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ANNUAL PROGRESS REPORT (OCTOBER 2009 – SEPTEMBER 2010)

INFORMATION TECHNOLOGY MASTER PLAN IMPLEMENTATION PHASE (ITMP-IP)

OCTOBER 2010
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ACRONYMS AND ABBREVIATIONS

AC	Air Conditioner
AD	Active Directory
ADS 548	Automated Directives System Chapter 548
AM-MM	Asset Management-Maintenance Management
AM-MM-BP	Asset Management-Maintenance Management Best Practices
ASG	Assistant Secretary General
AWC	Aqaba Water Company
BCP	Business Continuity Plan
BOQ	Bill of Quantity
BP	Best Practice
BRS	Business Requirements Specification
CCNA	Cisco Certified Network Associate
CEDAW	Convention of Elimination of All Kinds of Discrimination Against Women
CEO	Chief Executive Officer
CIO	Chief Information Officer
CIO/EIS	Chief Information Officer/Executive Information Systems
CIS	Customer Information System
CO	Contracting Officer
COBIT	Control Objectives for Information and related Technology
COBOL	Common Business-Oriented Language
COBOS	A COBOL-based billing system used by the ICTU-HQ
COP	Chief of Party
COTR	Contracting Officer's Technical Representative
DCOP	Deputy Chief of Party
DRP	Disaster Recovery Plan

EIS	Executive Information System
ESB	Enterprise Shared Bus
FC	Fiber Change
GIS	Geographic Information System
GOJ	Government of Jordan
GTZ	*Deutsche Gesellschaft für Technische Zusammenarbeit GmbH* (German Society for Technical Cooperation)
HQIT	Headquarters Information Technology
HR	Human Resources
HVAC	Heating, Ventilation, and Air Conditioning
ICT	Information and Communications Technology
ICTU-HQ	Information and Communications Technology Unit – Headquarters
IDARA	Instituting Water Demand Management in Jordan
IP	Internet Protocol
IRM	Information Resources Management
IQC	Indefinite Quantity Contract
ISP	Internet Service Provider
IT	Information Technology
ITIL	Information Technology Infrastructure Library
ITMP	Information Technology Master Plan
ITMP-IP	Information Technology Master Plan Implementation Phase
IT/SM	Information Technology and Service Management
JD	Jordanian Dinar
JVA	Jordan Valley Authority
KPI	Key Performance Indicator
LAN	Local Area Network
LIMS	Laboratory Information Management System
LOE	Level of Effort
M&E	Monitoring and Evaluation
Mbps	Megabits per second
MOICT	Ministry of Information and Communications Technology
MOJ	Ministry of Justice

MOSS	Microsoft Office SharePoint Server
MOU	Memorandum of Understanding
MS	Microsoft
MWI	Ministry of Water and Irrigation
NDA	Non-Disclosure Agreement
NGWA	Northern Governorates Water Authority
OCS	Office Communication Server
OMS	Operations Management Support
PBX	Private Branch Exchange
PC	Personal Computer
PMP	Project Management Professional
PMU	Program Management Unit
POC	Proof of Concept
PQP	Project Quality Plan
PRI	Primary Rate Interface
RFP	Request for Proposals
ROLP	Rule of Law Program
SAN	Storage Area Network
SG	Secretary General
SGR	Stage Gate Review
SLA	Service Level Agreement
SOP	Standard Operating Procedure
SOW	Statement of Work
SRS	Software Requirements Specifications
STA/M	Senior Technical Advisor/Manager
STTA	Short-term Technical Assistance
TMS	Task Management System
TOR	Terms of Reference
UPS	Uninterruptible Power Supply
URL	Universal Resource Locator
USAID	United States Agency for International Development

VOIP	Voice over Internet Protocol
WAJ	Water Authority of Jordan
WAN	Wide Area Network
WFMMS	Water Facilities Management and Maintenance System
WIS	Water Information System
WMIS	Water Management Information System
WSUS	Windows Server Update Service

1.0 YEAR 2 PROGRESS REPORT SUMMARY

This document represents the Year 2 Progress Report for the United States Agency for International Development (USAID)/Jordan Information Technology Master Plan Implementation Phase (ITMP-IP), USAID Contract Number EPP-I-00-04-00019-00, Task Order 03 under the Integrated Water and Coastal Resources Management II Indefinite Quantity Contract.

The ITMP-IP project is one outcome of a USAID-commissioned assessment of the status of information technology (IT) systems carried out in 2005 and resulting in the Information Technology Master Plan (ITMP) published in August 2006. The project is being carried out by Tetra Tech ARD (formerly ARD, Inc.) in association with Deloitte Consulting LLP, ECO Consult, Primus, and Development & Training Services, Inc.

The project aims to consolidate the respective IT departments of the Jordan Ministry of Water and Irrigation (MWI), the Jordan Valley Authority (JVA), and the Water Authority of Jordan (WAJ) into a unit—the Information and Communications Technology Unit – Headquarters (ICTU-HQ)—as the primary Information and Communications Technology (ICT) service provider for the three headquarters organizations, and eventually for the water sector as a whole.

In addition to establishing the ICTU-HQ as a shared service provider of IT, the project is implementing two specific applications: the Executive Information System (EIS) will provide a decision-support service to MWI, WAJ, and JVA stakeholders; and a Collaboration and Web Presence will provide document sharing, workflow automation, and other productivity tools as a service to MWI, WAJ, and JVA stakeholders.

The project also provides technical assistance to the ICTU-HQ in acquisition support, on an optional, as-needed basis, which may include drafting statements of work, market analyses, tendering, and project implementation oversight within the domains of ICT Infrastructure, Back Office Systems, Asset Management and Maintenance Management (AM-MM), and Supply Chain.

During the second[1] year of the project, the ITMP-IP succeeded in meeting several important milestones, including

- establishment of an ICTU-HQ strategic business plan and launching the start of the plan's implementation in March 2010;
- completion of a detailed ICTU-HQ organizational structure; a human resources (HR) assessment, key job descriptions, and skills gap analysis; organizational key performance indicators (KPIs); and a comprehensive three-year training program for the ICTU-HQ—documents which together represent a significant milestone in the transition of ICTU-HQ from an informally managed organization to a managed one, setting the stage for its transition to higher levels of service delivery;

[1] See note at the end of this section for the period covered by the annual report.

- development of a controls matrix using international standards, complete list of ICTU-HQ assets, and service catalogue to assess ICTU-HQ readiness as a service provider for the headquarters organizations;
- virtualization assessments by industry leaders, assessment of Local Area and Wide Area Networks (LANs and WANs) at the ICTU-HQ and WAJ remote sites; an ICTU-HQ data center readiness assessment; and a servers and storage assessment;
- significant upgrades to the IT infrastructure upgrades, including LAN and WAN upgrades for both headquarters and remote offices, offering significant performance improvement;
- completing business requirements for Collaboration and Web Presence, and successful piloting of two applications in the ICTU-HQ;
- identification of requirements for the acquisition of an EIS, and preparation of the Request for Proposals (RFP) anticipated to be published in mid- to late October;
- identification of additional priority systems and successful procurement for two: Laboratory Information Management System (LIMS) and Legal case management system ("Legal");
- completion and dissemination of an AM-MM prefeasibility study; and
- conduct of several workshops and training sessions, and conduct of a study tour in October 2010.

While progress was made in Year 2 on the EIS and Collaboration and Web Presence, there were some delays. Delays in the EIS were partially linked to delays in hiring the ITMP-IP Chief Information Officer/Executive Information System (CIO)/EIS Advisor; and long-pending USAID approval of a scope modification and associated budget realignment (submitted in July 2009 and approved in December 2009). Progress made in the Collaboration Component was adversely impacted by modifications made to the work plan to realign the activity with evolving ICTU-HQ realities, including the physical and management environment, and to accommodate the counterpart's requests for changes. In addition, the decision to extend collaboration activities beyond the ICTU-HQ backfired with heightened expectations from non-headquarters entities and resulted in spreading out levels of effort without visible outcomes.

Delays in hiring the Infrastructure Manager and the CIO/EIS Advisor resulted in delays to several milestones in the respective components of the Year 2 work plan. While many of these delays were resolved in the ensuing months, the overall progress of the ICTU-HQ Readiness Plan was shifted back six months from estimated completion in May 2010 to not earlier than December 2010. All these variables required the team to develop detailed "action plans" designed to streamline and refocus the project's activities, and guide activities through December 2010 (i.e., the rest of project Year 2 until the end of the calendar year), ensuring the successful completion of project deliverables. During the second half of Year 2, the action plans helped ensure that the team succeeded in catching up from those delays with the EIS and, during the first part of Year 3, will do the same for Web Collaboration (See Year 3 Work plan).

Note: For the purpose of annual reporting, this Year 2 report covers the period spanning October 2009 through September 2010. Quarters refer to calendar quarters. Hence, "Quarter 1" refers to the period October-December 2009, while Quarters 2 to 4 refer to the periods January – March 2010, April – June 2010, and July – September 2010; respectively.

1.1 PROJECT MANAGEMENT MILESTONES DURING YEAR 2

During Year 2, the project continued to deliver monthly and quarterly reports, and to schedule monthly Technical Committee meetings. USAID obligated the remaining project funds during the first part of Year 2, and approved the scope modification and associated budget realignment submitted in July 2009. This allowed mobilization of the CIO/EIS Advisor and Infrastructure Manager (as mentioned above). With the addition of these two individuals to the team, rapid progress was made in two of the four components: ICTU-HQ Support, and Infrastructure, e-Readiness and e-Government.

However, other delays in project activities—especially Collaboration and Web Presence—were determined to be the result of management issues, rather than technical ones, and resulted in management changes taking place in June 2010. During the ensuing transition period, Tetra Tech ARD's Senior Technical Advisor/Manager (STA/M) took over as acting Chief of Party until a suitable alternative could be identified. In addition to changes in the team's management, the internal technical team structure was reorganized to take better advantage of team skills, streamline operations, and reduce redundancy and overlap. This new structure is described in detail in the Year 3 Work Plan. Individual scopes of work were reviewed and revised, as well, to bring them into alignment with the internal reorganization and approved action plans, and levels of effort were reconciled. The ongoing support of a new USAID Contracting Officer's Technical Representative (COTR) was instrumental in implementing these changes, while his support and that of the Contracting Officer (CO) ensured timely approvals and mobilizations.

As a result, the EIS component was quickly brought back on track, and the Collaboration and Web Presence component was re-scoped for a more rapid pace of implementation during Year 3, with an anticipated renewal of effort in the early part of Year 3. A backlog of technical reports from the ICTU-HQ Support and Infrastructure, e-Readiness and e-Government components were or are (at the time of this writing) in the process of being finalized and submitted to USAID.

Finally, three key management documents were revised to accompany the Year 3 Work Plan: The Communication and Coordination Strategy, the Monitoring and Evaluation (M&E) Plan, and the Training Plan. These documents have to be internally reconciled with one another, and with a proposed scope modification and associated budget realignment request being developed at Tetra Tech ARD's home office, setting a foundation for easier and more consistent project implementation, tracking, and monitoring during Year 3.

1.2 YEAR 3 WORK PLAN, BUDGET REALIGNMENT, CONTRACT AMENDMENT

The Year 3 Work Plan reflects activities to be conducted during the last year of the project. The methodological approaches described in this work plan are designed so that tasks can be carried out in a way that makes up for the delays experienced during Year 2. Implementation of this work plan is highly dependent upon submission and rapid USAID approval of a scope modification and associated budget realignment. An approved budget realignment will allow the project to move forward in the following areas, already identified as critical by USAID and the counterparts.

- Increase to full time, for the duration of the project, the following individuals:
  - Ramez Mallouk (currently CIO Advisor, a key position, contract expires in March 2011);
  - Nour Bani (currently Senior ICT Advisor, contract expires at the end of Year 2); and
  - Suzan Taha (currently Deputy COP, whose current remaining level of effort allows her only to work part time until the end of the contract).
- Extend the contract of Ra'ed Sleihat (currently only funded through February 2010) to the end of the project, allowing continuous support to enhance the ICTU-HQ state of readiness as a full service IT provider and to participate in e-Government (i.e., "e-Readiness").
- Addition of one or two ICT Business Advisors, to assist with ICTU-HQ business planning and budgeting, and to help pave the way for eventual corporatization.
- A short-term Network Operating Center Specialist, to assist ICTU-HQ in meeting international standards and best practices for possible eventual certification.
- Reduction in the allocation of funds for the EIS from $500,000 to $100,000, proposed due to the potential high risk of this application.

- Addition of funds for procurement of Web Collaboration, from a current allocation of $0 to $150,000.

Other areas which may be affected by the scope modification and associated budget realignment, pending agreement by USAID and counterparts are the following.

- Additional training for ICTU-HQ staff to ensure longer-term sustainability of the evolution of the ICTU-HQ as a full service IT provider.
- Additional short-term technical assistance (STTA) which may include:
  - A "change management expert" to help the ICTU-HQ staff transition to a higher "tiers" of operation and eReadiness;
  - Additional Human Resource analysis, training gap analysis, and especially retention planning;
  - Additional STTA to continue work begun in Year 2 in the area asset management/maintenance management (AM/MM), specifically, to prepare interested water sector institutions with a way forward to reach a "state of readiness" to make effective use of these cost-saving technologies.
- Other areas of mutual interest and agreement with USAID and the Government of Jordan.

Submission by Tetra Tech ARD of the scope modification and associated budget realignment request that would allow the project to move forward in all of these areas is, in turn, dependent on USAID's agreement with Tetra Tech ARD of a replacement Chief of Party candidate. Tetra Tech ARD stands ready with the submission, once that agreement is made.

1.3 SUMMARY OF PERSONNEL STATUS

The following is a list of project staff, with their job descriptions and main assignments.

1.3.1 Long-Term and Intermittent

- *Richard Noth* (Tetra Tech ARD), served as Chief of Party (COP) until 18 June 2010.
- *Lynnette Wood* (ARD), Tetra Tech ARD STA/M, served as acting Chief of Party from June 2010 onwards.
- *Suzan Taha* (ECO Consult), Deputy Chief of Party (DCOP), served as EIS Component Leader until the arrival of the CIO/EIS Advisor. In this role, she worked on defining business requirements for the EIS. She also supported, on an as-needed basis, the ICTU-HQ Support, the Collaboration and Web Presence, and the Asset Management – Maintenance Management components.
- *Ramez Mallouk* (Deloitte): CIO/EIS Advisor since April 2010. Responsible for providing support to the project in terms of technical ICT implications of work plan activities, strategic recommendations, and project timeline; supporting the ICTU-HQ Support component, and led the EIS component from design through implementation.
- *Nour Bani* (Primus), Senior ICT Advisor, leading acquisition support for LIMS and "Legal." Led the EIS acquisition activities and, since August 2010, assumed the responsibility of the Collaboration and Web Presence component. Also providing project administration and management support.
- *Raed Sleihat* (Deloitte): Seconded to the ICTU-HQ as Infrastructure Manager since joining the project in February 2010. Also, component leader of Infrastructure, e-Readiness and e-Government.
- *Jeremy Terr* (Deloitte) led the field work for the human resources aspects of the ICTU-HQ Support component. Assisted in the implementation of the ICTU-HQ organizational development and development of the ICTU-HQ Business Plan. His HR aspects of the ICTU-HQ Support component included several key ICTU-HQ initiatives such as the assessment of ICTU-HQ employees'

knowledge and skills for the purpose of developing a training needs assessment, and development of the Year 3 Training Plan. Mr. Terr demobilized in June 2010.

- *Steve McCoy-Thompson* (Deloitte, intermittent) provided guidance to the ICTU-HQ Support component and assisted the project in program management activities.
- *Bharat Parihar* (Deloitte) supported primarily Collaboration and Web Presence until his demobilization in December 2009, and also supported the Infrastructure and Back Office Systems components, as well as program management activities.
- *Sultan AlSharfi* (Primus): Specialist in implementing the Collaboration platform using Microsoft SharePoint Server (MOSS). Led the Collaboration and Web Presence component and its technical implementation until end of May 2010.
- *Mohammad Saleh* (ECO Consult, intermittent) supported the ICTU-HQ Support component, including coordination of on-site and off-site training and the assessment of people and processes in the WAJ remote offices. Also supported EIS business and reporting requirements definition.
- *Lina Sheqem* (ECO Consult, intermittent): Supported the ICTU-HQ Support component and the prefeasibility study for introducing AM-MM. Assisted in identification of business requirements for the EIS component.
- *Administrative Staff* (Tetra Tech ARD): Lana Marouf (Office Manager) conducts accounting and administrative functions. Saleem Al-Kharabsheh, project driver and logistics coordinator.

1.3.2 Short-Term

- *Bander AlSharfi* (Tetra Tech ARD) served between February and May 2010. He supported the project in the rollout of collaboration tools throughout the water sector.
- *Joseph Volonakis* (Tetra Tech ARD) led the preparation of a pre-feasibility study for introducing AM-MM system in the water sector (February to June 2010).
- *Nabila Marcos* led the gender development for ICTU-HQ under the ICTU-HQ Support component (dTS, January–August 2010), and provided HR and training needs analysis and support to the ICTU-HQ Support component since April 2010 (under Deloitte).
- *Hiba Qanadalft* (dTS) supported gender development for ITCU-HQ (January–August 2010), and is supporting (since beginning of September 2010) the HR work for ICTU-HQ Support.
- *Rawda Awamleh* provided personnel profile analysis and job description development support to the ICTU-HQ (April–August 2010).
- *Raed Nimri* supported the preparation of the pre-feasibility study for introducing AM-MM in the water sector (March–June 2010).

1.3.3 Home Offices

- *Dr. Lynnette Wood*, STA/M, provides ongoing Tetra Tech ARD home office oversight of technical aspects of the project and provides Quality Assurance/Quality Control of deliverable documents.
- *Ben Lawrence* (Tetra Tech ARD), Project Manager, provides home office administrative and logistical support.
- *Pam Doran* (Tetra Tech ARD), Contracts Specialist, provides contract and subcontract monitoring services.
- *Nate Nash* (Deloitte), Senior ICT Advisor and former Project Manager, provides administrative oversight from Deloitte.
- *Jay Hariani* (Deloitte), Current Project Manager and IT/EIS Advisor, assisted in the preparation of the Automated Directives System Chapter 548 (ADS 548) report for the EIS procurement and in the review of the EIS Request for Proposals.

- *Tara Ferdows* (Deloitte), Project Administration.

1.3.4 Recent Changes

- Mr. Richard Noth, outgoing Chief of Party, demobilized in June 2010. Dr. Lynnette Wood, ARD's STA/M, took over as Acting Chief of Party until a permanent COP could be identified.
- Mr. Jeremy Terr, Human Resources Specialist, demobilized on 17 July 2010.

2.0 SUMMARY OF YEAR 2 ACTIVITIES AND ACCOMPLISHMENTS

This section summarizes the activities and accomplishments during Year 2 of the ITMP-IP. The ITMP-IP project activities have been organized into the following sections.

- Cross-cutting activities that affect all project initiatives: Project Management and Administration, Gender Activities, Training, Communications and Coordination, and M&E.
- Technical components that are aligned with the tasks and subtasks listed in the task order and the corresponding deliverables:
  - Component 1: ICTU-HQ Support;
  - Component 2: Development and implementation of Executive Information System (EIS);
  - Component 3: Development and implementation of Collaboration and Web Presence;
  - Component 4: Infrastructure, e-Readiness, and e-Government;
  - Component 5: Back Office Systems;
  - Component 6: Asset Management - Maintenance Management (AM-MM); and
  - Component 7: Supply Chain.

2.1 CROSS-CUTTING ACTIVITIES

2.1.1 Project Management and Administration

The project activities and reporting are managed by an administrative team consisting of the Chief of Party, Deputy Chief of Party, and Office Manager/Administrative Assistance housed at 38 Salem Al Hindawi St., Shmeisani, Amman, with administrative and technical backstopping provided by Tetra Tech ARD's Home Office in Burlington, Vermont. Specific activities and accomplishments for Year 2 have been summarized in the previous section.

2.1.2 Gender Integration

During its second year, the project implemented several gender development activities to promote gender integration in the ICTU-HQ. Although the establishment of a proposed Gender Committee or a suggested alternative, a Gender Resource Group, proved unfeasible, the impact of the gender development activities was significantly positive. The activities resulted in improved understanding of women's role in the workplace by ICTU-HQ staff (both male and female) and building a common vocabulary and understanding for gender mainstreaming. It also provided female employees with extensive career networking opportunities inside and outside of the Ministry as a coping mechanism to share the

challenges and successes of female inclusion. Details of Gender Integration activities are discussed under Component 1, ICTU-HQ Support.

2.1.3 Monitoring and Evaluation

While the project met its quantitative targets in some components during Year 2 (EIS, Acquisition Support, and Gender), it failed to meet some of its targets in the ICTU-HQ Support and the Collaboration and Web Presence components. (See detailed reporting on Year 2 M&E plan in Annex 1.) This is primarily due to the following factors:

- Time gap between development of M&E indicators for the ICTU-HQ Support component and hiring of the CIO/EIS Advisor. The ultimate approach developed by the new CIO/EIS integrated all the activities under the ICTU-HQ Support component with new objectives and corresponding actions plans, resulting in difficulties applying the M&E indicators that had been developed previously in the absence of this integrated approach.
- As mentioned in Section 1 above, modifications made to the Year 2 Collaboration and Web Presence work plan did not always allow mapping achievements with target indicators as depicted in the M&E plan. This resulted in skewed presentation of actual target values, showing over-achievement in some instances and under-achievement in others.

