based on any defined attributes or keyword).			
S77	Users can build queries based on document system attributes and/or user-defined attributes.			
S78	Search queries can be saved globally so all system users can run these queries later without having to rebuild			

	them again			
S79	Search results can be stored for later processing and/or reporting			
S80	Support for progressive search, in other words, user can apply more search queries on the previous search results.			
S81	Search results should be filtered based on the user access rights.			
S82	The system should provide easy access to found objects as part of search results			
G. Document View/Review				
S83	The system must have imaging functions like zoom in, zoom out, rotate, flip, image panning, magnifier			
S84	The system must have annotation capabilities like rectangle, blackouts, lines, stamps and free hand annotations			
S85	System user must be able to view any number of pages in the same viewer			
S86	Users must be able to put pre-defined stamps as annotation overlays. Users should be able to define new stamps.			
S87	The images in the system must have a standard image format utilizing standard compression that can be opened by standard image viewers.			
H. Import/Export				
S88	The system should enable the import and export of files to/from the file system.			
S89	The ability to import documents that were created outside of the document management system. The use of a flexible check-in function that is part			

	of the core product is mandatory.			
I. Security & Access				
S90	Definition of Users and Groups relation in the system			
S91	Grant users and groups access permissions on Folders, documents and Document Classes			
S92	Secure login and passwords for each user			
S93	LDAP authentication and single sign-on support			
S94	Supports SSL/HTTPS for secure transmission			
S95	The system must have full flexible user access to all filing structure levels (document/ folder / sub-folder/ …)			
J. Fax, Mail				
S96	Support document sending via fax and internal/external mail			
S97	Facility to send documents as email attachments			
S98	Support the Integration with fax server for automatic capturing of incoming faxes			
S99	Provides automatic or semi-automatic mechanism for routing incoming faxes to corresponding users			
S100	The system should support the automatic or manual sending of documents to an external fax from the user desktop via integration with the fax server			
L. Reporting				

S101	The system should provide a means to generate, customize, save, and run reports based on ad-hoc queries given by the system user.			
S102	The system should provide basic administration reports to monitor system and user performance. In other words, system administrators can generate a report for different system activities.			
M. Administration				
Security				
S103	Administrator(s) can add users with user name and password for each user.			
S104	Administrator(s) can define groups and add users to these groups.			
S105	Ability to assign security rights for users and groups on documents or folders. Access rights could be for viewing, modifying, deleting, or ownership.			
Backup & Restore				
S106	Must include backup and restore procedures			
Audit Trail				
S107	System should record all users' actions to allow administrators trace changes made on a document or by specific user.			
S108	The ability to visually retrieve the log of any user action on documents			
Others				
S109	Ability to administrate the system from a console or remote machine			
N. User Interface				
S110	Simple and easy GUI system interface using up-to-date technologies such			

	as but not limited to drag-and-drop, context menus, help, etc.			
S111	Ability to customize the user interface without the need for programming.			
S112	The system should provide a tree structure browser to classify the documents and classes in file/folder structure. The Tree should also support unlimited folder levels.			
S113	Full Functional Web Browser based user interface for document search and retrieval , add new document , print , upload documents.			
O. Integration with Windows Applications				
S114	Full integration with ODMA applications e.g. MS Office suite, Windows Explorer. The user should be capable of save, open and create new version direct into EDMS repository			
S115	The system provides the capability to perform Arabic/English OCR/Bar-code recognition.			
S116	The systems should support image enabling to other windows applications.			
P. Web Support				
S117	The system should be web based. Describe in details the system architecture.			
S118	The user should be able to manage the document through the web. The user can create, search, retrieve, index, update and import document through the web.			
S119	All the administration function can be done from the web interface.			
Q. Other Requirements				

S120	Logging and system performance monitoring capabilities			
S121	Critical mission system working 24x7 supporting hardware redundancy			
S122	System should have hot-standby features so if the main server crashes; it can be 'taken over' by a hot-standby server.			

Annex K: Proposed Comprehensive Integrated Tariff System (CITS)