Realizing that the Year 2 M&E plan has become outdated, the project worked with the support of a private firm to bring the M&E plan up to date and into alignment with current realities. The new plan was incorporated into the Year 3 Annual Work Plan.

2.1.4 Training Plan and Training Activities

The ITMP-IP team developed an updated Training Plan in September 2009 as part of the Year 2 Work Plan. The Year 2 Training Plan identified specific third-party management and technical training needs for ICTU-HQ, and listed training options and an associated budget to meet these needs. A total cost of $26,150 was estimated for third-party training to be funded by the project, of which approximately $7,700 was spent for Project Management Professional (PMP) training. The project worked with a local training provider to design the PMP course; in December 2009, the provider delivered 40 hours of PMP training to five participants from ICTU-HQ staff, qualifying them to apply for PMP certification.

Utilization of the unspent budget was pending the completion of the HR assessment. However, this assessment was delayed in order to accommodate requests to focus on other tasks, and the HR assessment was not begun until July 2010. That assessment has now been completed and incorporated into a new training plan that will be submitted to USAID as a companion to the Year 3 Work Plan.

Instead of third-party training, during Year 2, capacity building was mostly conducted through on-job coaching and workshops (rather than third-party training). ITMP-IP staff designed and delivered several training activities in order to leverage staff expertise, as highlighted below.

- The project conducted a workshop in Aqaba to clarify roles of the ICTU-HQ and corporatized water companies. The workshop involved ICTU-HQ department heads—now known as team heads—and the IT directors from the water companies (January 2010).
- In the ICTU-HQ e-Government Team, the Collaboration and Web Presence component leader trained six end users on MOSS, trained two trainers for tasks management workflow, and six Task Management System Administrators. This was followed by training of all the end users in the ICTU-HQ on the Task Management System, for a total of 38 trainees. In parallel activities,

the project trained the six employees in the Aqaba Water Company (AWC)'s ICT Unit on both SharePoint and BizTalk Developers.

- In April 2010, 11 participants from the ICTU-HQ Infrastructure Team attended "Cisco Certified Network Administrator." The training was prepared and conducted by the Infrastructure Manager who has been seconded from the project to the ICTU-HQ since February 2010. In August, the Infrastructure Manager trained nine individuals from WAJ remote sites on the Fundamentals of Networks and Systems.

The project also assisted the ICTU-HQ in organizing third-party training offered by vendors. Training for 276 individuals was conducted in Year 2, of which more than 30 percent were females. A full list of training activities is provided in Annex 5 to this report.

2.1.5 Communications and Coordination Plan

The project's Communications and Coordination Plan was submitted to USAID as part of the Year 2 Work Plan. The plan listed key milestones and related events such as regular meetings, planning and coordination meetings, press releases, and public awareness-building events, as part of a larger strategy to position ICTU-HQ as the leading provider of ICT services for the water sector in Jordan.

During the second year, the Minister and Secretaries General of MWI, WAJ, and JVA and the Director of the Program Management Unit (PMU) continued to provide oversight and guidance for the project through the steering committee meetings. Special meetings were also called when decisions of major importance were being debated. A total of four steering committee meetings were conducted this year.

The Technical Committee, formed in May 2009, was reconfigured in October of the same year, to accommodate the participation of AWC and replace some members who had left the sector, or were no longer available. Technical Committee meetings continued to be held regularly throughout the year to discuss project progress and resolve pending issues.

During the second year, the project interacted with other donor-funded projects on an as-needed basis, including the Water Resources Program, funded by *Deutsche Gesellschaft für Technische Zusammenarbeit GmbH* (German Society for Technical Cooperation) (GTZ), supporting information management activities at MWI, and the Operations Management Support (OMS) project at WAJ.

The IMTP-IP project representative and the ICTU-HQ managers began meeting weekly about halfway through the year. These coordination meetings were found to be important for keeping everyone abreast of recent events and apprised of priorities.

2.2 PROGRAM IMPLEMENTATION

2.2.1 Component 1: ICTU-HQ Support

The ICTU-HQ Support component assists the ICTU-HQ in its evolution toward a premier ICT service provider for the water sector in Jordan. This involves first facilitating integration of the previously separate headquarters' IT departments into a single unit. Second, this component will help establish an efficient organizational structure within the unit that will allow it to achieve its mandate. This includes the articulation of ICTU-HQ vision, mission, and strategy; improvement of staff capabilities to achieve ICTU-HQ objectives; and establishment of clear business processes, policies, and procedures designed to ensure efficient operations and data management and reporting. Third, the component will institutionalize the ICTU-HQ on a sustainable basis through the establishment of an effective governance structure, including clarification of ICTU-HQ reporting relationships within the MWI, communication protocols

between the headquarters departments, relations with external stakeholders, and budget and staffing authorities. Activities and accomplishment during Year 2 in the areas are described in detail in this section.

TASK 1.1: CONSOLIDATION OF THE THREE HEADQUARTERS IT DIRECTORATES

Sub-Task 1.1.A: Detailed Plan for Consolidation

i. Develop ICTU-HQ Business Plan and Strategy

During Year 2, the project finalized the ICTU-HQ Strategic Business Plan 2009–2011. This represented a major milestone for the year. The plan was presented by the ICTU-HQ on 22 December 2009 and subsequently socialized with the water companies in January 2010 in a three-day workshop conducted in Aqaba. Workshop attendees identified 14 areas where the ICTU-HQ and water companies can coordinate ICT water sector improvements (see also Task 1.2). Based on this meeting, the business plan was reviewed and officially presented on 1 March 2010 at a kick-off event at the Dead Sea with opening speeches from the Minister of Water and Irrigation and the USAID Mission Director. More than 120 individuals attended this official launch event. In the two-day workshop that followed, 75 sector authorities and ICTU-HQ staff captured input for developing a Service Catalog and the basis of Service Level Agreements (SLAs) that will establish the agreed-upon nature of services that ICTU-HQ provides.

ii. Design ICTU-HQ Organizational Structure to Consolidate WAJ, MWI, and JVA ICT Departments

Activities associated with an ICTU-HQ consolidated organizational structure were completed during Year 1 of the project. However, the project's recommendation for ICTU-HQ's organizational structure was not adopted during WAJ's restructuring. Refinement of the organizational structure was subsequently incorporated into the HR activities under the ICTU-HQ Readiness Action Plan. (See Phases 2, 4, and 5 of the ICTU-HQ Readiness Action Plan.) The refinement was based on the research and findings of the project with respect to the services required by the sector and water companies' needs. These were identified during dedicated meetings and interviews with both the ICTU-HQ staff and the water companies. Two organizational charts were completed, one reflecting the functions and services of each division and position within each division, and the second depicting reporting lines and authorities.

iii. Formulate Staff Recruitment and Retention Strategy

An ICTU-HQ staff recruitment and retention strategy was determined to be a value-added deliverable of the project which would greatly enhance implementation of the IT Master Plan. While this activity was not envisaged in the original task order, it was agreed mid-way through Year 2 that the ITMP-IP would collaborate with the MWI and WAJ to explore innovative mechanisms to close the talent gap and reduce talent flight leaving at high rates for better paying positions in the private sector and expatriate opportunities. However, because of delays in approving the organizational chart and strong resistance from WAJ administration to deviate from standard government practices for hiring and total compensation, further development of a recruitment and retention strategy, while value added, may not receive the support and endorsement necessary for financing or implementation. The need for such a strategy was raised again during a Technical Committee meeting held late in the project year and, as such, this option may be considered as a candidate for additional scope during a scope modification and budget realignment request.

iv. Develop Improved SLAs with Headquarters (HQ) Organizations

Activities related to improved SLAs were carried out in an integrated and complementary manner with other tasks and subtasks of the ICTU-HQ Support component, through the adoption of the ICTU-HQ Readiness Action Plan (see 'ICTU-HQ Readiness Action Plan'). The action plan addressed all the elements involved in

developing, among other things, ICTU-HQ IT service lists and catalogue, and SLAs. With regular coaching and training from the project on service catalogue design, management, update and maintenance, and the development of a list of existing services, the ICTU-HQ was able to create a detailed service catalogue for almost every service provided by ICTU-HQ. The catalogues were finalized in September 2010. Completion of SLA development (envisaged for January 2011) awaits the finalization of the risk assessment associated with the gaps between the existing services and Information Technology Infrastructure Library (ITIL) services due for completion in November 2010. The risk assessment will form the basis for SLA development, as well as the design of performance metrics and implementation of functional performance management systems and training program. (See also Phases 2 and 3 of the ICTU-HQ Readiness Action Plan.)

v. Optimally Match Current Staff to New Positions

As part of the ICTU-HQ Readiness Action Plan, job descriptions were completed (including clearly defined reporting lines and high-level decision rights). The job analysis incorporated comparison with ITIL skills requirements for each position. The ITMP-IP team prepared individual profiles for all ICTU-HQ staff. Each profile encompassed educational background, past experience, personal skills, and behavioral aspects. In order to measure the gaps between actual and required skills, the team compares the profiles with international standards, and accordingly developed a competency library for the ICTU-HQ staff. These resulted in a comprehensive three-year training plan, and an accompanying budget for those portions of the training plan that could be covered by the ITMP-IP. (The remaining would be covered by the ICTU-HQ.) This training plan will be submitted to USAID as part of the Year 3 work plan. It is designed to be refined as new findings emerge from additional competency assessments and the IT risk assessment study is completed. Implementing the training plan will significantly enhance staff capability to perform the roles for which they will be reassigned into the new organizational structure. (See also HR activities under Phases 2, 4, and 5 of the section on ICTU-HQ Readiness Action Plan.)

vi. Develop Policies and Procedures

The development of policies and procedures builds on benchmarking existing IT processes and technologies against best practices (BPs) and subsequent risk assessment. Review and analysis of the gaps in the existing IT processes and technologies will be completed in October 2010. Results and findings will be submitted to the ICTU-HQ Readiness Team for review and elaboration. The results and findings will be key inputs to formulating policies and procedures which will be completed in December 2010. Additional activities related to the development of policies and procedures are also covered by the ICTU-HQ Readiness Action Plan.

vii. Identify Critical Systems for Day Zero

Day Zero, or the "stand-up" of the ICTU-HQ organization, was initiated during Year 2 with the launch of the strategic business plan. The critical systems for Day Zero were identified in the strategic business plan document. The actual portfolio of critical systems will evolve over time based on the outcome of IT assessment activities, such as the service catalogue, risk assessment, and continuing strategic reviews with MWI executives. ITMP-IP will accordingly update the list of critical systems for continuing operation.

viii. Establish IT Board and Conduct Training

The IT Board was informally launched in January 2010 when the ICTU-HQ leadership team and IT representatives from the major utilities—AWV, Miyahuna, and the Northern Governorates Water Administration (NGWA) —convened for the water sector strategy session in Aqaba. During this workshop, 14 key areas for sector-wide collaboration and cooperation on ICT were identified. (See also Task 1.2.) In May 2010, the project further identified utilities' requirements from ICTU-HQ service offerings and a list of services that the ICTU-HQ can provide. Further detailing of these services is envisaged for Year 3, once the corporatization plan for ICTU is ready.

The formal launch of the IT Board is scheduled for Year 3 once a formal governance structure is established, one for which all parties agree and which yields binding decisions on IT procurement, talent management, and disaster preparedness across the water sector. ITMP-IP will facilitate numerous working groups in Year 3 to move towards consensus. However, this is openly acknowledged as a challenge due to the reliance on a 'consensus' process in a highly politicized environment with competing public sector and commercial priorities.

ICTU-HQ Readiness Action Plan

With the addition of the CIO Advisor to the project in April 2010, an approach was developed to proceed with activities under the ICTU-HQ Support component in an integrated and complementary manner. Those activities address all the elements involved in developing ICTU-HQ IT policies, standard operating procedures (SOPs), the service catalogue, and SLAs. The approach builds on documentation of existing knowledge of all ICT assets (infrastructure, HR, applications, and processes) and identifies gaps and deviations from international standards and best practices. An assessment of risks associated with the gaps envisaged under this approach will form the basis for the formulation of new policies and procedures, the design of performance metrics, and the implementation of employee and functional performance management systems and a training program. In order to allow transfer of know-how, intense involvement of the ICTU-HQ in all activities is needed. This is being accomplished through the formation of an ICTU-HQ Readiness Team under the leadership and coaching of the CIO Advisor. The approach has proven its success as reflected in the ICTU-HQ IT Readiness Action Plan which was endorsed by the ICTU-HQ and Technical Committee in May and June 2010, respectively, and which is now being implemented.

Relevance to the ITMP-IP Tasks

The Readiness Action Plan covers and/or impacts several subtasks of Tasks 1.1.A and 1.1.B of the task order, as follows.

Task 1.1.A: Detailed Plan for Consolidation

- Establish project oversight mechanism;
- Develop improved target service scope and levels, and develop SLAs with each headquarters organization;
- Establish monitoring and reporting mechanisms to track service levels;
- Develop staffing model;
- Optimally match current staff to the new positions and roles and prepare "a Day Zero" plan that reallocates staff into their new roles; and
- Develop Policies and Procedures Manual for ICTU-HQ operations, based on international practices.

Task 1.1.B: Consolidation and Capacity Building

- Apply and continuously coach the skills learned in each training; and
- Monitor and report service levels.

Overview of the ICTU-HQ IT Readiness Action Plan

The ICTU-HQ IT Readiness Action Plan represents the foundation for an ICTU-HQ that can implement Information Technology and Service Management (IT/SM) best practices. The action plan consists of five consecutive phases:

1. Kickoff Phase
2. Baseline Phase
3. Risk Assessment Phase
4. Implementation Phase
5. Enhancement Phase

A description of each phase and status of related activities is provided below.

Phase 1: Kickoff Phase

The kickoff phase established with the ICTU-HQ a common perspective and agreed-upon outcomes and expectations. To launch this phase, the ITMP-IP team defined an action plan framework and timeline according to IT/SM best practices and ICTU-HQ needs, and gained agreement with the counterpart on an M&E framework, roles and responsibilities, participants, activities, and outputs. A project charter and a detailed plan were developed. These were followed by an orientation session on work methodology conducted for all participants introducing Control Objectives for Information and related Technology (COBIT), ITIL, and International Organization for Standardization (ISO) 27001:2005. Templates for all project activities including HR were prepared.

Activities under this phase were completed.

Phase 2: Baseline Phase

The baseline phase lists all the elements (software, hardware, people, licenses, digital assets, and processes) involved in developing ICTU-HQ IT policies, procedures, and SLAs. This phase involves gathering documents, conducting interviews, and formulating a baseline asset list and service catalogue. The table below summarizes the key activities and outputs related to this phase completed during Year 2 .

Table 1: Key Activities and Output – ICTU-HQ Readiness Plan; Baseline Phase

Key Activities	Key Output
2.1 Define Framework • Define Controls matrix • Define ITIL list of requirements for processes	Controls Matrix (Completed - August 2010)
2.2 Complete IT Asset List • Complete position descriptions, reporting lines, HR data • Complete hardware and software license inventory • Existing SOPs, processes	ICTU-HQ IT Asset List (Completed - July 2010)
2.3 Develop Service Catalogue • Develop service list and description of services	Service Catalogue (Completed - September 2010)

During Year 2, the IMTP-IP project conducted several meetings and a training session to enable the ICTU-HQ Readiness Team to properly collect assets information, classify them and assign confidentiality, availability, and integrity impact rating. Several orientation sessions on service catalogue design and management were also conducted. The project designed an initial frame for the service catalogue and led an IT/SM best practices coaching focused on the asset list, including the development of a list of existing services. Further coaching was also conducted by the ITMP-IP on the importance of maintaining an accurate asset list, its relation to industry standards, and the impact on ICTU-HQ readiness. The project also provided the team with a detailed configuration sheet that was used to collect information on various ICTU-HQ IT information assets (software, hardware, people, licenses, digital assets, and processes). The asset list, which was completed and "frozen" as final, will be used in the gap analysis and risk assessment exercise under Phase 3. Maintaining an updated asset list and service catalogue is a mandatory requirement for COBIT, ITIL, and ISO 27001 certification.

In order for the ICTU-HQ Readiness Team to maintain and update the ICTU-HQ service catalogue on an ongoing basis, upon the completion of the IT assets list, the project conducted several meetings and an orientation session on ITIL—focusing on service catalogue creation and definition. The ICTU-HQ Readiness Team was accordingly able to create a detailed service catalogue for almost every service provided by ICTU-HQ. Development of the service catalogue was completed in September 2010.

Several organizational-level policies were also developed during this phase: Backup Policy, Email Usage Policy, Acceptable Use Policy, and Clear/Clean Desktop Policy. These policies are intended to help ICTU-HQ manage the corresponding functions, reduce the risk, and gradually prepare users for the upcoming change.

Work in the HR track of the baseline phase consisted of completion of a detailed job analysis which defined roles, responsibilities, deliverables, performance management targets, and high-level decision authorities. The output of the job analyses were captured in updated and revised job descriptions for all positions in the newly designed ICTU-HQ organizational structure. The project also identified the ITIL required skills for each job. As mentioned above, the project also developed individual profiles and compared them with international standards; these were used for the preparation of a detailed training plan. (See Task 1.1.A (v) and HR activities under Phase 5.)

Phase 3: Risk Assessment Phase

Building on the output from the second phase, the objective of the risk assessment phase is to clarify and rank the gaps and risks related to achieving high reliability and ICT service excellence; formulate a treatment plan; and develop an implementation roadmap for policy development, SOPs, and SLAs. This phase was structured around the following key activities, begun in Year 2 of the project, and planned for completion by the end of 2010..

Table 2: Key Activities and Output – ICTU-HQ Readiness Plan; Risk Assessment Phase

Key Activities	Key Output
Gap Analysis • Benchmark existing policies and procedures against controls	Gap/Analysis report detailing the gaps and deviation from international standards. (October 2010)
Risk Assessment • Prioritize risks and develop risk mitigation	A risk assessment report indicating the existing risks, their impacts, proposed mitigation actions and time plan for mitigating or eliminating the risks. (November 2010)
Implementation Plan • Roadmap for policy development, SOPs and SLAs	The policies roadmap provides a list of policies, procedures or SLAs that will be developed, their timing and priority. (October 2010)
Data Center Business Continuity Plan (BCP) and Disaster Recovery Plan (DRP) • Business impact analysis • Develop BCP and DRP	The assessment will help ICTU-HQ in planning for its Data Center site to become a disaster recovery site for the entire water sector. The assessment will be based on international standards and will include a business impact assessment. (December 2010)

In order to move the ICTU-HQ into international standards and best practices, ITMP-IP advised the ICTU-HQ to adopt a mixed controls matrix of ITIL, ISO 27001, and COBIT, and to follow the recommendation of such standards in assessing the readiness of ICTU-HQ. The standards mandate that a risk-based approach must be used to identify short-, medium- and long-term risks associated with existing practices and build a risk mitigation plan with a solid commitment to address the associated risks and budget prior to any certification process. Not only must risks be mitigated, but also gaps from international standards and deviation from best practices assessed. Accordingly, the gap analysis activity was launched and completed in collaboration with ICTU-HQ Readiness Team. Review and analysis of the gaps (comparing baseline to ITIL, COBIT, and ISO standards) will be completed in October 2010. Results and findings will be submitted to the ICTU-HQ Readiness Team for their review and elaboration. The risk assessment phase is expected to close out by December 2010.

Phase 4: Implementation Phase

The implementation phase transforms recommendations into final deliverables, by developing organizational readiness documents, including ICT policies, SOPs, controls and SLAs, organizational structure refinement (as necessary), and training program with associated costs. This phase also marks the beginning of training ICTU-HQ staff for their new roles and responsibilities.

Table 3: Key Activities and Output – ICTU-HQ Readiness Plan, Implementation Phase

Key Activities	Key Output
HR Documentation • Refine organizational structure as needed • Develop job Descriptions and staff training program	• Organization chart • Staff training program and associated costs
Policies, SOPs and Controls • Formulate policies, SOPs based on risk assessment • Develop new technical controls and document configuration standards	• Policies • SOPs • Controls
SLA Development • Formulate SLAs based on customers' needs	• SLAs for key customers

Activities related to the implementation phase were begun during Year 2 for the HR track. As mentioned in Phase 2 above, and based on the interviews carried out with the ICTU-HQ staff and the requirements stated by the water companies, the IMTP-IP project proposed a new organizational structure that better fits with the recent restructuring of the ICTU-HQ and aligns the services it offers to the HQ organizations and those required by the water companies. Additionally, the structure created and aligned position titles to each section. The project team identified those positions which were filled and vacant, and established organizational KPIs for each section level. The team completed two organizational charts, one reflecting the functions and services of each division and position within each division and the second reflecting reporting lines and authorities. Both were submitted to the ICTU-HQ Director and approved.

Phase 5: Enhancement Phase

The enhancement phase delivers ongoing training, designs functional and employee KPIs and the related performance management system, and provides performance coaching to ICTU-HQ staff and supervisors. Key activities and outputs of this phase are listed in table below.

Table 4: Key Activities and Output – ICTU-HQ Readiness Plan; Enhancement Phase

Key Activities	Key Output
Capacity Building • Implement training and mentoring programs • Design and implement employee performance management program	• Employee performance management program
Monitor and Evaluate • Design and implement functional performance management system	• Functional performance management system

As mentioned under the baseline phase, the project team completed a draft competency library for all positions in the future ICTU-HQ organization, based on the individual profile for each employee. The competency library was used to measure the gaps between actual and required skills. In addition, the project team gathered data on training center options and costs and developed a training plan for the ICTU-HQ which was substantiated by the skills and competency tests that all ICTU-HQ personnel undertook in late September 2010. Computer-based tests, based on internationally certified tests and used to verify the profiles resulting from interviews, were also used to assess the technical skills, behavioral competency levels, and management skills. Accordingly a complete training plan and budget were prepared and submitted for approval by the ICTU-HQ Director. The training plan will prepare the ICTU-

HQ staff for their new roles and responsibilities. Moreover, the plan will enable the ICTU-HQ executive team to design career paths for employees with the support of the functional and management skills and competencies curriculum, as this curriculum was developed based on the levels required for each position in the proposed ICTU-HQ organization chart.

Sub-Task 1.1.B: Consolidation and Capacity Building

Sub-Task 1.1.B – Consolidation and Capacity Building – overlaps and is strongly linked with the ICTU-HQ Readiness Action Plan discussed above as part of Task 1.1.A. Many of the activities carried out under the Readiness Action Plan were designed and performed with the involvement and coaching of the ICTU-HQ staff. These are summarized below.

- The project team conducted an orientation session on the work methodology introducing COBIT, ITIL, and ISO 27001.
- The project conducted several meetings and a training session to enable the ICTU-HQ Readiness Team to properly collect assets, classify them and assign confidentiality, availability, and integrity classification.
- Project team members provided coaching in IT/SM best practices with a focus on asset listing, including the development of a list of existing services.
- The project team also conducted coaching on the importance of maintaining an accurate asset list, its relation to industry standards, and its impact on ICTU-HQ readiness.
- Several coaching sessions were conducted on service catalogue design and management and on ITIL, specifically service catalogue creation and definition.

Skills learned were applied by the ICTU-HQ Readiness Team in the development of the asset lists, the creation of a detailed service catalogue, and in supporting the gap analysis undertaken by the CIO Advisor to identify the gaps and deviation in ICT assets from international standards.

Other Related Activities under this Sub-Task

Jointly with the ICTU-HQ, the project team worked closely with several vendors on developing proofs of concept (POCs) to enable selection and implementation of best technical solutions with optimal cost. The following POCs were developed:

- Network management; using SolarWIN;
- Web security; using Webwasher;
- Application virtualization[2] using Citrix XenApp;
- WAN in WAJ Labs and JVA Dams' directorate using Zain's microwave connection; and
- WAN in the Jordan Valley using Umniah's microwave connection to leverage speed and coverage provided by the service provider in the Jordan Valley.

Future upgrades in the ICT technologies will build on the POCs developed. For example, the WAN in the Jordan Valley will be fully migrated with Umniah's microwave connection. This will enable the ICTU-HQ to upgrade the respective WAN technology and speed by November 2010.

The IMTP-IP project also managed the procurement and installation of uninterruptable power supplies (UPS) and air conditioners (ACs) for the Data Center, and managed and supervised installation of a call center. The ITMP-IP project team managed and supervised procurement and installation of 200 personal computers (PCs) and 50 printers. (See also Component 4.)

[2] Allows applications to run in environments that do not suit the native application.

Sub-Task 1.1.C: Full ICTU-HQ Operations

The project team finalized the ICTU-HQ's annual operational plan, including it in the operating model section of the ICTU-HQ Strategic Business Plan.

The team also conducted field visits to governorates' water administrations to build a better understanding of the current ICT situation and the current human resources capabilities and procedures; and also to perform a high-level "gap analysis" to identify areas of improvement which the ICTU-HQ can address. The focus of the assessment was the Middle Governorate water utilities of Balqa, Madaba and Deiban, and Zarqa and Ruseifa. The Tafileh remote offices were also visited, but were found to have no network infrastructure. While not part of the Middle Governorate, Karak was also visited, by their request. The assessment resulted in the report "Water Authority of Jordan Remote Site Assessment" (September 2010). As a result of the assessment, the ITMP-IP worked closely with the ICTU-HQ to prepare detailed specifications for mail servers, PCs, servers, and related equipment for the remote sites. The project's Infrastructure Manager supervised the installation of three ACs and two UPSs, 200 PCs, and 50 printers.

With the support of the ITMP-IP, the ICTU-HQ's procurements are being aligned with IT assessment findings, and with the vision to improve the ICTU-HQ infrastructure and services. (See Component 4). With the support of the ITMP-IP in the preparation of technical specifications and assistance in selection of the system, the ICTU-HQ successfully procured a queuing system. The ITMP-IP project also provided management support to the ICTU-HQ LIMS and Legal Web Project Managers. (See Component 5).

TASK 1.2: DEFINE ROLES AND RESPONSIBILITIES BETWEEN ICTU-HQ AND OPERATING UTILITIES

As mentioned under Task 1.1.A and as a result of the Aqaba Workshop conducted in January 2010, the ITMP-IP project identified a list of 14 areas where ICTU-HQ and water companies own, coordinate, or collaborate to purchase, implement, or author water sector ICT improvements. Such areas include disaster recovery and business continuity planning, coordinating standards and policies, and evaluating sector-wide options for the purchase and implementation of AM-MM system(s). Results were published as the meeting minutes and executive summary of the Aqaba Workshop, January 6–8, 2010. In response to the outcome from this workshop, a draft memorandum was developed between ICTU-HQ and water companies to share strategic plans, technology purchasing plans, and policy and standard operating procedures manuals.

Additional requirements from the ICTU-HQ were also largely identified in May 2010. These included providing support services for Oracle E-Business Suite on a 24-hour, seven-day (24x7) basis, coordinating sector IT hosting services for website and servers, and providing software bulk purchases. All service areas will be further detailed after the corporatization plan is completed in Year 3.

TASK 1.3: ESTABLISH A GOVERNING IT BOARD

As indicated in Task 1.1.A (vii), the governing IT Board activity was launched informally as an outcome of the Aqaba Workshop between ICTU-HQ and the IT departments at the major governorates. However, the formal launch of the IT Board will begin in Year 3 and focus on establishing a 'consensus-driven' approach to governance.

TASK 1.4: MOVE ICTU-HQ TO BEST PRACTICES

The project designed an institutional KPI Performance Management System within ICTU-HQ. The Performance Management System was piloted in the Applications Department, and the results were documented and submitted in a report to the ICTU-HQ Applications Department for review. The accompanying manual provided detailed instructions for users to manage and update the institutional KPI performance reporting system. This manual and a narrative on lessons learned and recommendations for implementation were submitted to the Applications Department. The project supported the ICTU-HQ in monitoring and reporting the institutional KPIs for the month of April. Ongoing KPI monitoring, however, was not maintained once ITMP-IP support subsided as it was determined that an automated solution integrated with the ShortMaze service desk would provide a more efficient and reliable mechanism for performance reporting and tracking.

A revised performance management system, integrated with the ShortMaze service desk, is expected after the completion of relevant activities of the ICTU-HQ Readiness Plan. The overlap is necessary in order to align the performance management system with the refined organizational structure, ICT Policies, SOPs, controls, and SLAs. Both functional and employee KPIs and the related performance management system will thereafter be designed, followed by performance coaching and mentoring of ICTU-HQ staff and supervisors (Phase 5 of the ICTU-HQ Readiness Plan). While the initial KPI system proved ineffective, the training and process design provided a highly valuable learning opportunity for all ICTU-HQ staff involved; understanding the purpose and means of performance management is a significant accomplishment for the ICTU-HQ.

Other activities associated with moving the ICTU-HQ to best practices include the third-party PMP training (see Section 2.1) and the Readiness Action Plan implementation (as described in detail above).

GENDER INTEGRATION

Gender development activities undertaking during Year 2 resulted in significantly improving the understanding of women's role in the workplace by both the female ICTU-HQ employees and their male counterparts. It also provided female employees with extensive career networking opportunities inside and outside of the MWI as a coping mechanism to share the challenges and successes of female inclusion. Overall, the ITMP-IP project succeeded in transferring knowledge, building a common vocabulary and understanding for gender mainstreaming, and delivering targeted interventions to ICTU-HQ staff and management.

Implementation of gender development activities in the ICTU-HQ included participative planning and conduct of several training events. The gender development team delivered a kick-off meeting to all female employees in the ICTU-HQ to provide a high-level overview of gender development, women's business professional groups, and the overall timeline and main activities for the gender development work plan.

The project team prepared a preliminary list of relevant women's professional organizations including membership requirements, fees, and training schedules. The team also coordinated several training events hosted by Mahari, the National Council for Women, to provide strategic communications and presentation skills to ICTU-HQ female employees. In addition, the ITMP-IP team provided training on the Convention of Elimination of All Kinds of Discrimination Against Women (CEDAW).

The following workshops, training, and coaching events were conducted or coordinated by the ITMP-IP project during Year 2 of the contract.

- Workshop with ICTU-HQ female employees to develop scenarios of implementing the Gender Committee in ICTU-HQ. (March 2010)

- Workshop for ICTU-HQ female staff members to discuss the Jordanian civil labor law. (May 2010)
- CEDAW Workshop on the Jordanian Labor Law for ICTU-HQ female employees. (April 2010)
- Executive coaching to female ICTU-HQ staff members on conflict management and professional development. (March–June 2010)
- Coordination of training attendance by ICTU-HQ female employees during the launch event for the "Who is She" Jordan database, part of the "Engendering the Public Sphere" initiative led by the Jordanian National Commission for Women. (May 2010)
- Gender Development Workshop for ICTU-HQ staff to accommodate all the professionals working at the ICTU-HQ. (June 2010)
- Communication Skills and Cross Gender Communication Workshop for 39 employees of the ICTU-HQ, both women and men. (August 2010)

The Gender Integration Plan developed during Year 1 of the project recommended establishing a gender committee or gender resource group. This was attempted during Year 2, but was found to be unfeasible for several reasons. Most importantly, the gender committee proved unfeasible due to the by-laws of the Civil Service Law. Nor was the suggested alternative, a gender resource group, deemed viable due to lack of any female leadership among the ICTU-HQ employees or commitment by MWI or WAJ for the necessary resources and budget. Secondarily, establishing a gender committee only for IT women seemed impractical given the interest and potential benefit to the larger MWI community, and yet, broadening membership was out of the scope for the ITMP-IP project. Finally, the provision of resources and funding for the long-term sustainability of such a committee (or resource group) was unlikely given the MWI resistance and financial restrictions.

2.2.2 Component 2: Executive Information System

The EIS component aims to provide the MWI with a central EIS that can be used by the senior management of MWI, the JVA, and WAJ to improve planning and decision making and achieve a better oversight of the water sector's performance. The EIS component consists of four tasks that were identified in Section C of the task order.

Task 2.1: *Prepare a Detailed Business Needs and Detailed Statement of Work*: This task consists of two subtasks. The first is intended to explore and assess EIS market and study potential technology options for the implementation of the system (completed in Year 1 of the project), while the second involves conducting a thorough EIS requirement analysis including establishment of a sufficient number of Key Performance Indicators (KPIs) to enable the development of the Request for Proposals (RFP) and identifying executive reporting requirements (both completed during Year 2). Activities of this sub-task include preparation, submission, and approval of a Business Requirements Specifications (BRS) document (incorporated into a request for proposals in Year 2, see Task 2.2).

Task 2.2: *Solicit and subcontract to an appropriate firm*: Starting with development of procurement documents, tendering, and evaluation of bids, selection of the most responsive bid evaluating vendor cost proposals, and warding and concluding the EIS implementation contract.

Task 2.3: *Supervise sub-implementer performance and conduct regular quality assurance for the required deliverables*: This involves oversight of the EIS implementation. The project is intending to implement EIS in three phases. The phased implementation approach will incrementally deliver EIS functionality and reporting capabilities to an increasing number of stakeholders while simultaneously training stakeholders on the most effective way to use the information produced by the system.

Task 2.4: *Successfully close-out the component:* To ensure that the implementer has successfully completed all deliverables as per the completion criteria, including training of end users and technical administrators and sign off on users acceptance testing.

Task 2.1: Prepare a Detailed Business Needs and Detailed Statement of Work (SOW)

Sub-Task 2.1.1: Assess EIS Market and Study Potential Technology Options for Implementation

Activity completed in Year 1

Sub-Task 2.1.2: Determine EIS Requirements

Establish Approved KPIs and Reports

In line with the Year 2 work plan, Sub-Task 2.1.2 involves working closely with stakeholders to establish water sector KPIs for the EIS, reporting requirements, and the associated systems landscape. In order to develop the water sector KPIs, the project facilitated the formation of nine specialized committees. Committee members were appointed in October 2009. Membership consisted of individuals representing WAJ including the PMU, MWI, JVA, the water companies, and the USAID-funded Instituting Water Demand Management in Jordan (IDARA). The committees and their members are shown in Table 5.

Table 5: Water Sector KPI Committees Members

EIS Area	Committee	Members	Organization
Water Situation	Water Resources	Mohammad Momani	MWI
		Ali Subah	MWI
		Suzan Kilani	WAJ
		Khair Hadid	WAJ
		Yousef Hassan	JVA
		Abeer Nassar	JVA
	yWater Suppl	Ayman Jaber	MWI
		Bassam Saleh	WAJ
		Tayseer Ghzawi	JVA
		Imad Azzam	Miyahuna
	Water Demands	Jamal Hijazi	MWI
		Louis Qaqish	IDARA
Operation & Maintenance	Water & Wastewater	Walid Sukkar	WAJ
		Hassan Amro	WAJ
		Jamal Naouri	PMU
		Ikhlas Shamon	PMU
		Ahmad Alimat	WAJ
		Ahmad Hoseh	WAJ
		Osama Mughrabi	WAJ
	Irrigation	Tayseer Ghzawi	JVA
		Youssef Hassan	JVA
		Qais Uweis	JVA
		Mohammad Fuheili	JVA
		Abeer Nassar	JVA
		Khuloud Bishtawi	JVA

EIS Area	Committee	Members	Organization
Financial		Feras Azzam	WAJ
		Hamed Abu Hawileh	MWI
		Sahar Kilani	JVA
		Tayseer Murad	Miyahuna
Project Performance & Capital Investment		Jamal Naouri	PMU
		Mohammad Jum'a	WAJ
		Khairi Ammari	JVA
		Isam Rimawi	MWI
		Raja Ammari	PMU
Administration	Human Resources	Ziad Darwish	MWI
		Rami Samawi	WAJ - Balqa Administration
		Khalil Absi	JVA
		Sameh Amad	Miyahuna
	Legal	Mohammad Abu Ghabsh	MWI
		Mahmoud Udwan	JVA
		Suhail Samawi	Miyahuna

The project conducted a kick-off meeting on 19 November 2009 to present an overall view of the EIS, demonstrate a typical EIS platform and conceptual model, and provide the members with their scopes of work. Building on the desktop research and previous workshops held in August 2009, which identified an initial set of KPIs to monitor the sector performance, the project conducted more than 14 focused group meetings supplemented by one-on-one meetings with the various committees. The meetings aimed to

- Finalize the definitions of the KPIs in each EIS area/subarea;
- Develop EIS KPI metadata, consisting of KPI measuring unit, implementation priority, target value, the way the KPI will affect decision making, required spatial unit, whether the KPI is available, source and point of contact for the KPI, its update frequency, and the required presentation of the KPI;
- Attain agreement on the proposed EIS KPI formulae;
- Explore the availability of data in support of EIS KPI calculation;
- Form initial ideas about the quality of the required data;
- Identify the source systems from which the variables and data needed for the KPI calculation should be extracted. This includes definition of KPI variables, and their measurement unit, corresponding source type of the variable (manual, or computerized) corresponding to the responsible department and organization, its reliability, availability of historical records and their completeness, in addition to the variable update frequency; and
- Define target audiences for each KPI: Level 1, the Minister and Secretaries General; Level 2, Assistant Secretaries General; and Level 3, key directors.

The result of this extensive exercise was a shortlist of an initial set of KPIs that fulfilled the following selection criteria:

- Availability of reliable and frequently updated data;
- New KPIs (to avoid duplication of information with other systems); and
- KPIs that provide added value by allowing users to build insight into new areas.

The project proposed a list of KPIs which were afterwards incorporated into an EIS RFP. The list was circulated to the relevant committee members in April and revised following several iterations of discussions. A sign-off was requested on the revised version, but feedback was obtained only from JVA

within the required timeframe. Hence the project team assumed tacit consent to proceed (16 May 2010). During the EIS implementation planned in Year 3, the project team will continue to work with stakeholders and the winning vendor to select a subset of key KPIs that will be implemented during the three envisaged EIS implementation phases. (See also EIS implementation phases in the Year 3 Work Plan.)

In June 2010, the project kicked off the activities related to the identification of the EIS reporting requirements and associated systems landscape with the development of survey forms and questionnaires. The project vetted the proposed methodology, the list of systems, and key staff to be interviewed, with the ICTU-HQ. The ITMP-IP survey team completed 21 interviews with executives in WAJ, MWI, JVA, and the PMU. The survey identified 37 reporting requirements for Level 1 and Level 2 executives. According to the interviewees, 23 were considered as high priority. Seven additional "wish list" reports were identified, five of which would be required from entities external to the water sector.

Using the results of the reporting requirements survey, the project team then carried out a survey of the landscape of all the source systems that would be required to generate the reports for the water sector executives. Thirty-four such systems were identified in WAJ, JVA, MWI, and the water utilities. The project distributed questionnaires to the respective systems administrators. Only 14 questionnaires were completed and returned. The results from both the reporting requirements and systems landscape surveys were incorporated into the EIS request for proposals.

Decide on the Implementation Approach and Prepare Business Requirements Specifications

A key milestone identified during Year 1 under Sub-Task 2.1.2 was the development of a BRS document. In order for the EIS to be completed effectively, the project started preparing a solution architecture document which forms the main source of content for the preparation of the ADS-548 Report and the RFP. The ITMP-IP completed 80 percent of the first draft of the EIS Solution Architecture document, which was sufficient to start preparing the ADS 548 report required for obtaining USAID approval on the procurement. Further work on the Solution Architecture and the preparation of the BRS documents was stalled. Instead, and in order to gain back time lost during Year 2 in the preparation of these documents, it was decided to simply incorporate the BRS information directly into the RFP. In this way, the BRS information would still be included where it was ultimately needed—in the RFP—but would save time in not requiring review and revision of an additional document. The team moved ahead with the ADS 548 report while concurrently preparing a draft RFP that incorporated all the necessary parts: EIS business requirements, solution architecture, and EIS implementation approach. In this way, the component rapidly made up time lost during Year 2 in the preparation of these documents.

At the same time, the project proposed formation of a specialized IT involving business owners and IT specialists in the sector including water companies. The committee was mandated to sign off on the proposed EIS implementation approach, and review the technical and functional specifications of the EIS. This will allow the ITMP-IP not only to leverage the expertise of water sector experts and ultimate users of the system, but also to garner buy-in and support for the system.

Task 2.2: Solicit and Subcontract EIS or Determine Alternative Approach for Implementation

According to the Year 2 Work Plan, Task 2.2 involves completion of the following milestones:

1. Develop, submit, and gain approval for USAID ADS-548 report;
2. Prepare the RFP;
3. Publish and issue the RFP;
4. Establish proposal submission deadline;
5. Select winning vendor; and
6. Sign Contract with winning vendor.

As mentioned under Task 2.1.2, the project prepared the ADS 548 report in support of the USAID Independent Verification and Validation review of the EIS investment. The ITMP-IP submitted the report to the Information Resources Management (IRM) of the Office of the Chief Information Officer (CIO) in Washington DC, and received feedback on technical and functional requirements. Tetra Tech ARD received the ADS 548 approval on 27 August 2010.

Meanwhile, the project kicked off the first meeting of the EIS specialized committee as part of a technical committee meeting held in August 2010. During that meeting, the ITMP-IP CIO/EIS Advisor presented an overview of the EIS, its components, and solution options, together with the platform definition and proposed implementation approach. The meeting also addressed sustainability issues related to pre-implementation and post-implementation of the EIS, in addition to the results of the reporting requirements and associated systems. Both the technical and EIS specialized committees approved the EIS implementation approach, the proposed selection criteria for both the water sector KPIs and reports, and the ITMP-IP recommendation to use commercially based open source software (Enterprise Edition) provided it can be supported locally.

In September 2010, the ITMP-IP completed a draft RFP which incorporated feedback on the technical and functional specifications obtained from the specialized EIS committee. (Feedback was obtained from two members only, out of nine.) Feedback from the IRM was also integrated into the RFP, prior to its submission to the USAID Contracting Officer for review. The project received USAID comments on 29 September 2010, which will be duly incorporated into the RFP.

Task 2.3: Supervise Sub-Implementer Performance

Task not started. Rescheduled for Year 3.

Task 2.4: Successfully Close Out EIS Component

Task not started. Planned for Year 3.

2.2.3 Component 3: Collaboration and Web Presence

The objective of the Collaboration and Web Presence component is to implement web collaboration capabilities in the ICTU-HQ that will enable personnel and administrative productivity improvements. The use of such tools in the ICTU-HQ will be the “launching ground” for further rollout, through training of a sector-wide Collaboration Team who will be trained on Microsoft (MS) SharePoint. This learn-by-doing approach will allow the Collaboration Team members to initially work with vendor-provided experts to design, develop, and deploy selected workflows in the ICTU-HQ. Collaboration Team members will then further deploy the selected and additional workflows in their home institutions, on their own. The Collaboration Team would subsequently be able to expand the rollout of the collaboration tools sector-wide, independently of the ITMP-IP project.

Task 3.1: Prepare a Detailed Business Needs and Detailed Statement of Work (SOW)

Preparation of a detailed business needs and SOW was completed in Year 1. The ITMP-IP team together with the ICTU-HQ decided to adopt MOSS as the collaboration platform of choice, building on the Government of Jordan’s existing MOSS capabilities, and providing extensive organizational capacity building to ensure that the existing MOSS system is fully utilized.

Task 3.2: Solicit and Subcontract Collaboration and Web Presence or Determine Alternative Approach for Implementation

As indicated in the Year 1 progress report, the ITMP-IP project attempted in Year 2 to implement the Collaboration and Web Presence component using project resources rather than an external vendor. Jointly with the sector and the ICTU-HQ, the following collaboration platform features were selected:

- Document/Knowledge Management; and
- Forms and workflow automation using two popular requests – Leave and Vacation Request (WAJ) and the Internal Audit Process (WAJ Labs).

Four departments were also selected to pilot collaboration improvements, as indicated in Table 6.

Table 6: Year 1 Selected Pilot Departments and Corresponding Processes

Entity	Department	Processes
ICTU-HQ	e-Government Group	Document /Knowledge Management
		Workflow Automation – Leave and Vacation Request (Legacy WAJ process)
MWI	Water Information System (WIS)	Document /Knowledge Management
JVA	GIS	Document /Knowledge Management
WAJ Labs	Internal Audit Group	Document /Knowledge Management
		Workflow Automation – Internal Audit Process

Task 3.3: Supervise Sub-Implementer Performance

A summary of Year 2 activities completed with project resources in the Collaboration and Web Presence component follow.

Pilot Deployment – ITMP-IP Project Managing the Process

The project launched MOSS in the sector using ICTU-HQ as the starting point. This was accomplished by launching document and knowledge management capabilities via department web sites at one department (e-Government) in October 2009 to be rolled out to another three in December 2010 (Water Information Systems, WAJ Labs, and GIS). The department web sites serve as a venue for ICTU-HQ staff to enter and update and report upon their daily tasks.

The following lists the activities that were involved in the pilot deployment:

- Built and deployed collaboration site as a pilot in e-Government unit and built sites for later deployment in three other units;
- Established an instance of MOSS 2007 aligned with industry best practices to facilitate the build activities indicated above (as the implementation used in the ICTU-HQ was found to be not suitable);
- Assisted the ICTU-HQ to re-engineer the Active Directory (AD) implementation related to ICTU-HQ staff in order to facilitate the deployment of applications and capabilities of the MOSS collaboration platform;
- Successfully deployed the following sites in the e-Government department:
  - Document/ Knowledge Management,
  - Meetings for use as an online home for meeting information, and

  - Projects and task management to enable employees and managers to manage and monitor projects and daily tasks;
- Delivered hands-on training and mentorship to the e-Government Team of the ICTU-HQ on the use of the department collaboration sites deployed as part of the pilot implementation; and
- Created MOSS training modules, including video tutorials to provide easy-to-understand demonstrations explaining how to use day-to-day functionalities in SharePoint.

Due to the positive impact of the pilot task management feature on the e-Government department performance, the ICTU-HQ Director requested that the ITMP-IP project enhance the task management feature with specific requirements and workflows and deploy it to the 13 ICTU-HQ departments instead of three. Accordingly, a revised pilot deployment was prepared involving the departments and processes for development shown in the table below.

Table 7: Revised Year 1 Selected Pilot Departments and Corresponding Processes

Entity	Department	Comment	Processes
ICTU-HQ	All departments	Pilot	Document /Knowledge Management
			Task Tracking Tool
		Originally a pilot project but deferred to Deployment 1.0 (ICTU-HQ Director request)	Workflow Automation – Leave and Vacation Request (legacy WAJ process)
WAJ Labs	Internal Audit Group	Pilot	Document /Knowledge Management
		Originally a pilot process but deferred to Deployment 1.0 (ICTU-HQ Director request)	Workflow Automation – Internal Audit Process

Subsequently, the project designed a task tracking and monitoring process with corresponding reporting and monitoring dashboards. Project-funded programmers built and deployed a task monitoring and reporting tool on the collaboration platform to the ICTU-HQ. Intranet sites with enhanced task management capabilities and workflows were also created and deployed. The programmers completed their "build" activities in December 2009 and deployed MOSS document/knowledge management sites for the ICTU-HQ divisions and departments (13 in all). The deployment incorporated document sharing and workflow and reporting processes (task tracking and monitoring). Access to the portal MOSS-based Intranet via the Internet was accomplished via the publication of the following URL – http://212.118.28.138. These features were embraced by the entire ICTU-HQ, and are still in use today.

During the second quarter of Year 2, the project finalized a Collaboration Year 1 Activities Report and prepared a presentation of the year's deliverables for the project's Technical Committee. In addition, the project-funded programmers fine-tuned the candidate version of the pilot implementation within ICTU-HQ of the document and tasks management capacities of MOSS collaboration tool. Organizational hierarchy data was completed in the Active Directory for the ICTU-HQ and was started for the thousands of staff in the three HQ organizations. In a parallel activity, the project's acquisition support staff assisted ICTU-HQ to successfully tender the restructuring of the websites of the MWI, WAJ, and JVA.

The Task Management System (TMS) for ICTU-HQ was launched officially in April 2010 in a special event, and coaching of related staff members in ICTU-HQ began. Specifically, the ITMP-IP programmers coach the ICTU-HQ e-Government team on how to use and administer the TMS and how to update user information and organization structure on the Active Directory. Subsequently, the e-Government team provided on-the-job training to other ICTU-HQ staff on use of the task management system. Rollout of the TMS included all sections in the Applications Department in ICTU-HQ. Changes

in ICTU-HQ organizational structure were reflected on active directory, task management sites, and reporting modules. The project also created a training site to host the video training tutorials for TMS instead of using YouTube.

Importantly, these activities resulted in establishing a technical forum for communications among ICTU-HQ, ITMP-IP, and water companies (Miyahuna, NGWA, and AW). While such communications open the door for closer collaboration and cooperation, it also had the unintended side-effect of raising expectations for use of collaboration and a business process automation platform. The project attempted to respond by planning a collaboration and business process automation platform for AWC, working with an AWC team to introduce Enterprise Shared Bus (ESB) practices and standards and planned BizTalk Server 2009 for AWC to facilitate the integration of heterogeneous systems.

The ITMP-IP project programmers installed MOSS in Miyahuna and AWC, and restructuring started on their respective active directories in preparation for rollout of the tasks management capacities. The project's programmers developed video tutorials to support distance learning for rolling out tasks management throughout all entities of the water sector. The project also initiated the environment setup for the deployment of MOSS in NGWA, and developed POCs for AWC demonstrating integration between heterogeneous systems using BizTalk server. These were performed jointly by AWC's IT staff. The ITMP-IP programmers began documenting the business processes and workflows in AWC.

Four additional sites were created to serve three purposes:

- A document-sharing site to be used by ITMP-IP and ICTU-HQ for relevant project publications instead of emails;
- A document-sharing site and a separate meeting site to be used by ITMP-IP and MWI to share documents related to rolling out the Collaboration Suite at MWI; and
- The HR MySite component in the Collaboration Suite.

Upon the request of the Technical Committee (May 2010), the project developed a rollout plan for the Collaboration Suite which was vetted with the ICTU-HQ and water companies. In order to enable the rollout of Collaboration applications sector-wide, the water companies proposed to form a Collaboration Team with representatives from the ICTU-HQ, Miyahuna, NGWA, and AWC. This approach would leverage the sector's existing capacity, rather than relying fully on the project's programmers, and also provide an excellent means for learning by doing that would ensure longer-term sustainability after the ITMP-IP project ended. The selection of Collaboration Team members would be based on skills set requirements to be identified by the ITMP-IP in order to qualify for training in MS SharePoint. Once training was completed, the team would work closely in the design, development, and deployment of additional workflows in the ICTU-HQ. During Year 3, the Collaboration Team would implement some of these workflows in other departments within or external to the headquarters organizations. By then, the Collaboration Team would take ownership and responsibility for further expansion of Collaboration capabilities sector-wide, independently of the ITMP-IP project.

In view of the above, the ITMP-IP project identified a list of prospective workflows/and presented them to the Technical Committee in July 2010. The Technical Committee voted on the workflows, identifying six as meeting the selection criteria that included the number of users affected and the number of organizations benefitting. The priority workflows identified are internal memo (six votes), maintenance request (five votes), procurement (five votes), water/wastewater subscription request (five votes), transportation request (one vote), and medical evaluation request (one vote). These priority workflows were subsequently selected for automation by the Technical Committee and vetted with the Secretaries and Assistant Secretaries General.

During the same period, the project defined the skills set needed for MS SharePoint training. Accordingly, Collaboration Team members were nominated and their curricula vitae forwarded to the ICTU-HQ in

response to a letter prepared by WAJ at the end of July 2010. The ITMP-IP worked closely with ICTU-HQ and Microsoft to coordinate this activity and to identify the best training options for the Collaboration Team. The project forwarded the Collaboration Team members' curricula vitae to Microsoft for assessment and subsequent design of a customized training program. Training from Microsoft is scheduled to begin on 31 October 2010.

In order to assess the one implementation option for the continuation of the Collaboration and Web Presence component, a demonstration on an e-Correspondence application was presented on 8 August to the USAID COTR and ITMP-IP Project team. In September 2010, the project decided to proceed with procurement of the following workflow applications through a competitive bid/offer solicitation according to USAID rules and regulations:

1. Internal Memo;
2. Maintenance Request;
3. Water/Wastewater Subscription Request;
4. Procurement; and
5. Medical Evaluation Request or Transportation Request.

Meanwhile, preparations continue to ensure that the counterpart Web Collaboration Team will receive adequate training prior to implementation of additional workflows under this component. Importantly, completion of this task is pending USAID approval of a budget realignment that will free up the necessary resources for a subcontract award to a sub-implementer.

Task 3.4: Successfully Close Out Collaboration and Web Presence Component

Scheduled to be completed no later than December 2009, this task will be shifted to Year 3. A contract modification will be required, and will be submitted by Tetra Tech ARD to USAID with the scope modification and associated budget realignment request.

2.2.4 Component 4: Infrastructure, E-Readiness, and E-Government

The Infrastructure, e-Readiness and e-Government Component is specifically targeted to support the updating and upgrading of ICTU-HQ infrastructure, operating procedures, security, and move toward green-IT in order to support its core business functionality. In addition, in order for the ICTU-HQ to begin promoting and delivering secure e-Services and eventually to be ready to participate in e-Government ("e-Readiness"), multiple factors required review, including many completed during Year 2 of the project:

1. Headquarters local area network LAN upgrade;
2. Remote office LAN and WAN upgrades (including associated hardware upgrades);
3. Infrastructure Management Tools;
4. Application Lifecycle Maintenance Tools; and
5. IT Security status and procedures.

In April 2010, with the hiring of the Infrastructure Manager and the CIO Advisor, an Infrastructure Development Action Plan was developed jointly with the ICTU-HQ, and was vetted with the ICTU-HQ Director, ICTU-HQ Infrastructure Team, and the IMTP-IP Technical Committee. The plan comprised four phases: (1) Baseline Phase, (2) Assessment Phase, (3) Recommendation Phase, and (4) Supervision Phase.

Both Phases 1 and 2 above fall under Contract Task 4.1 "Prepare A Detailed Business Needs and Detailed Statement of Work," while the activities under the Recommendation and Supervision Phases represent the requirements under Contract Task 4.2 "Provide Technical Assistance to the GOJ During the Tendering

Process" and Task 4.3 "Provide General Oversight and Coordinate Performance of Sub-Implementer," respectively.

The plan, which was vetted with the ICTU-HQ Director and Infrastructure Team, identified all the activities needed in order to ensure e-Readiness of ICTU-HQ, targeting the following objectives:

- Ensure that the infrastructure is ready to provide e-Services;
- Improve, enhance, and secure infrastructure and related services;
- Ensure secure connectivity of remote offices;
- Improve network and service management;
- Improve Data Center status to move into Tier 2 aiming towards Tier 3;
- Understand the need for building a sector-wide secure network and provide detailed design documents;
- Align ICTU-HQ services to e-Government initiatives and ensure compliance to SGN network requirements;
- Assist ICTU-HQ in budgeting, planning, and e-Service enablement;
- Assist ICTU-HQ in cost optimization;
- Co-develop proofs of concept;
- Develop infrastructure team technical skills and provide daily support; and
- Reduce time and cost through introducing a "Dynamic Infrastructure Concept."

The following section details the activities associated with each of the contract task areas.

Task 4.1 Prepare a Detailed Business Needs and Detailed Statement of Work

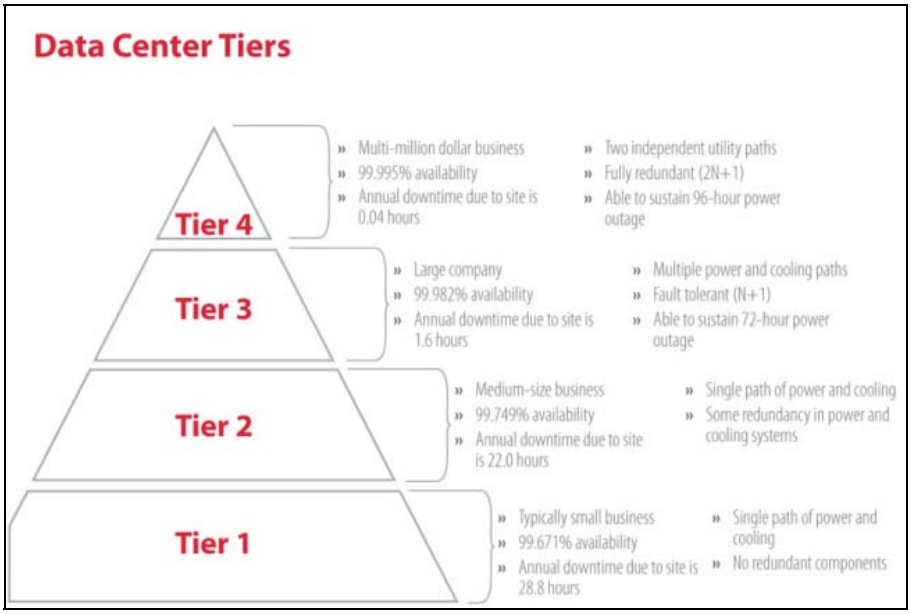
Sub-Task 4.1.1: Phase I: Baseline Phase

A key input to any procurement is adequate understanding of the business and identification of its needs. Accordingly, the project-funded Infrastructure Manager (who joined the project in February 2010) began as part of the baseline phase to gather relevant information to understand the ICTU-HQ mission, existing services, and infrastructure details. In addition, the project jointly collected with the ICTU-HQ Infrastructure Team relevant information on existing infrastructure components, their service status, and existing network diagram, and met with the ICTU-HQ Infrastructure team to understand their roles and responsibilities.

Sub-Task 4.1.2: Phase II: Assessment Phase

In order to move the ICTU-HQ to e-Readiness, the IMTP-IP project identified several network-related assessment and analysis areas. The areas are LAN/WAN, bandwidth optimization, unified communications, virtualization, Data Center operations, backup and storage, and antivirus. These and additional assessment planned for Year 3 are all intended to help evolve the ICTU-HQ to a higher tier of service provision. International standards for Data Centers refer to four tiers of service: Tier 1, Tier 2, Tier 3, and Tier 4. One objective of the Infrastructure, e-Readiness and e-Government Component is to help the ICTU-HQ move to a Tier 2 level of service and pave the way for it to move on its own into Tier 3, as shown in the diagram below. Another is to help the ICTU-HQ to participate in the GOJ's Secure Government Network (SGN); on as-needed basis.

Figure 1: Data Center Tiers



LAN/WAN Assessments were needed to (a) assist the ICTU-HQ in providing a scalable architecture and infrastructure design and plan for future growth and improve timeliness of its services, (b) ensure that LAN connectivity of remote offices is efficient and fully functioning, and (c) ensure all remote offices have high-speed connection to ICTU-HQ for the entire water sector. During Year 2, this assessment focused on the Middle Governorates, resulting in the report "Water Authority of Jordan Remote Site Assessment" (September 2010).

For this assessment, the Infrastructure Manager visited WAJ remote offices and assessed the LAN and WAN infrastructure needs in several sites:

- Zarqa Central Water Administration and Ruseifa Directorate;
- Balqa Central Water Administration and Fuheis, Ain El-Bash, Deir Alla, and South Shuneh Directorates;
- Madaba Central Water Administration and Deiban Directorate;
- Karak Central Water Administration; and
- Tafileh Central Water Administration.

The purpose of the visits was to document WAN structure, software, hardware, applications, and networking requirements of the remote offices and to understand users' business requirements and the capabilities of IT staff. Subsequently, the project prepared a gap analysis for identifying improvement opportunities and requirements that were included in the "Water Authority of Jordan Remote Sites Assessment" report, submitted to the USAID in September 2010. The assessment included the status of the IT resources in the remote sites and associated risks and security threats, based on which recommendations were prioritized and presented with a corresponding timeline for implementation. The assessment also included bills of quantity and proposed specifications for the required hardware. (See also Task 4.2.)

Based on the results of the LAN assessment, the project completed the design of the WAN for the entire sector. The project's Infrastructure Manager supervised the installation of a new LAN in Fuheis Remote Office and connected it to the frame relay WAN. The ITMP-IP supported the reconfiguration of the existing LAN in the Zarqa remote office and applied the results of the assessment to the provision of PCs

and peripheral devices (particularly printers) to the remote sites, and to the implementation of some of the recommendations in the various sites including installation of a domain controller, active directory, and antivirus software, and restructuring of the internet protocol (IP) schema. (See also Task 4.3.)

Upgrades to the existing WAN were also initiated and, by the time of compilation of this report, were well underway, converting from the previous frame relay technology to 2Mbps microwave technology. In August 2010, the project expanded its LAN/WAN connectivity assessment to include the JVA Control Center. Requirements formed the basis for further meetings with internet service providers (ISPs), Umniah, Zain, Orange, BatleCo, to discuss possible solutions and respective costs. Together, these upgrades resulted in performance improvements ranging from 100 percent (a doubling of performance) to 760 percent (a more than sevenfold performance improvement).

Bandwidth Optimization ensures that e-Services can be provided and fulfilled without any interruption or loss of data, and that the services are delivered in a secure manner. During Year 2, the Infrastructure Manager conducted several tasks to analyze traffic patterns, application requirements, and user requirements, and provided ICTU-HQ with various options to update and securely manage existing bandwidth. Jointly with the ICTU-HQ, the project also met with ISPs to discuss solutions for bandwidth optimization (see also Task 4.2). Accordingly, several options for internal bandwidth management were assessed. Respective findings will be presented as part of the "HQ LAN Network and WAN Connectivity" report due for submission at the end of October 2010. The report will include assessment of the LAN at the headquarters and the WAN connectivity for the remote sites, propose a network diagram for the headquarters LAN and WAN, and make recommendations for bandwidth optimization. The report will also consolidate the findings of the completed assessment of the current practices and tools used for network monitoring and management, and will make recommendations for acquisitions to address the gaps.

Unified Communication allows the implementation of an Integrated Unified Communications System for ICTU-HQ that will reap benefits, including lowering communication costs, improving meeting means and collaboration, improving communication security, and reducing maintenance and operations costs. In Year 2, Microsoft worked with the ICTU-HQ and the project to carry out an assessment of the requirements to establish a unified communication system. The assessment included the benefits related to the system's implementation, associated cost, and return on investment. Accordingly, ICTU-HQ decided to leverage government agreement with Microsoft who offered support for the implementation of Office Communication Server (OCS); in order to provide VOIP, video conferencing, and instant messaging for the entire sector. Microsoft requested that ICTU-HQ provide eight servers to install MS OCS. Full implementation of the unified communication system is now pending allocation of sufficient funds for relevant ICTU-HQ procurement in the 2011 budget.

Virtualization increases hardware utilization, optimizes business and network infrastructure, and improves servers' availability. Benefits include moving into green-IT, reducing maintenance and operations costs, and improving service availability and management.

In August 2010, the project prepared and submitted a "Servers and Storage Assessment and Recommendations" report for the ICTU-HQ Data Center. The report provided recommendations for upgrading the ICTU-HQ's current server and storage infrastructure in order to meet the unit's current and future requirements. Highlights of the recommendations include moving towards blade server technologies, server virtualization, and implementing a business continuity plan that includes server and storage disaster recovery and upgrading of the current infrastructure following a recommended upgrade path.

During mid-Year 2, the project also initiated virtualization assessments by industry leaders and is currently developing associated recommendations for the existing servers. Three virtualization assessments were completed for the ICTU-HQ by industry leaders: STS, Base, and Optimiza, representing VMware, Microsoft, and Citrix, respectively. The results of these assessments will be incorporated into a consolidated virtualization report which will be submitted in October/November 2010.

Data Center: Upgrades to the existing ICTU-HQ Data Center are needed to follow industry best practices. The ICTU-HQ Data Center is currently considered at the entry level for a modern data center structure and operation. The Data Center can be utilized to provide disaster recovery services for the water utilities in Jordan, but in order for it to provide such a service, the Data Center must be upgraded and able to meet international best practices. Activities associated with this fall under the ICTU-HQ Support Component.

During Year 2, the Infrastructure Manager conducted an initial assessment of the Data Center readiness based on the pyramid representing the various tiers (see above figure). The assessment concluded that ICTU-HQ Data Center qualifies for Tier 1 but must be moved to Tier 2 in order to provide disaster recovery services. All findings from this assessment will be compiled in an analysis report together with recommendations for improvements and related Bills of Quantity (BOQs). The Data Center Analysis report will be submitted pending the associated risk assessment and business impact analysis which will be completed in December 2010.

Backup and Storage is needed to store data in a centralized location while providing redundancy, availability, scalability, and security. During Year 2, the project conducted an assessment for existing servers and storage and backup infrastructure and their limitations. Results of the assessment were included in the "Servers and Storage Assessment and Recommendations" report (August 2010). (See also Task 4.1.2.1.) The report concluded that most of the ICTU-HQ's current server and storage infrastructure consists of equipment that are running on old technology and has therefore reached the end of its product lifecycles, while existing storage uses slow storage area network (SAN) speeds. This limits expandability of the Data Center to fulfill ICTU-HQ's current and future needs. The report recommended upgrade of the existing SAN infrastructure to benefit from current fiber change (FC) speeds and allow for much larger raw capacity, and provides a summary of the upgrade paths from the existing infrastructure to the recommended infrastructure.

Antivirus: A draft assessment on the current state of the existing antivirus posture was completed in August 2010 and submitted to the ICTU-HQ director for review. Once finalized, it will be submitted in a separate report in February 2011. The assessment will include the current process for uploading and implementing antivirus, as well as recommendations for uploading antivirus and security patches.

Note: Upgrades recommended from the completed assessments are being considered in the Year 2011 ICTU-HQ capital and operational plan.

E-Government/Secure Government Network

The e-Government and Secure Government Network sub-task involves helping the ICTU-HQ to understand and meet the requirements for participation in the SGN. No business needs or SOW activities are associated with this sub-task. However, during Year 2 and jointly with the ICTU-HQ, the project initiated a dialogue with the Ministry of Information and Communications Technology (MOICT) concerning the SGN. The Infrastructure Manager, together with the ICTU-HQ, met with the e-Government team to understand and ensure that their requirements are fulfilled and considered with the upcoming activities of ICTU-HQ. As a result, e-Government requirements are being addressed and incorporated into future ICTU-HQ initiatives.

Capacity building

The objective of capacity building, in the context of this component, is to train the ICTU-HQ and remote offices infrastructure staff, raise their level of knowledge and expertise to support and maintain new infrastructure, and implement a security awareness training program. Activities were ongoing throughout Year 2 in this area, consisting primarily of hands-on training and coaching as described in Annex 5. Important among the hands-on training was the Cisco Certified Network Administrator (CCNA) training provided by the Infrastructure Manager in April 2010. This training was provided to the ICTU-HQ

Infrastructure Team and consisted of 40 hours of training during one month. The training was sufficient to allow each trainee who passes a standardized test. The project also conducted training on "Fundamentals of Networks and Systems" for 11 persons representing the ICTU-HQ at both the headquarters and remote sites: WAJ Labs, and Karak and Zarqa Water Administrations.

In addition, the Infrastructure Manager cooperated with the HR Senior Advisor, working under the ICTU-HQ Readiness Action Plan, to identify staff training needs at the Infrastructure Division. (See ICTU-HQ Action Plan, Phases 2, 4, and 5, Subtask 1.1.A.) (This training needs assessment is considered part of the training plan which was developed and incorporated into the Year 3 work plan.) Implementing the training plan during Year 3 will significantly enhance staff capability to perform the job roles for which they will be reassigned into the new organizational structure.

The project also coordinated and supervised the implementation of various third-party training to ICTU-HQ, namely the training implemented for Help Desk staff at ICTU-HQ and for two ICTU-HQ Infrastructure staff on the ICTU-HQ air conditioning maintenance procedures, provided by the AC vendor. In addition, the ITMP-IP followed up on progress of training on the operation and maintenance of the UPS equipment for three members from the ICTU-HQ Infrastructure Team.

Task 4.2: Provide Technical Assistance to the GOJ during the Tendering Process

The assessments conducted in the previous task resulted in numerous procurements, upgrades, and proofs of concept under Task 4.2. These occurred in almost all of the areas assessed in the previous task: LAN/WAN, bandwidth optimization, unified communications, virtualization, Data Center operations, backup and storage, and antivirus. Specific activities under this component comprise:

1. Bid preparation, implementation, and closeout:
    - Creation of tendering documents;
    - Creation of evaluation criteria;
    - Follow-up on corresponding tendering documents;
    - Assistance in evaluating proposals as required, with ad hoc support to team preparing tender;
    - Participate in publishing bids and evaluating proposals;
    - Contract preparation and negotiation with the winning bidder;
    - Award and administer project contract;
    - Contract closure (if within time period of the ITMP-IP contract);
2. Development of recommendations on gaps reported in the assessment phase;
3. Provision of bills of quantity;
4. Meetings with vendors to discuss proposed solutions;
5. Solicitation of offers for ICTU-HQ budgeting;
6. Development of POCs with the ICTU-HQ; and
7. POCs jointly implemented with the ICTU-HQ Infrastructure Team and vendors.

LAN and WAN: As part of the "Water Authority of Jordan Remote Sites Assessment" report (September 2010), the ITMP-IP provided a list of actions that are required to meet the immediate needs of WAJ remote offices and address the respective risks of data loss single point of failure and security threats for each site. The report included prioritized recommendations which were presented with a corresponding timeline for implementation. Also included were bills of quantity and proposed specifications for the required hardware. (See also Task 4.1.2.1 for a listing of the remote sites.)

The ITMP-IP also provided technical specifications and reviews of proposals from vendors for a variety of ICTU-HQ infrastructure equipment (including servers, switches, routers, printers, PCs) and obtained technical solution offers from vendors to replace seven switches at ICTU-HQ. As a proof of concept, the

project supervised the installation of a web security device (Web Washer) at the ICTU-HQ to secure the Internet accessibility. The POC will determine whether or not the installed product will meet ICTU-HQ requirements. In addition, the project met with the Internet provider, Zain, to discuss expanding the WAN in JVA Dams Directorate, WAJ Labs in Amman, and JVA Labs in the Jordan Valley. As of the end of September 2010, it was agreed that Zain would implement a POC in each of these sites.

Bandwidth optimization: Following the assessments made on the LAN/WAN connectivity, the project together with the ICTU-HQ Director met with several Internet Service Providers to discuss and select solutions for bandwidth optimization. These included:

- '*Umnia' technical and sales team*: Discussed the existing contract with WAJ and JVA of the WAN connectivity in order to replace the existing WAN connectivity (frame relay) with fiber and microwave technology. An additional meeting was held during which the ICTU-HQ and ITMP-IP agreed to migrate the existing frame relay connection in the Middle Governorates and JVA's remote sites to a microwave connection with a minimum speed of 2 Mbps (from an existing speed of 256 Kbps) under the current maintenance contract without any additional price increase.
- *'Zain' technical team*: Agreed to start a POC for three locations (JVA Dams Directorate, WAJ Labs, and JVA labs) using Zain's Microwave connection.
- *'4-dimension' technical team*: Agreed to conduct a POC, for Traffic Analyzer in order to determine if the product will meet ICTU-HQ requirements. The project supervised the installation of a network traffic analyzer product in order to complete the WAN assessment activity, and developed a test case for bandwidth management and Internet splitter to ensure compliance of the respective vendor's products with the ICTU-HQ requirements.

Unified Communications: The project discussed with Microsoft representatives the implementation of Microsoft OCS 2007, which will dramatically reduce the cost of communications for WAJ and permit distance training and meetings, facilitating rollout of the Collaboration tool. Microsoft offered to finance $65,000 of the $197,000 cost. The implementation eventually depends on availability of funds.

Virtualization: The project discussed options with Hewlett Packard staff for obtaining upgraded servers through a trade-in process and the costs involved. In addition, the project and the ICTU-HQ Director met with an IBM technical team from Dubai to discuss the possibility of trading in existing servers at the ICTU-HQ with IBM servers. Receipt of IBM's proposal is still pending.

Data Center: The project will consolidate its recommendations for improvements and related Bill of Quantities for moving the Data Center from Tier 1 to Tier 2 in the "Data Center Analysis" report which will be submitted in December 2010, pending the completion of the associated risk assessment and business impact analysis under the ICTU-HQ support component. (See also Task 4.1.2.1.)

Backup and Storage: The "Servers and Storage Assessment and Recommendations" (see Task 4.1.2.1) recommended upgrades to the existing SAN infrastructure to benefit from current fiber channels speed and allow for much larger raw capacity, and provides a summary of the upgrade paths from the existing infrastructure to the recommended infrastructure. Bills of quantity are pending the completion of the disaster recovery and business continuity plan by December 2010.

Antivirus: Activities for this area will take place during Year 3.

Note: Recommendations are mostly completed, and proofs of concept is in progress.

Task 4.3: Provide General Oversight and Coordinate Performance of Sub-Implementer

In Task 4.3, ITMP-IP project staff provided general oversight and coordination of services performed as the result of procurements, upgrades, and proofs of concept under Task 4.2. Activities under this task aimed at assisting the ICTU-HQ in the following ways:

- Development and evaluation of Requests for Proposals (RFPs);
- Contract negotiations;
- Supervision of implementation in a joint effort with the ICTU-HQ;
- Reporting of risks, issues, or gaps to the ICTU-HQ director; and
- Provision of recommendations for budgeting and projects for the following year.

LAN and WAN Analysis: As mentioned in Task 4.1.2.1, the project initiated the necessary activities to implement the recommendations listed in the "Water Authority of Jordan Remote Sites Assessment" report. With the participation of the ICTU-HQ Infrastructure Team, the ITMP-IP achieved the following in response to the immediate ICT needs of the remote sites:

- Installed one new LAN in Fuheis remote office;
- Upgraded the WAN connection at Fuheis to 512 Kbps and connected Fuheis location to Amman through the frame relay, which facilitated the installation of X7. Fuheis is now fully operational;
- Installed a domain controller in Zarqa, Balqa, and Madaba;
- Supervised and led the installation of the antivirus servers and Windows Server Update Service (WSUS) in Zarqa, Balqa, and Madaba. Installation of antivirus installation included all desktops and servers such as ACCPAC Server (accounting system) and X7 (billing system);
- Restructured the IP address schema at Madaba, Zarqa, and Balqa; and
- Supervised the new configuration of the Router at Ruseifa. The new configuration included changes to the IP address Schema to comply with ICTU-HQ IP address Schema policy.

Bandwidth Optimization: The project supervised the installation of 2 Mbps microwave connections to link both JVA Dams Department and WAJ Labs with the ICTU-HQ and changed the IP address schema at JVA Dams Directorates to comply with that of the ICTU-HQ. The ITMP-IP also supervised installation of email accounts and added computers in the JVA Dams Department and WAJ Labs to the MWI domain.

Unified Communication: The project supervised with the ICTU-HQ Infrastructure Team the installation of a digital line for a call center for WAJ.

Virtualization: Activities associated with the implementation of virtualization will occur in Year 3.

Data Center: Jointly with the ICTU-HQ Infrastructure Team, the Infrastructure Manager supervised the installation and operation of three AC units in the Data Center and ensured all heating, ventilation, and air conditioning (HVAC) requirements were met. Scheduling of preventive maintenance is presently waiting the vendor's reply. In addition, the project supervised the delivery, final installation, and operation of two UPSs (80 KVA capacity each) and a new electricity circuit breaker. The UPSs are now fully operational.

Storage: Activities associated with the implementation of storage upgrades will occur in Year 3.

Back-up and Antivirus: As mentioned in Task 4.3, the project supervised and led the installation of the antivirus servers and Windows Server Update Service (WSUS) in Zarqa, Balqa, and Madaba.

Other Infrastructure Activities

In addition to the technical assistance the Infrastructure Manager provides under Tasks 4.1, 4.2, and 4.3, the project also provides on-site support through hands-on technical management of the sector's ICT infrastructure. The following lists the major Year 2 activities and accomplishments of the project under this category:

- Restructured the Active Directory and email accounts at the ICTU-HQ to reconcile account names with email addresses and ensure compatibility with SharePoint Server requirements. Completed Active Directory restructuring for WAJ.
- Moved the email system to a new server at the ICTU-HQ.
- Resolved technical problems that for several months did not allow backup of the server hosting X7 billing/customer information system (CIS) in Zarqa, and that threatened the Water Document Center Database server at MWI due to a virus.
- Worked with the ICTU-HQ Director to salvage and recover the mail server database which crashed during July. Reconfigured the existing Exchange Server (mail policy, storage group) and recovered all emails.
- Provided maintenance, support, and data recovery for Al Karak billing server running a Common Business-Oriented Language (COBOL)-based billing system (COBOS) Version II used by the ICTU-HQ application on Alpha server.
- Recovered Ruseifeh billing server was without the need to format the server.
- Obtained financial offers from Internet Service Providers to upgrade the ICTU-HQ internet connection from 5 MB to 10 MB, and to install digital line Primary Rate Interface (PRI).
- Participated in the supervisory committee for the website restructuring project implementation.
- With the support of the ITMP-IP, the ICTU-HQ procurement of a queuing system was completed, for which the project prepared the specifications, RFP, and assisted in the formal selection of the system.

2.2.5 Component 5: Back Office Systems Acquisition Support

The Back Office Systems Acquisition Support component provides technical assistance to the ICTU-HQ in procuring back office systems. This is accomplished by conducting market analyses, drafting statements of work and business specifications, and providing tendering assistance and project implementation oversight. Based on the ITMP-IP assessment of existing IT systems that was carried out in 2009, the project identified two back office systems that were not receiving support by other donors or entities within the e-Government initiative. These are the legal case management system, known as the Legal e-Service, and the Laboratory Information Management System (LIMS).

The task order lays out four task areas for back office acquisition support: Task 1 – Develop detailed terms of reference, Task 2 – Select successful sub-implementer, Task 3 – Supervise the implementation and monitor and evaluate its success, and Task 4 – Successfully close out the project. In the following, "Legal" and LIMS are described in turn according to this sequence of tasks.

Task 5.1: Legal E-Service

Sub-Task 5.1.1: Prepare a Detailed Business Needs and Detailed Statement of Work

During the first quarter of project Year 2 (October–December 2009), the project supported the ICTU-HQ through the entire procurement lifecycle for the Legal e-Service, including the preparation of business specifications and the creation of the RFP. The Legal e-Service will provide access for water sector legal departments to the MOJ legal case management system—MIZAN II. Preparation for the RFP publication took place in close cooperation with WAJ, MWI, Rule of Law Program (ROLP), the Ministry of Justice (MOJ), and the ICTU-HQ. The WAJ Tenders Department published the RFP in December 2009. The project also supported the ICTU-HQ through the establishment of a common understanding and framework for having a Memorandum of Understanding (MOU) signed between MWI and MOJ.

Sub-Task 5.1.2: Provide Technical Assistance to the GOJ during the Tendering Process

The ITMP-IP supported a WAJ-formed committee to evaluate proposals submitted in January 2010. Support included development of tender evaluation criteria and technical evaluation of the proposals. The project also supported the evaluation committee in completing its financial evaluation and submitted the report to WAJ Tendering Department which included the committee's recommendations. The approval process, involving the WAJ Tendering Department, the Audit Bureau, and the evaluation committee, culminated in a tender award in April 2010 following successful negotiations with the prospective vendor.

With the support of the project, the Minister of Water and Irrigation and Minister of Justice signed an MOU, prepared by the ITMP-IP and MWI's Legal Project Manager, in a ceremony that included USAID, ITMP-IP, and ROLP. The project facilitated meetings between the vendor and ICTU-HQ, ROLP, and MOJ representatives to discuss the proposed architecture and business requirements, layout, and design, and drafted Non-Disclosure Agreements (NDAs) in both English and Arabic to the ICTU-HQ for review, to be signed by the vendor, WAJ, and MOJ to ensure confidentiality of accessed information.

Finally, the project initiated communication during the second quarter with the Turkish Ministry of Justice for the purpose of conducting a study tour to review Turkey's web-based legal system based on the need identified during October 2009.

Sub-Task 5.1.3: Provide General Oversight and Coordinate Performance of Sub-Implementer

The oversight phase began in June 2010. Since that time, the ITMP-IP has been engaged in providing general oversight to the implementation of the Legal e-Service. Activities included meeting with the ICTU-HQ, ROLP, MOJ, and vendor to discuss the proposed prototype, report generation requirements, and design. Accordingly, the vendor submitted a modified layout which was approved by the Legal e-Service project team and completed with the ROLP the installation of Oracle 10G on a SSS-Process test computer. The ITMP-IP also reviewed management documents including MS Project plans and provided feedback. The ICTU-HQ and MOJ approved the Software Requirements Specifications (SRS) document. In July 2010, the ITMP-IP participated in the steering committee meeting attended by the ICTU-HQ Director, MOJ, ROLP, MWI Legal Project Manager, and the vendor in which the overall project progress and issues were discussed. Other meetings followed in August 2010. These represented the first demonstration of the solution developed, as well as the project status meetings to discuss overall progress and issues. With the completion of the development work by the vendor and all the preparations for the deployment stage, the ICTU-HQ and MOJ started testing activities at MOJ premises in September 2010.

Task 5.2: Laboratory Information Management System (LIMS)

Sub-Task 5.2.1: Prepare a Detailed Business Needs and Detailed Statement of Work

The project supported the ICTU-HQ through the entire procurement lifecycle for the LIMS, including the creation of the RFP, evaluation criteria, and evaluation of proposals. This culminated in publishing the RFP in October 2009. Accordingly, WAJ Tenders Department received bid responses in November 2010.

Sub-Task 5.2.2: Provide Technical Assistance to the GOJ during the Tendering Process

Upon the request of the ICTU-HQ Director, the project supported the sector during the technical and financial evaluation of the bid responses. The technical and financial evaluations were concluded in December 2009 and March 2010, respectively. During this period, the ITMP-IP closely followed up with ICTU-HQ and the WAJ Tendering Department to ensure obtaining the Audit's Bureau approval on the recommendations of the Technical Evaluation Committee. The Audit's Bureau held the approval for several weeks causing delays that had to be escalated by the project to the ITMP-IP Technical Committee. Accordingly, the Audit Bureau's representative approved the recommendations, and the financial

proposals were opened on February 4, 2010. Financial evaluation proceeded with the project's support. This included preparing a list of questions to the bidders, providing assistance in reviewing their responses, financial analysis of cost proposals, and preparing a financial report. Following the approval obtained from the Tendering Department and the Audit Bureau, the project assisted in planning and preparing for the financial negotiation phase with the qualified bidders and helped the Evaluation Committee hold several negotiation meetings with the first two ranked bidders, based on which the financial evaluation was completed and submitted as part of a report to the WAJ Tendering Department with the Committee recommendations. Approval was obtained at the end of April 2010.

Following a request made by the WAJ Tendering Department's request, the winning bidder provided a final list of hardware to be supplied, after which the award document was issued and signed by the Minister of Finance and Minister of Water and Irrigation (May 2010). The winning bidder was requested to prepare an SLA upon signing the contract. The Project assisted the ICTU-HQ and WAJ Tendering Department in reviewing and responding to the winning bidder's comments on the award letter, and helped the ICTU-HQ-designated LIMS Project Manager plan for the kickoff meeting with the vendor and LIMS stakeholders. In June 2010, the project completed and submitted a report on the successful completion of the tendering phase of LIMS, as part of the project's support to ICTU-HQ under the acquisition support component.

Sub-Task 5.2.3: Provide General Oversight and Coordinate Performance of Sub-Implementer

Oversight of LIMS implementation began in June 2010, with kickoff and planning meetings which took place in Amman with the vendor and the LIMS Team (representing ICTU-HQ, WAJ Labs, and JVA Labs). The project supported planning for these meetings and participated in initiation meetings with the LIMS team. In addition, the ITMP-IP provided feedback on various LIMS project management documents submitted by the vendor, including the MS project plan, the project quality plan (PQP) document, and the change management plan.

During the last quarter of Year 2 (July–September 2010), the project continued to provide project management support to the ICTU-HQ LIMS Project Manager and project team, including assisting in the coordination of LIMS hardware delivery by the vendor and reviewing the NDA provided by the vendor. Due to contradiction of the vendor's NDA with the GOJ's laws and regulations, the ITMP-IP sent a draft proposed NDA (in both English and Arabic) for ICTU-HQ and MWI legal department review.

The ITMP-IP also assisted in coordinating and planning for two vendor training workshops on LIMS. The workshops resulted in reviewing and updating the requirements trace matrix along with prototype "walk-throughs." In September, the vendor conducted an instrument survey for both WAJ and JVA Labs. An instrument integration and networking report was issued. Both labs, with ICTU-HQ's support, worked to meet the requirements and recommendations mentioned in the report to be able to integrate a LIMS solution with lab instruments.

In cooperation with the ICTU-HQ LIMS project team, the vendor installed and configured a "sandbox" server and conducted workshops with the WAJ/JVA team on topics related to data loading and ware-housing, reporting, test approaches and test planning and scripting, in addition to interfaces with the MWI Water Information System, JVA Water Management Information System (WMIS), and GIS. As of the end of September 2010, the vendor held a Stage Gate Review (SGR) with the LIMS project management team.

2.2.6 Component 6: Asset Management – Maintenance Management System (AM-MM) Acquisition Support

The ITMP-IP project's involvement in AM-MM is limited conditionality requirements—specifically, availability of GOJ funds for implementation and the requirement that such implementation take place within the three-year timeframe of the ITMP-IP. AM-MM is a particularly expensive, complex, and long-

term investment and one which should not be undertaken without extensive institutional as well as technical preparation. It would have been unlikely to meet the conditionality requirements, even if work had begun immediately upon ITMP-IP contract award.

At the same time, however, AM-MM can provide huge cost savings and efficiency improvements to organizations in a position to take full advantage of the technology. There was keen interest from the water sector in general for the ITMP-IP to evaluate the institutional "readiness" of major water sector entities to implement AM-MM. Therefore, as part of the scope modification and budget realignment approved by USAID in December 2009, the project was authorized to carry out a prefeasibility study to assess the readiness of the water sector to adopt AM-MM best practices (BPs).

As with the other acquisition support tasks, the ITMP-IP task order lays out four task areas for AM-MM acquisition support: Task 1 – Develop detailed terms of reference, Task 2 – Select successful sub-implementer, Task 3 – Supervise the implementation and monitor and evaluate its success, and Task 4 – Successfully close out the project.

While a terms of reference was not developed for AM-MM, the aim of the prefeasibility study was to provide support to decision makers that would allow them to better determine whether or not an RFP was timely and whether or not major water sector institutions were "ready" to take on the challenge of significantly improving the management and maintenance of the assets utilized by Jordan's water operators (water utilities, water companies, and bulk water suppliers) through full application of AM-MM. Included in the study's scope were Miyahuna, the AWC, the WAJ Central Operations Department, NGWA, and the Zarqa Water Administration.

The project began preparing for the prefeasibility study by reviewing and consolidating previous work on AM-MM assessments, gathering data, and reviewing relevant documents, including business plans, organizational charts, SOPs, and the 2006 IT Master Plan. The ITMP-IP team conducted informational interviews with water operators' staff at various levels and with various donor project staff active in the Jordan water sector, and held several workshops for key AM-MM stakeholders. The workshops included informative presentations on AM-MM best practices, and guided discussions. In order to provide the basis for evaluating the organizational readiness to undertake the type of change required for moving to Asset Management-Maintenance Management Best Practices (AM-MM-BP), the project conducted "self-assessment workshops" for each of the water operators included in the study, in addition to a review and strategy workshop which brought together key staff from the five assessed organizations to review, discuss, and provide feedback on the findings of the assessments and to solicit ideas for AM-MM-BP implementation strategies. Finally, the project collected information on system capabilities and related costs from leading vendors in Jordan.

The results of the prefeasibility study were delivered in two reports:

- An **interim report** on the findings of the study as they related to WAJ Central Operations Department, entitled "AM-MM Pre-Feasibility Study Interim Report on WAJ" submitted in April 2010. The report was prepared upon a request made by an executive committee formed by the Minister of Water and Irrigation to help position WAJ on a way forward with respect to WAJ procurement evaluation of an AM-MM system for the Central Operations Department. The committee was created following a presentation made in March 2010 to the ITMP-IP Steering Committee on the scope of the AM-MM prefeasibility study, to ensure that the results of the study were integrated into the letter of award or, if necessary, in a revised version of the RFP, if needed.
- A **final report** with the final results of the study were submitted in July 2010; "Final Report for the AM-MM Prefeasibility Study."

The results of the AM-MM prefeasibility assessment were presented to the ITMP-IP Steering Committee on 4 August 2010 and subsequently to the ITMP-IP Technical Committee on 10 August 2010. WAJ executives

were invited through a separate letter issued by WAJ Secretary General (SG). However, due to the short notice, no representatives from WAJ Water Administration attended the meeting. A second meeting will be rescheduled for October or November 2010, to which NGWA representatives will also be invited.

Sub-Task 6.1: Prepare a Detailed Business Needs and Detailed Statement of Work

Upon request made by the Minister of Water and Irrigation during the February 2010 Steering Committee meeting, the project carried out a technical review of the WAJ RFP "209/128–Water Facilities Management and Maintenance System (WFMMS)"and submitted its feedback on the technical specifications to the Minister and the Secretaries General of MWI, WAJ, and JVA. The RFP had been issued by WAJ to purchase an AM-MM system for its central production unit in December 2009. Review of WAJ RFP concluded that the tender documents utilized for that procurement suffered from several defects, and that WAJ should wait for AM-MM study's final report before pursuing further procurement for any type of maintenance management computer system. Accordingly, the procurement was halted, pending finalization of the AM-MM prefeasibility study.

Sub-Task 6.2: Provide General Oversight and Coordinate Performance of Sub-Implementer

Not applicable.

Sub-Task 6.3: Successfully Close Out Asset Management – Maintenance Management System

Not applicable.

2.2.7 Component 7: Supply Chain Acquisition Support

The Supply Chain Acquisition Support component was removed as a potential area of support when the Ministry of Finance, General Supply Department, deployed a standard government inventory management system intended for mandatory use across all GOJ entities.

3.0 SUMMARY OF ACCOMPLISHED ACTIVITIES AND DELIVERABLES

3.1 PROJECT MANAGEMENT AND ADMINISTRATION

Component And Activity	Scheduled	Accomplished	Comments
Project Management			
Year 2 Work Plan	October 2009	December 2009	USAID accepted a draft work plan to meet the October deadline
Year 2 Procurement Plan	October 2009	December 2009	Included in Year 2 Work Plan
Year 2 Training Plan	October 2009	December 2009	Included in Year 2 Work Plan
Monthly Reports	5 days after the end of the month		
Quarterly Reports	7 calendar days after the end of the quarter		
Annual Progress Report	1 November 2009	29 October 2009	

3.2 TECHNICAL COMPONENTS

Task	Milestone	Output / Deliverable	Actual or Revised Completion Date	Scheduled Completion (per work plan)	Issues/ Comments Including Reasons for Delays
COMPONENT 1: ICTU-HQ SUPPORT					
1.1: Consolidation of 3 HQ IT Directorates					
1.1.A: Detailed Plan for Consolidation					
1. 1.A (i)	Develop ICTU Business Plan and Strategy	ICTU-HQ Strategic Business Plan	March 2010	November 2009	Completed and delivered to water sector March 1.
1.1.A (ii)	Design ICTU-HQ Organization structure to consolidate WAJ, MWI, and JVA IT		October 2009 and revised in July 2010 (Pending official approval)	September 2009	Completed in time. However, under the ICTU Readiness Action Plan, a revised Organizational structure was proposed that better fits the recent restructuring of the ICTU-HQ and that is more aligned with the services it offers to the HQ organizations and those required by the water companies.
1.1.A (iii)	Formulate Staff Recruitment and Retention Strategy	Staff Recruitment and Retention Strategy[3]	-	January 2010	Activity started but was abandoned due to WAJ resistance to deviate from hiring and compensation government practices.
1.1.A (iv)	Develop Service Level Agreements (SLAs) with HQ Organizations	SLAs Drafted	January 2011	July 2010	SLA formulation was delayed due to delays in completion of ICTU-HQ service catalog.
1.1.A (v)	Optimally match current staff to new positions	Positions matched to new ICTU-HQ organizational structure	July 2010; pending official approval	November 2009	Activity completed on time and revised based on the outcome of the HR track of the ICTU-HQ Readiness Plan, which recommended new position titles and organizational structure.
1.1.A (vi)	Develop Policies and Procedures Manual	SOPs Published On-Line	December 2010	March 2010	Delayed until ICTU-HQ gap analysis and risk assessment is completed and road map formulated.
1.1.A (vii)	Identify critical system for Day Zero	Major projects inventories	March 2010	November 2009	Documented in Strategic Business Plan.

[3] A value-added deliverable which would greatly enhance implementation of the IT Master Plan, but not required by the USAID task order

Task	Milestone	Output / Deliverable	Actual or Revised Completion Date	Scheduled Completion (per work plan)	Issues/ Comments Including Reasons for Delays
1.1.A (viii)	Establish IT Board	IT Board Formed IT Board Charter developed	December 2010	February 2009	
1.1.B: Consolidation and Capacity Building					
1.1.B (i)	Monitor and report service levels	Process improvements to key ICTU-HQ services Updated SOPs	February 2011	November 2010	
1.1.B (ii)	Update and implement ITMP Training Plan	2010 Training Plan	Update: September 2010 Implementation: November 2011	November 2010	
1.1.B (iii)	Formulate corporatization plan	Corporatization Plan	January 2011	July 2010	
1.1.B (iv)	Prepare post-corporatization business plan	Post-corporatization business plan	June 2011	September 2010	
1.1.B (v)	Manage hardware, infrastructure, and communications upgrades	Preliminary work plan	Ongoing	January 2010	Subject to USAID approval for extending the Infrastructure Manager contract through to the end of the project.
1.1.B (vi)	Implement sector-wide centralized deployment of collaboration tools	Collaboration tools implementation timeline		November 2011	
1.1.B (vii)	Support EIS implementation	Organizational development input		November 2011	
1.1.C: Full ICTU-HQ Operations					
1.1.C (i)	Prepare annual operations and capital plans and budget	2010 departmental work plan Validated 2010 budget	January 2011	January 2010	
1.1.C (ii)	Manage vendor implementations	IT contract management training and vendor management KPIs	October 2011	November 2011	
1.1.C (iii)	Provide quality assurance for projects	Technical briefings		November 2011	CIO/EIS Advisor and Infrastructure Manager provide day-to-day technical expertise to ICTU-HQ director and staff
1.1.C (iv)	Review ITMP and assess existing systems	2010 ITMP status check		July 2010	

Task	Milestone	Output / Deliverable	Actual or Revised Completion Date	Scheduled Completion (per work plan)	Issues/ Comments Including Reasons for Delays
1.2: Define Roles and Responsibilities Between ICTU-HQ and Operating Utilities					
1.2 (i)	Develop water sector IT authority matrix	Water Sector IT Authority Matrix	December 2010	May 2010	
1.2 (ii)	Develop Water Sector IT Communications Strategy	Water Sector IT Communications Strategy	December 2010	November 2011	Completed templates for communicating to all mwi.gov.jo active directory members and other water sector stakeholders. Initial focus on email messaging for routine and unplanned outages.
1.2 (iii)	Draft MOUs with Relevant Water Sector ICT Organizations	Draft MOUs	Year 3	November 2011	Conducted workshops at Aqaba (January 6–7) to determine areas needing formal MOUs between ICTU-HQ and water companies This task will be superseded by SLAs which are scheduled for completion by January 2011. Additional MOUs with water companies and/or other MWI entities will be developed on an as-needed basis, e.g., EIS relevant data-sharing agreements.
1.3: Establish Governing IT Boards: Planned for Year 3					
	Introduce ICT Water Sector Governing Board concept	ICT Water Sector Governing Board formed	December 2010	July 2010	This activity is planned for Year 3, recognizing the highly politicized nature of cross-sector collaboration and the need to complete institutional improvements at the MWI before engaging water utility counterparts.
1.4: Move ICTU-HQ to International Best Practice Operations					
1.4 (i)	Implement Organizational Performance Management KPI System	KPI Performance Management System	June 2011	November 2010	Completed Pilot Implementation and User's Manual. KPI: Regular performance management report issued for Applications Department. However, revised KPI system is under development and scheduled for release in Year 3.

Task	Milestone	Output / Deliverable	Actual or Revised Completion Date	Scheduled Completion (per work plan)	Issues/ Comments Including Reasons for Delays
1.4 (ii)	Implement Training Plan to Advance ICTU-HQ Staff Skills to International Best Practice Operations	Completed Training	September 2011	November 2010	Conducted ITIL workshop to ICTU-HQ staff, focused on ITIL Service Catalogue.
1.4 (iii)	Formulate Capacity Building Assessment	Capacity Building Inputs to 2011 Training Plan	September 2010	November 2010	Capacity Building Assessment was conducted under the HR track of the ICTU-HQ Readiness Plan.
1.4 (iv)	Implement ITIL practices	ITIL-compliant ICT policies	Year 3	April 2011	In progress.
COMPONENT 2: EXECUTIVE INFORMATION SYSTEM					
2.1: Prepare a Detailed Business Needs and Detailed Statement of Work					
2.1.1: Assess EIS Market and Study Potential Technology Options for Implementation					
Task completed in Year 1					
2.1.2: Determine EIS Requirements					
2.1.2 (i)	Establish approved water sector KPIs and reports	Approved KPIs and Reports	May and July 2010, respectively	November 2009	Lack of availability of counterparts for KPIs development and review. However, the project defined sufficient number of KPIs to proceed with the procurement.
2.1.2 (ii)	Decide on the implementation approach	Implementation Approach approved by the sector	August 2010	December 2009	Delay in hiring the CIO/EIS advisor, and unavailability of technical resources in the field.
2.1.2 (iii)	Prepare Draft BRS Document	BRS Document	August 2010	December 2009	Completed as part of the RFP to catch up with delays.
2.1.2 (iv)	Finalize BRS Document	Approved BRS Document	September 2010	January 2010	
2.2: Solicit and Subcontract to an appropriate firm or determine an appropriate approach					
2.2 (i)	Develop and submit USAID ADS-548 report and get approval from USAID	USAID Approval	August 2010	February 2010	Delay in hiring the CIO/EIS advisor, and unavailability of technical resources in the field. Completed and approved
2.2 (ii)	Prepare RFP	Approved RFP	September 2010	March 2010	
2.2 (iii)	Publish and issue RFP	RFP Published	October 2010	March 2010	

Task	Milestone	Output / Deliverable	Actual or Revised Completion Date	Scheduled Completion (per work plan)	Issues/ Comments Including Reasons for Delays
2.2 (iv)	Proposal Submission Deadline	Proposals Submitted	November 2010	April 2010	
2.2 (v)	Select Winning Vendor	Vendor Selected	December 2010	July 2010	
2.2 (vi)	Sign Contract with winning Vendor	Contract Signed	December 2010	July 2010	
2.3: Supervise Sub-implementer Performance & Conduct Regular Quality Assurance for the Required Deliverables					
2.3 (i)	Initiate Project with Vendor	Approved Vendor Project, Resource, Quality, Training, Testing, and Change Management Plans	January 2010	August 2010	
2.3 (ii)	Supervise Implementation	EIS implemented	September 2011	April 2011	
2.4: Successfully Close Out the Component					
This task is planned in Year 3.					
COMPONENT 3: COLLABORATION AND WEB PRESENCE					
This component is in the process of revision.					
COMPONENT 4: INFRASTRUCTURE, E-READINESS, AND E-GOVERNMENT					
4.1: Prepare a detailed business needs and detailed SOW					
4.1.1: Baseline Phase					
This task is completed in Year 2 upon arrival of the Infrastructure Manager in February 2010.					
4.1.2: Assessment Phase/Network Analysis (ICTU-HQ & Middle Governorates)					
4.1.2 (i)	LAN/WAN Connectivity Assessment		October 2010		
4.1.2 (ii)	Bandwidth optimization		October 2010		
4.1.2 (iii)	Unified Communication		March 2010		
4.1.2 (iv)	Virtualization		October/November 2010		
4.1.2 (v)	Data Center		December 2010		
4.1.2 (vi)	Backup and Storage		August 2010		
4.1.2 (vii)	Antivirus		February 2010		
4.1.2 (viii)	e-Government		Ongoing		
4.1.2 (ix)	Capacity Building		Ongoing		

Task	Milestone	Output / Deliverable	Actual or Revised Completion Date	Scheduled Completion (per work plan)	Issues/ Comments Including Reasons for Delays
4.2: Provide technical assistance to the GOJ during the tendering process					
This is an ongoing activity which depends on the availability of funds.					
4.3: Provide general oversight and coordinate performance of sub-implementer					
This is an ongoing activity which depends on the availability of funds.					
COMPONENT 5: BACK-OFFICE SYSTEMS					
5.1: Legal e-Service					
5.1.1	Prepare a Detailed Business Needs and Detailed Statement of Work	Activity completed in Year 1			
5.1.2	Provide technical assistance to the GOJ during the tendering process	Technical and Financial Evaluation	February - March 2010	Year 2 work plan did not include a scheduled completion date as it depended on the availability of funds at MWI	Tender awarded.
5.1.3	Provide General Oversight and Coordinate Performance of Implementer	Successful implementation	October 2010		A study tour to Turkey is being organized.
5.2: LIMS					
5.2.1	Prepare a Detailed Business Needs and Detailed Statement of Work	Activity completed in Year 1			
5.2.2	Provide Technical Assistance to the GOJ during the tendering process	Technical and Financial Evaluation	April 2010	Year 2 work plan did not include a scheduled completion date as it depended on the availability of funds at MWI	Tender awarded.
5.2.3	Provide General Oversight and Coordinate Performance of Implementer	Successful implementation	December 2010		
COMPONENT 6: ASSET MANAGEMENT – MAINTENANCE MANAGEMENT					
6.1: Prepare Detailed Business Needs and Detailed Statement of Work					
6.1.1	Study available options on the market	Internal report	July 2009	June 2009	
6.1.2	Collect data and identify risks	Pre-Feasibility Study Report	May 2010	February 2010	An interim report on WAJ assessment was submitted to USAID in WAJ's disposition regarding the AM-MM RFP.
6.1.3	Finalize Report	Pre-Feasibility Study Report	June 2010	February 2010	
6.1.4	Disseminate Results	Pre-Feasibility Study Report	August 2010	February 2010	Dissemination workshops conducted 4 and 10 August.

4.0 SUMMARY OF PROBLEMS AND ISSUES FACED DURING IMPLEMENTATION AND MEANS OF ADDRESSING THEM

4.1 PROJECT MANAGEMENT

As described in Section 1.2 and elsewhere in the previous sections, the project has made significant progress in making up for delays and time lost during Year 2. However, further forward progress could be severely hampered if there are delays in the ability of Tetra Tech ARD to submit a scope modification and budget realignment request (dependent on first finding a mutually agreeable solution to replacing the COP) and rapid USAID approval of the scope modification and associated budget realignment once submitted. Without this approval, the project will be unable to move forward at all in the Collaboration and Web Presence component, and will be hampered in all of the other components. This is by far the most serious issue facing the project management.

4.1.1 Component 1: ICTU-HQ Support

Task 1.1: Consolidate the Existing Three Headquarters Information Technology (HQIT) Directorates

- Delays in bringing on board the CIO/EIS Advisor and Infrastructure Manager resulted in delays to several milestones in the project work plan early in Year 2. While many of these delays were resolved in the ensuing months, the overall progress of the ICTU-HQ Readiness Plan was shifted back six months from estimated completion in May 2010 to not earlier than December 2010.
- Neither the ICTU-HQ department heads nor the newly created job roles have the approval and official assignment from WAJ administrators. Receiving approval for the assignments is delayed in part because of an interest to downgrade the hierarchical level of key management positions and because of the bureaucratic nature of position assignments which required several layers of approvals. The result is perpetuation of misaligned job roles, continuing ambiguity around roles and responsibilities,

and an overall decrease in staff morale as the numerous 'improvements' are only on paper and not enacted.

- ICTU-HQ staff members have doubts about the future of ICTU-HQ consolidation post ITMP-IP and in the longer term. The HR component associated with the ICTU-HQ Readiness Plan proposes a revised organizational structure with clear roles and responsibilities that will sustain the operations of ICTU-HQ post ITMP-IP and which is better aligned with the existing structure. Yet the water sector has also to emphasize the support to ICTU-HQ by ensuring the proper consolidation of all IT activities to ICTU-HQ.

- The "brain drain" problems continue to challenge retention of qualified staff; specifically, there has been recent departure of mid-level employees and ongoing gaps in department managers for the ICTU-HQ's Application, Infrastructure, and Risk Management departments. The lack of middle management to support ICTU-HQ and manage its operations has been recognized since Year 1. ITMP-IP seconded an Infrastructure Manager and has supported the operations of the Infrastructure department, but this is only a short-term solution. The ICTU-HQ will recruit middle managers through directly contracting qualified staff.

- ICTU-HQ staff members are underpaid. This is causing de-motivation and lack of genuine support to the consolidation. JVA and MWI staff have lost 50 Jordanian Dinars (JDs) per month from being seconded to ICTU-HQ. Should ICTU-HQ be corporatized, salary scales can be reviewed and adjusted. ITMP-IP is currently supporting ICTU-HQ by promoting its services to "off-takers" and other water utilities based on service/revenue model that can feed back to ICTU-HQ budget and allow them to offer allowances on a case-by-case basis. A more sustainable solution would be approval of the ICTU-HQ proposed organization structure, connecting the ICTU-HQ to WAJ SG and allowing for the corporatization path to take place.

- The continuing decrease of female employees in the ICTU-HQ is now very evident as the number has been reduced from 20 to just nine. While a number of factors not exclusively related to gender are potential contributors to talent loss, there are also clearly instances where gender sensitivity is not evident. This continues to present challenges to ITMP-IP when highly qualified staff members receive ITMP-IP funded training and then leave their jobs.

- Establishment of a proposed Gender Committee proved unfeasible due to the by-laws of the Civil Service Law. Nor was a suggested alternative, a Gender Resource Group, deemed viable due to lack of any female leadership among the ICTU-HQ employees or commitment by MWI or WAJ for the necessary resources and budget.

- JVA is still maintaining software development and recently established an e-Government unit that conflicts with the mandate of consolidating the IT departments. In Year 3, ITMP-IP will bring on board a consultant to assess the state of IT consolidation and propose a recommended path to complete the initiative. Regardless of the consultant's findings, sector senior management must support the consolidation and ensure that no IT initiatives are maintained or created on the side or as a supporting function within existing departments. ITMP-IP is also working on building clear service catalogues and service level agreements to ensure that all organizations receive the service in a quality, consistent, and realistic manner.

- For ICTU-HQ to be ready to operate as designed by ITMP, capacity building is becoming a key requirement. ITMP-IP already started conducting essential training sessions to help the ICTU-HQ Infrastructure Team gain expertise and knowledge on latest technology standards and implementation. In addition and once the Year 3 plan is completed, ITMP-IP can offer a detailed capacity-building plan as an outcome from the technical assessment exercise carried out by the HR

component of the project. To sustain such an effort, ICTU-HQ must start allocating a portion of its budget for capacity building and training.

Task 1.2: Define Roles and Responsibilities between HQIT and Operating Utilities IT Departments

As noted above, delays in bringing on board the CIO Advisor and Infrastructure Manager resulted in delays to several milestones in the project work plan earlier in Year 2. Specific to the relationship between ICTU-HQ and the operating utility departments, the CIO/EIS Advisor was needed to coordinate and facilitate these relationships. Now, with the CIO Advisor's presence, the project expects progress, although the overall completion date is shifted six months.

Task 1.3: Establish Governing IT Board

Establishment of an IT Board was also delayed due to the delay in bringing on board the CIO Advisor. The CIO Advisor will lead relationship building between the various entities party to the IT Board and facilitate a consensus-driven approach to governance. This activity will progress, although not until Year 3, once institutional capacity-building activities are completed.

Task 1.4: Move HQIT to International Best Practice Operations

The collection of the asset listing required additional time from the ICTU-HQ Readiness Team due to the resistance of staff to share information, competing responsibilities of the ICTU-HQ's readiness team members, and the need to complete the service catalogue, regarding contracts and IP settings.

4.1.2 Component 2: Executive Information System (EIS)

The development of KPIs for the EIS was slower than anticipated due to sporadic availability of various subcommittee members, especially in the performance management areas related to the financial and HR areas. The project resorted to several strategies to expedite progress, including clarification of high-level ownership of the EIS and a change of tactics for engagement with individual members. However, while effective in developing consensus for a large number of relevant and useful KPIs, this did require more time. In order to avoid further delays, it was determined that more than a sufficient number of KPIs were present to allow ITMP-IP to proceed with the preparation of an RFP. The EIS will be designed as a dynamic platform for KPI development and monitoring, should the sector decide to incorporate additional KPIs into the EIS in the future.

There are a number of issues and risks associated with the EIS. The EIS will be fully dependent upon external sources for data and information. This poses a significant risk in populating the EIS platform with timely, relevant, and up-to-date information. Data and information from these external sources may not be timely or accurate, may not be consistent from one source to another, and may not even be available for uploading to the EIS in some cases.

Clear and unambiguous ownership of the EIS must be established: what organizational entity will be ultimately responsible for sustaining the EIS in the long term. Such ownership is required to identify a "champion" for the EIS and ensure that it is maintained and updated in a timely manner. Depending on the software solution used for the EIS, the annual cost of the software licenses could be expensive. Without clear institutional ownership being established, there is no way to determine ability-to-pay. In addition, some ICT infrastructure enhancements might be required prior to implementation.

In order to avoid the risks associated with the implementation of the EIS, the project proposed a phased implementation approach which was endorsed by the Technical Committee and the specialized EIS committee. The two committees concurred with the ITMP-IP proposal to incrementally develop and deliver EIS functionality (including KPIs and reporting capabilities) to an increasing number of users while simultaneously training users on the most effective way to use the information produced by the system. By using a series of small phases, with transition to each subsequent phase dependent on the successful completion of the previous phase, the risk of large resource expenditures not meeting the desired end result can be minimized.

4.1.3 Component 3: Collaboration and Web Presence

Among the findings during the piloting of the Collaboration and Web Presence undertaken in Year 2, was that the Active Directory structure implemented in the water sector does not reflect industry best practices. This impacted deployment of automated processes in the collaboration platform and necessitated the coding (programming) of workarounds. The project recommended and implemented Active Directory changes with the cooperation of the ICTU-HQ and provided hands-on training to the unit to resolve the issue related only to that unit's activities. This unscheduled task has impacted the progress of the build activity, and is likely to negatively impact future rollout of Collaboration and Web Presence tools to the sector.

During the first part of Year 2, the project scope associate with this component was continuously changed to adjust to evolving requirements from water sector organizations. In addition, the decision to extend collaboration activities beyond the ICTU-HQ backfired with heightened expectations from this component which resulted in spreading out levels of effort without visible outcomes. In order to better manage expectations, the project developed a rollout plan for the Collaboration Suite which was vetted with the ICTU-HQ and water companies. A sector-wide Collaboration Team with representatives from the ICTU-HQ and the water companies was formed with the responsibility for implementing, under ITMP-IP supervision, selected priority workflows in other departments within or external to the headquarters organizations. The Collaboration Team will subsequently take responsibility for rolling out expansion of the Collaboration capabilities sector-wide, independently of the ITMP-IP project. The workflows, which the project identified following an approved selection criteria, were approved by the Technical Committee and then "frozen" as final.

The project also worked closely with USAID and counterparts to consider other implementation options (other than direct hiring of programmers) for the continuation of this component and has recently opted to move forward with procurement of third-party experts through a competitive bid/offer. Further development and rollout depends on completion of Collaboration Team training and approval by USAID of a budget realignment that will free up resources for such a procurement.

4.1.4 Component 4: Infrastructure, E-Readiness and E-Government

Once the contract of the Infrastructure Manager is extended (pending USAID approval of a scope modification and budget realignment request), there will be no anticipated risks with this component. However, it should be noted that several of the performance indicators will be dependent upon timely inputs (including IT equipment upgrades) on the part of the ICTU-HQ.

Task 4.1: Prepare a Detailed Business Needs and Detailed Statement of Work

One of the key issues associated with this task is the lack of availability of sufficient funds to complete the Data Center upgrade. As a mitigation measure, the ICTU-HQ is planning its Data Center upgrades in phases and according to availability of funds either through the MWI budget or by means of external

assistance by external funding agencies. Another issue is related to the slow response time of vendors to requests for proofs of concept. Although the project is addressing this through regular follow-up with vendors, it still remains an issue outside the control of the ITMP-IP.

Task 4.2: Provide Technical Assistance to the GOJ during the Tendering Process

The response time of vendors to proofs of concept request is an issue that remains beyond the control of the project.

Task 4.3: Provide General Oversight and Coordinate Performance of Sub-Implementer

MWI procurement policies and procedures are time-consuming, sometimes causing procurement delays, but are out of the control of ITMP-IP project.

4.1.5 Component 5: Back Office Systems (Legal and LIMS)

Upon a request made by the ICTU-HQ, the ITMP-IP provided project oversight and management support which was envisioned in Year 1. The only delay involved in this component was in organizing a study tour to the Turkish Ministry of Justice. The delay was due to the slow response of the Turkish Ministry of Justice in appointing a contact person to help arrange the study tour. The tour was conducted in late October 2010. The unavailability of production hardware for the Legal e-Service will affect the project completion deadline.

4.1.6 Component 6: Asset Management – Maintenance Management

The ICTU-HQ launched a tender process for an AM-MM system without the knowledge of the ITMP-IP project or its Technical Committee. This compromised the standing of both the project and the ICTU-HQ with the sector at large (particularly with the corporatized water companies), especially that both had promoted the opportunity for a consolidated, sector-wide AM-MM platform that could be incrementally implemented. In response to this, the project called for a special meeting to present the scope of the AM-MM prefeasibility study to the Steering Committee to ensure that the results of assessment carried out by the project were integrated into the letter of award or, if necessary, in a revised version of the RFP. Accordingly the Minister of Water and Irrigation requested the ITMP-IP to review WAJ's tender for an AM-MM system, and the project had to adjust its plan to accommodate the Minister's request—an activity which was unscheduled.

The Steering Committee's request for an interim report for WAJ Central Operations to address its previously issued RFP proved to be an interim deliverable. The project handled this deliverable and continued with its plan to develop the final study report and provide the sector with recommendations on the best way to move forward in implementing AM-MM best practices in the sector.

The results of the presentations made to the Steering Committee to present the AM-MM prefeasibility study findings were encouraging, indicating a general interest in proceeding to next steps. Any further work by the ITMP-IP will require a scope modification approval by USAID. Such a scope modification will be included in Tetra Tech ARD's overall scope modification and budget realignment request anticipated to be submitted during November 2010.

ANNEX 1: MONITORING AND EVALUATION

A quantitative comparison of project accomplishments to date vs. project benchmarks, M&E indicators and targets, and overall end of project objectives are detailed per each component here below:

The M & E Metrics are designed to be reported on calendar year Q4 (December); for Annual Reports, the metrics reflect status as of end of Q3 (September)

Program Management - Indicators Sheet

Data Collection/Reporting Responsibility: Project Management Team Leader

Please note that only percentage figures in the Indicator Sheets represent cumulative values.

Consolidation from all components
Not included in any of the components
Included in one of the components

	KPI #	Indicator	Means of verification	Baseline	Project	Year	2009				2010				2011				Assumptions	Notes
						Quarter	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
Goal																				
G - IR 15.3 - Strengthened water policies and systems by enabling performance improvement and improving decision making systems	G - IR 15.3 (a)	# of institutions receiving ICTU services	Review of ICTU service agreements	2	3	Target	0	0	0	0	0	0	0	0	0	0	1	0	Buy-in of user institutions. Strategic direction of MoW related to decentralization.	
						Actual	0	0	1	0	2	0	0	0	0	0	0	0		
	G - IR 15.3 (b)	# of service level agreements developed for different institutions	Review of progress reports	0	3	Target	0	0	0	1	0	0	0	1	0	0	1	0	Buy-in of user institutions.	
						Actual	0	0	0	0	0	0	0	0	0	0	0	0		
	G - IR 15.3 (c)	# of research activities or information gathering exercises	Review of progress reports	0	21	Target	0	6	4	7	0	0	0	4	0	0	0	0		
						Actual	1	3	13	13	11	5	3	0	0	0	0	0		
	G - IR 15.3 (d)	# of women trained on strategic information management topics	Review of training attendance sheet/log	0	92	Target	0	0	0	24	0	0	0	42	0	0	0	26		
						Actual	0	15	30	3	48	12	0	0	0	0	0	0		
	G - IR 15.3 (e)	# of men trained on strategic information management topics	Review of training attendance sheet/log	0	147	Target	0	0	0	36	4	0	0	58	0	0	10	39		
						Actual	0	21	33	3	82	32	0	0	0	0	0	0		
Outcome																				
G - 1.1 - Expanded and coordinate the application of IT within the HQ of MWI, WAJ, JVA	G - 1.1 (a)	Percentage of coordination sessions conducted as per the ICTU communication plan	Review of progress reports	0	60%	Target				30%			60%						Buy-in form key stakeholders and ICTU.	
						Actual					100%									
	G - 1.1 (b)	ICTU business plan developed and updated each year	Review of progress reports	0	3	Target	0	0	0	1	0	0	0	1	0	0	0	1		
						Actual	0	0	0	0	1	0	0	0	0	0	0	0		
	G - 1.1 (c)	# of regular KPI monitoring reports issued by ICTU for performance evaluation	Review of KPI monitoring reports	0	8	Target	0	0	0	1	1	1	1	1	1	1	1	0		
						Actual	0	0	0	1	3	0	0	0	0	0	0	0		
G - 2.1 - Enhanced information flow through providing the tool to facilitate information accessibility for decision makers	G - 2.1 (a)	Average number of EIS queries requested per month	Review of EIS Monitoring Report	0	50	Target	0	0	0	0	0	0	0	10	20	0	20	0		
						Actual	0	0	0	0	0	0	0	0	0	0	0	0		
G - 1.3 - Enable optimal choices and investments in IT	G - 1.3 (a)	# of requests for proposals (RFP) and requests for information (RFI) issued/published by ICTU for IT	Review of issued/published RFP/RFI log	0	2	Target	0	0	0	2	0	0	0	0	0	0	0	0	Availability of funds by GoJ. Buy-in of ICTU	
						Actual	0	0	1	3	0	0	0	0	0	0	0	0		
	G - 1.3 (b)	Policy for IT selection and development issued and endorsed/approved by the ICTU	Review of progress reports	0	1	Target						1							Buy-in of ICTU	
						Actual														
G - 1.2 - Improve productivity and increase institutional knowledge through providing a collaboration platform within the ICTU	G - 1.2 (a)	# of collaboration platform users within the ICTU	Review of System User Access Privilege Reports	0	45	Target	0	0	0	5	0	0	15	0	0	0	25	0	1- Buy-in from ICTU 2- Availability of fund from GoJ 3- Total ICTU staff is 45	
						Actual	0	0	0	6	0	0	32	0	0	0	0	0		

ICTU Support - Indicators Sheet

Data Collection/Reporting Responsibility: ICTU Support Team Leader

		Indicator	Means of verification	Baseline	Project	Year	2009				2010				2011				Assumptions	Notes
						Quarter	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
Outcomes																				
A - 1.1 - Expanded and coordinated application of IT within the ICTU	A - 1.1 (a)	# of users accessing the system (collaboration portal)	System number of hits	0	60%	Target				20%				40%				70%	The consolidation of the ICTU is complete	
						Actual				20%										
	A - 1.1 (b)	# of regular KPI monitoring reports issued by ICTU for performance evaluation	Review of KPI monitoring reports	0	8	Target				1	1	1	1	1	1	1	1			KPI reporting postponed (during Q2, Q3 and Q4) until new performance management system is designed and implemented.
						Actual				1	3									
	A - 1.1 (c)	# of institutions receiving ICTU services	Review of ICTU service agreements	2	3	Target											1		Buy-in of user institutions. Strategic direction of MoW related to decentralization.	
						Actual			1		2									
Outputs																				
A - 1.1.1 - Consolidate and build the capacity of ICTU	A - 1.1.1 (a)	# of women who received training on the technical and management topics	Review of training attendance sheet/log	0	54	Target				12				16				26	Women compose 40% of ICTU staff.	The project held six workshops or trainings during Q1, 2010. Two of the six trainings (33%) were devoted to the Service Catalog task which is part of formulating SLAs with water sector organizations. These two trainings were male and female, while the other trainings were only attended by female employees.
						Actual		15	30		48									
	A - 1.1.1 (b)	# of men who received training on the technical and management topics	Review of training attendance sheet/log	0	81	Target				18				24				39		The project held six workshops or trainings during Q1, 2010. The high number of females trained reflects the concentration on gender development activities.
						Actual		21	33		76									
	A - 1.1.1 (c)	ICTU staffing model developed	Review of progress reports	0	1	Target				1										During Q3, extensive revisions to ICTU-HQ staffing plan
						Actual				1			1							
	A - 1.1.1 (d)	# of service level agreements developed for different institutions	Review of progress reports	0	3	Target				1				1			1		Buy-in of user institutions.	SLA Development kick-off at the Dead Sea workshop. Expected completion of SLAs is in December 2010.
						Actual				0										
A - 1.1.2 - Design and implement communication and coordination strategy	A - 1.1.2 (a)	ICTU communication plan developed	Review of progress reports	0	1	Target				1										Preliminary ICTU communications plan developed. The plan focuses on Email templates for planned and non-planned communications to all mwi.gov.jo users.
						Actual				0	0									
	A - 1.1.2 (b)	ICTU training plan developed and updated each year	Review of progress reports	0	3	Target			1				1				1			Developed Year 3 Training Plan, with emphasis on Technical Skills
						Actual			1				1							
	A - 1.1.2 (c)	ICTU business plan developed and updated each year	Review of progress reports	0	3	Target				1				1				1		Updated ICTU strategic business plan and officially presented to water sector stakeholders on March 01, 2010. Key speeches at the launch event were delivered by the Minister and USAID Mission Director.
						Actual					1									
	A - 1.1.2 (d)	# of research activities or information gathering exercises		0	2	Target		2												During Q3, conducted detailed research on position requirements for ICTU-HQ
						Actual		2			2		1							

EIS - Indicators Sheet

Data Collection/Reporting Responsibility: EIS Team Leader

		Indicator	Means of Verification	Baseline	Project	Year / Quarter	2009 Q1	2009 Q2	2009 Q3	2009 Q4	2010 Q1	2010 Q2	2010 Q3	2010 Q4	2011 Q1	2011 Q2	2011 Q3	2011 Q4	Assumptions	Notes
Outcomes																				
A - 2.1 - Enhanced information flow through providing the tool to facilitate information accessibility for decision makers	A - 2.1 (a)	Average number of queries requested per month	Review of EIS Monitoring Report	0	50	Target								10	20		20			
						Actual														
	A - 2.1 (b)	Average number of data sources connected to the EIS	Review of EIS technical specifications and implementation records	0	4	Target								1			3			
						Actual														
	A - 2.1 (c)	Number of institutions that have used USG-Assisted MIS System Information to inform administrative/management decisions	Review of EIS Monitoring Report	0	3	Target				1				1			1			
						Actual				0										
Outputs																				
A - 2.1.1 - Design and implement EIS	A - 2.1.1 (a)	# of research activities or information gathering exercises (workshop & leading industry leaders)	Review of progress report	0	6	Target			4	2										
						Actual			3	13	1		2							
	A - 2.1.1 (b)	% of EIS requirements implemented compared to planned	Review of system functionalities Vs requirements signed off	0	50%	Target									10%	30%	50%			
						Actual														
	A - 2.1.1 (c)	Developed User and System manual	Review of progress report	0	2	Target								2					further updates on the user manuals will be completed by the ICTU team	
						Actual														
	A - 2.1.1 (d)	# of women who received administrators training on EIS	Review of training attendance sheet/log	0	4	Target								4						This indicator contributes to the project indicator of " # of women trained on strategic information management topics"
						Actual														
	A - 2.1.1 (e)	# of men who received administrators training on EIS	Review of training attendance sheet/log	0	2	Target								2						This indicator contributes to the project indicator of " # of men trained on strategic information management topics"
						Actual														
	A - 2.1.1 (f)	# of women who received end-user training on EIS	Review of training attendance sheet/log	0	10	Target								10					1- buy-in from stakeholders (utilities and other operational entities) 2- Number of new women using the EIS will be 10 every year	This indicator contributes to the project indicator of " # of women trained on strategic information management topics"
						Actual														
	A - 2.1.1 (g)	# of men who received end-user training on EIS	Review of training attendance sheet/log	0	30	Target								20			10		buy-in from stakeholders (utilities and other operational entities)	This indicator contributes to the project indicator of " # of men trained on strategic information management topics"
						Actual														

Collaboration - Indicators Sheet

Data Collection/Reporting Responsibility: Collaboration Team Leader

		Indicator	Means of verification	Baseline	Project	Year / Quarter	2009 Q1	2009 Q2	2009 Q3	2009 Q4	2010 Q1	2010 Q2	2010 Q3	2010 Q4	2011 Q1	2011 Q2	2011 Q3	2011 Q4	Assumptions	Notes
Outcomes																				
A - 1.2 - Improve productivity and increase institutional knowledge through providing a collaboration platform within the ICTU	A - 1.2 (a)	# of collaboration platforms users within the ICTU and other entities benefiting from collaboration suite	Review of System User Access Privilege Reports	0	45	Target				5			15				25		1- Buy-in from ICTU 2- Availability of fund from GoJ	
						Actual				6			32							
	A - 1.2 (b)	# of collaboration platform active users (adding/editing/browsing) documents and media within the ICTU and other entities benefiting from collaboration suite	Review of System User Activity Reports	0	20	Target				5			5				10			
						Actual				6			32							
	A - 1.2 (c)	Number of distinct work groups that have used USG-Assisted MIS System Information to inform administrative/management decisions	Review of System User Activity Reports	0	6	Target				3			3						Work groups include: ICTU e-gov team, WAJ labs, JWA/GIS Department, WIS management &planning system division	Achieved for ICTU-HQ and AW
						Actual				1		1								
Outputs																				
A - 1.2.1 - Design and implement collaboration and web presence platform	A - 1.2.1 (a)	Operational and deployed pilots of collaboration and web presence suite		0	6	Target				3				3					1- Buy-in from ICTU top management to use the collaboration tool. 2- Availability of GoJ funds to procure supporting infrastructure and software.	
						Actual				13		1								
	A - 1.2.1 (b)	Developed end user manual		0	2	Target				1				1						
						Actual														
	A - 1.2.1 (c)	# of administrators who received training on the collaboration platform		0	4	Target					4								1- Perception of ICTU staff that the Collaboration Platform is a valuable tool and facilitates productivity. 2- Support for processes and procedures of collaboration tool from ICTU management.	This indicator contributes to the project indicator of " # of men trained on strategic information management topics"
						Actual					6	6								
	A - 1.2.1 (d)	# of women who received end users training on the collaboration platform		0	24	Target				12				12						This indicator contributes to the project indicator of " # of women trained on strategic information management topics"
						Actual				3		12								
	A - 1.2.1 (e)	# of men who received end users training on the collaboration platform		0	30	Target				18				12						This indicator contributes to the project indicator of " # of men trained on strategic information management topics"
						Actual				3		26								
	A - 1.2.1 (f)	# of information gathering exercises		0	8	Target				4				4						
						Actual			7		7	5								

Acquisition Support - Indicators Sheet

Data Collection/Reporting Responsibility: Acquisition Support Team Leader

		Indicator	Means of verification	Baseline	Project Target	Year	2009				2010				2011				Assumptions	Notes
						Quarter	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
Outcomes																				
A - 1.3 - Enable optimal choices and investments in IT	A - 1.3 (a)	# of requests for proposals (RFP) and requests for information (RFI) issued/published by ICTU for IT	Review of issued/published RFP/RFI log	0	2	Target				2									Availability of funds by GoJ. Buy-in of ICTU	LIMS RFI , LIMS RFP, Legal RFP, WAJ Website Restructuring
						Actual			1	3										
	A - 1.3 (b)	# of procurement recommendations that have been proposed and approved by	Review of progress report	0	1	Target				1									Availability of funds by GoJ. Buy-in of ICTU	AM-MM, LIMS, Legal and WAJ Website Resructuring
						Actual			3	1										
Outputs																				
A - 1.3.1 - Provide oversight, coordination and technical support in the acquisition process	A - 1.3.1 (a)	# of information requirements statements issued	Review of progress report	0	4	Target		1	2			1								Legal - MoJ Case Profile, LIMS (RFI, RFP), LIMS RFP, WAJ Website Restructuring
						Actual		1	1	2										
	A - 1.3.1 (b)	# of procurement recommendations communicated to the ICTU through meetings/reports or other communication tools	Review of progress report	0	10	Target		5		5										AM-MM, LIMS, Legal, Network & Client Improvements, Infrastructure As A Service (IaaS)including - Virtualization, Remote Site Infrastructure Improvements, Software As A Service (SaaS) including VPN, WAJ Website Restructuring
						Actual		4	3	1										
	A - 1.3.1 (c)	# of research activities or information gathering exercises		0	4	Target		3		1										Infrastructure Assessment, LIMS RFI, Legal - MIZAN CASE Profile, AM-MM Market Research, EIS Market Research
						Actual		1	4											

Gender Integration - Indicators Sheet

Data Collection/Reporting Responsibility: Gender Integration Team Leader

		Indicator	Means of verification	Baseline	Project	Year / Quarter	2009 Q1	2009 Q2	2009 Q3	2009 Q4	2010 Q1	2010 Q2	2010 Q3	2010 Q4	2011 Q1	2011 Q2	2011 Q3	2011 Q4	Assumptions	Notes
Outcomes																				
GI - 1 Enhanced gender integration and development in the ICTU	GI 1 (a)	# of ICTU female employees in leadership/supervisory positions	Review of ICTU Staffing Table/Organizational Structure	2	5	Target												3		
						Actual														
	GI 1 (b)	# of gender initiatives taken by the committee addressed within the ICTU	Interview of committee head/review of committee minutes of	0	2	Target											2			
						Actual														
GI - 2 Enhanced skills of ICTU female employees	GI 2 (a)	# of ICTU female trainees attending technical/operational and leadership topics	Review of training attendance sheets	0	92	Target	0	0	0	24	0	0	0	42	0	0	0	26		
						Actual		15	30	3	48									
Outputs																				
GI - 1.1 Establishment of ICTU Gender Committee	GI - 1.1 (a)	Establishment of ICTU Gender Committee	Review of Progress Reports	0	1	Target								1						During Q2, framework completed, but implementation postponed indefinitely
						Actual						1								
	GI - 1.1 (b)	# of committee members	Review of committee official appointment letter	0	3	Target								3						See note above regarding postponement
						Actual														
	GI - 1.1 (c)	# of conducted committee meetings (once every quarter)	Review of committee meetings minutes/log	0	4	Target									1	1	1	1		See note above regarding postponement
						Actual														
	GI - 1.1 (d)	# of events carried out by the committee (once every quarter)	Review of committee meetings minutes/log	0	4	Target									1	1	1	1		See note above regarding postponement
						Actual														
GI - 2.1 ICTU female employees are members of professional association	GI - 2.1 (a)	# of ICTU female employees that are members of a professional association	Receipts of membership fees	0	18	Target								18						Pending discussions with WAJ administrator regarding future funding of membership dues
						Actual														
	GI - 2.1 (b)	# of ICTU female employees that renewed their professional association membership	Receipts of membership fees or confirmation from the association	0	5	Target												5		Pending budget approval from WAJ Administrator
						Actual														
	GI - 2.1 (c)	# of research activities or information gathering exercises		0	1	Target		1												Completed extensive research to compile list of woman's business associations
						Actual	1				1									

ANNEX 2: ANNUAL FINANCIAL STATUS

Budget to Actual Report

ARD, Inc.

Project Name: 1829- Jordan ITMP — **Report Date:** 10/20/2010

Contract No.: EPP-I-03-04-00019-00 — **Period Ending:** 9/30/2010

Contract start date: 11/28/2008

Contract end date: 11/27/2011

Obligated Amount	**$6,036,269**
Obligated Used	**64%**

	36 months	22 months	14 months		
	100%	61%	39%		
Category	**Contract Budget**	**Total Cost Incurred as of 9/30/2010**	**Remaining as of 9/30/2010**	**% used**	**Monthly Burn Rate by Line Item**
Labor					
Direct Labor	$ 531,280	$ 312,379	$ 218,901	59%	$ 14,199
Consultants	$ 107,451	$ 125,261	$ (17,810)	117%	$ 5,694
CCN Support Wages	$ 68,494	$ 38,726	$ 29,768	57%	$ 1,760
Subtotal	**$ 707,225**	**$ 476,366**	**$ 230,860**	**67%**	**$ 21,653**
ODCs and Indirects					
Fringe Benefits - US	$ 154,456	$ 115,362	$ 39,094	75%	$ 5,244
Subtotal	**$ 154,456**	**$ 115,362**	**$ 39,094**	**75%**	**$ 5,244**
Travel and Transportation	$ 174,845	$ 161,870	$ 12,975	93%	$ 7,358
Equipment and Supplies	$ 56,898	$ 24,734	$ 32,164	43%	$ 1,124
Allowances	$ 224,399	$ 135,994	$ 88,405	61%	$ 6,182
International (Bearing Point)	$ 2,738,862	$ 1,576,005	$ 1,162,857	58%	$ 71,637
Local (EcoConsult/Primus/Al Jidara)	$ 829,895	$ 715,512	$ 114,383	86%	$ 32,523
SDB (DtS)	$ 61,051	$ 31,409	$ 29,642	51%	$ 1,428
Other Direct Costs	$ 375,998	$ 172,304	$ 203,694	46%	$ 7,832
Subtotal	**$ 4,461,947**	**$ 2,817,828**	**$ 1,644,119**	**63%**	**$ 128,083**
Overhead	$ 193,970	$ 114,050	$ 79,921	59%	$ 5,184
G&A	$ 234,721	$ 150,736	$ 83,985	64%	$ 6,852
MHO	$ 55,301	$ 35,217	$ 20,083	64%	$ 1,601
Subtotal	**$ 483,991**	**$ 300,002**	**$ 183,989**	**62%**	**$ 13,636**
Fixed Fee	$ 228,649	$ 145,787	$ 82,862	64%	$ 6,627
TOTALS	**$ 6,036,269**	**$ 3,855,345**	**$ 2,180,924**	**64%**	**$ 175,243**
Average monthly burn rate	**$ 167,674**	**$ 175,243**	**$ 155,780**		

Approval Required by:	Name	Signature	Date
Project Manager	Ben Lawrence		
Contract Specialist	Pam Doran		
Controller	Brian Moore		

ANNEX 3: PROJECT BIBLIOGRAPHY

1 PROJECT MANAGEMENT	
Monthly	• Monthly Project Reports – October 2009 – September 2010
Quarterly	• Quarterly Project Reports – October-December 2009, January-March 2010, April-June 2010
October 2009	• Year 1 Annual Report
December 2009	• Year 2 Work Plan
February 2010	• Success Story: IT Collaboration Tools Bring Results to Jordan's Water Sector
March 2010	• Success Story: Ministry of Water & Irrigation Launches ICTU Strategic Plan
September 2010	• Success Story: It All Boils Down…. To the Quality of the Water • Success Story: Case Closed: A Legal eService Joins Two Ministries in Fruitful Collaboration • Draft Revised M&E Plan • Draft Communication & Coordination Strategy
2 TECHNICAL COMPONENTS	
2.1 ICTU-HQ Consolidation	
October 2009	• Year 2 Training Plan • ICTU-HQ Organization Chart and Staffing Plan
November 2009	• Department-level Key Performance Indicators and Reporting Sheets
January 2010	• Aqaba Workshop Meeting Minutes • Pilot Implementation Results of ICTU-HQ Performance Management System • Template for SOPs • List of SOPs Required for ICTU-HQ Services and Activities
February 2010	• ICTU-HQ Performance Management System User's Manual
March 2010	• Final ICTU-HQ Business Strategy and Plan • Analysis of the Dead Sea Workshop Participant Evaluation • Preliminary Assessment on People and Processes in Remote WAJ ICT Offices
July 2010	• Detailed job analysis for each role in the newly designed ICTU-HQ structure. This became part of the training plan drafted for Year 3 in September 2010. • Updated ICTU-HQ Organization Chart – functional and position-driven
August 2010	• Job Descriptions for all positions in the ICTU-HQ • Skills assessments for all ICTU-HQ employees, identified gaps, and aligned gaps to training plan

2 TECHNICAL COMPONENTS, CONTINUED	
September 2010	• Comprehensive technical and behavioral competency library for ICTU-HQ • Detailed Staffing Model including position descriptions, competency profiles, and individual employee profiles • Detailed ICTU-HQ training plan (2011-2013) and budget (for IMTP-IP portion)
2.2 Executive Information System	
November 2009	• Outline for EIS Solution Architecture
March 2010	• Final List of KPIs (definitions, formulae, variables, source systems, etc.) for the Water Resources and Supply tracks within the Water Situation area
July 2010	• Survey forms for the EIS systems landscape questionnaire
August 2010	• ADS 548 document submitted to USAID/Washington on 3 August 2010 (approved 27 August).
2.3 Collaboration and Web Presence	
October 2009	• MOSS Portal System Design Document
November 2009	• Success story video
December 2009	• ITMP Technical Committee Meeting Site http://212.118.28.139/ITMP-TC-MTG-SITE/default.aspx • ICTU HQ Task Management Site http://212.118.28.139/sites/tms/mwi/Lists/List/TasksAssignedToMe.aspx
January 2010	• Collaboration Year 1 Activities Report
February 2010	• Task Management System With Reporting Capabilities Release Candidate 1.0 - http://212.118.28.139/sites/tms/
March 2010	• Task Management System With Reporting Capabilities Final Release 1.0 - http://212.118.28.139/sites/tms/ • MOSS entity deployed at AW with two workflows and a POC demonstrating connectivity services for Oracle E-Business Suite.
	•
2.4 Infrastructure, E-Readiness and E-Government	
October 2009	• RFP to redesign and rebuild the Water Sector Internet Portal
December 2009	• Participated in evaluating proposals of the web site restructuring tender.
February 2010	• Draft document of WAJ remote sites ICT status quo and requirements • Draft work plan for Infrastructure Manager • Draft network WAN design document for middle governorates to connect with ICTU-HQ
August 2010	• Servers and Storage Assessment and Recommendations
September 2010	• Water Authority of Jordan Remote Sites Assessment
2.5 Back Office Systems	
Laboratory Information Management System (LIMS)	

2 TECHNICAL COMPONENTS, CONTINUED	
October 2009	• Request for Proposals for LIMS, and formal answers to bidders' questions. • Formal emails facilitating communications between WAJ Tendering Department and international bidders.
November 2009	• Non-disclosure agreement for LIMS evaluation committee participants. Refined evaluation procedures, scoring and questions for clarification to bidders (all these details are still confidential).
December 2009	• Questions of clarification to bidders upon starting the technical evaluation and evaluate responses. Technical assistance to ICTU-HQ on technical evaluation report.
February 2010	• List of points for negotiations
August 2010	• Non-disclosure agreement for vendor to sign
Legal Web Service	
December 2009	• Request for Proposal for Legal Web Service document and an evaluation criteria sheet. • Letter from Minister of MWI to Minister of MoJ updating him on tender publications and MWI's plan for a ceremony announcing the work and signing MOU.
Jan-March	• None
August	• Non-disclosure agreement for vendor to sign
2.6 Asset Management – Maintenance Management	
February 2010	• Technical review of the WAJ RFP "209/128–Water Facilities Management &and Maintenance System (WFMMS)"
April 2010	• AM-MM Pre-Feasibility Study Interim Report on WAJ
July 2010	• Final report for the AM-MM prefeasibility study.

ANNEX 4: LIST OF TECHNICAL ASSISTANCE ACTIVITIES

Below is a list of all technical assistance activities, including specialist name, purpose, and duration of consultation, achievements, and problems encountered (if any).

Specialist name: Nabila Morcos
Component: 1.0 ICTU-HQ Consolidation
Assignment: Lead technical training needs assessment for all staff of the ICTU-HQ including conducting job analysis and validating them with ICTU-HQ management; preparing job descriptions for 30 positions or as needed; conducting skills assessments for ICTU-HQ employees and gap analysis; preparing training needs profiles for each position in ICTU-HQ; update the ICTU-HQ organizational structure to reflect findings from technical and organizational reviews; and developing a final closeout report.
Duration of consultation: 62 days (beginning April 9)
Achievements/deliverables: • Finalized methodology and approach for all HR and Training-related activities in scope. • Updated the organizational structure diagrams based on technical and organizational recommendations. • Conducted detailed job analysis for each role in the newly designed ICTU-HQ structure. • Completed Job Descriptions for all positions in the ICTU-HQ. • Developed comprehensive technical and behavioral competency library for ICTU-HQ. • Formulated a training plan aligned to each position in ICTU-HQ. • Conducted skills assessments for all ICTU-HQ employees, identified gaps, and aligned gaps to the training plan. • Completed the HR and Training closeout report documenting approach and results.
Issues encountered: • Several delays were encountered due to staff availability and government holidays.
Mitigation measures: • Duration of assignment was extended two months to ensure full completion of activities and necessary resources were allocated to enable full or part-time continuation of ITMP-IP support.

Specialist name: Rawda Al Awamleh
Component: 1.0 ICTU-HQ Consolidation
Assignment: Support technical training needs assessment for all staff of the ICTU-HQ including conducting job analysis and validating them with ICTU-HQ management; preparing job descriptions for 30 positions or as needed; conducting skills assessments for ICTU-HQ employees and gap analysis; preparing training needs profiles for each position in ICTU-HQ; updating the ICTU-HQ organizational structure to reflect findings from technical and organizational reviews; and developing a final closeout report.
Duration of consultation: 62 days (beginning April 9)
Achievements/deliverables: • Finalized methodology and approach for all HR and Training related activities in scope. • Updated the organizational structure diagrams based on technical and organizational recommendations. • Conducted detailed job analysis for each role in the newly designed ICTU-HQ structure. • Completed Job Descriptions for all positions in the ICTU-HQ. • Developed comprehensive technical and behavioral competency library for ICTU-HQ. • Formulated a training plan aligned to each position in ICTU-HQ. • Conducted skills assessments for all ICTU-HQ employees, identified gaps, and aligned gaps to training plan. • Completed the HR and Training closeout report documenting approach and results.
Issues encountered: • Several delays were encountered due to staff availability and government holidays.
Mitigation measures: • Duration of assignment was extended two months to ensure full completion of activities and necessary resources were allocated to enable full or part-time continuation of ITMP-IP support.

Specialist name: Nabila Morcos
Gender Activities
Assignment: Lead integration/mainstreaming of gender considerations into project planning, M&E, technical support, and capacity-building activities, including the design and implementation of training plans and materials, gender mainstreaming performance indicators, gender mainstreaming committee, and detailed list of relevant professional woman's associations.
Duration of consultation: 30 Days
Achievements/deliverables: • Designed and implemented gender development training plan and materials. • Developed performance indicators for mainstreaming gender equity into ICTU-HQ work plans and staff performance plans. • Developed the charter and framework for a Gender Mainstreaming committee. • Completed a list of high-priority professional associations for professional women and identified sources of funding.
Issues encountered: • Developing the Gender Mainstreaming committee was postponed due to a combination of staff availability, leadership buy-in, and other organizational challenges.
Mitigation measures: • A Gender Mainstreaming charter and framework was designed and provided to the MWI for later use.

Specialist name: Hiba Kandalaft
Gender Activities
Assignment: Support integration/mainstreaming of gender considerations into project planning, M&E, technical support, and capacity-building activities, including the design and implementation of training plans and materials, gender mainstreaming performance indicators, gender mainstreaming committee, and detailed list of relevant professional women's associations.
Duration of consultation: 51 Days
Achievements/deliverables: • Designed and implemented gender development training plan and materials. • Developed performance indicators for mainstreaming gender equity into ICTU-HQ work plans and staff performance plans. • Developed the charter and framework for a Gender Mainstreaming committee. • Completed a list of high-priority professional associations for professional women and identified sources of funding.
Issues encountered: • Developing the Gender Mainstreaming committee was postponed due to a combination of staff availability, leadership buy-in, and other organizational challenges.
Mitigation measures: • A Gender Mainstreaming charter and framework was designed and provided to the MWI for later use.

Specialist name: Nate Nash
Component 2: Executive Information System
Assignment: Develop outline for the BRS document, and guide the team on preparation of the document and the ADS 548 report in support of the USAID Independent Verification and Validation review of the EIS investment (November 2009).
Duration of consultation: 10 days
Achievements/deliverables: • Outline and a data collection template for the EIS BRS document. • Orientation on determining recommended EIS implementation approach. • Kick-off Workshop for the Nine EIS committees.
Issues encountered: None
Mitigation measures: N/A

Specialist name: Joseph Volonakis
Component: 6.0 Asset Management - Maintenance Management
Assignment: Undertake a pre-feasibility study for the implementation of water operator AM-MM best practices to be supported by a best-of-breed enterprise computer application for the Jordan water sector.
Duration of consultation: 60 days LOE (beginning February 17)
Achievements/deliverables: • Preparation of an interim report for the assessment of WAJ Central Operations for the purpose of implementing AM-MM best practices. • Presentation on vision of AM-MM for Miyahuna, NGWA, AW, Zarqa, and WAJ (Assistant Secretaries General (ASGs), Directors and Chief Executive Officers (CEOs) where applicable. • Workshop on organizational readiness for AW, NGWA, Zarqa, and WAJ (Directors). • Workshop to socialize the assessment results for Miyahuna, AW, NGWA, Zarqa, and WAJ. • Information-collecting activities at Miyahuna, AW, NGWA, Zarqa, and WAJ. • Final Report.
Issues encountered: • WAJ interim assessment report is not part of original TOR and the activities associated with this ongoing issue delayed the development of the final study report.
Mitigation measures: • Additional project resources were devoted to the study to assist the AM-MM IT Advisor with study activities.

Specialist name: Raed Nimri
Component: 6.0 Asset Management - Maintenance Management
Assignment: Support prefeasibility study for implementation of water operator AM-MM best practices to be supported by a best-of-breed enterprise application for the Jordan water sector.
Duration of consultation: 50 days (beginning March 16)
Achievements/deliverables: • Provision of support in all of the above-mentioned activities under “Achievements/deliverables” by Mr. Volonakis – component lead.
Issues encountered: • Additional requirements were included in the work under this component, requiring more LOE than anticipated in the scope of work.
Mitigation measures: • Extra LOEs to support this component were allocated and expended as needed.

ANNEX 5: LIST OF TRAINING ACTIVITIES

5.1 OVERSEAS TRAINING

No international training was provided in Year 2.

5.2 IN-COUNTRY TRAINING

The ITMP-IP project provided a range of training activities that were provided to ICTU-HQ staff by local vendors, through on-job training, or workshops. Each of these were 15 or more hours duration and so should be included in USAID's centralized database TrainNet. These are listed below.

ANNUAL TRAINING REPORT FISCAL YEAR 2010

Equal or Above 15 Hours

Training Program Name	Component	Field of Study	Start	End	Total Hours	Training Type	Cost	Group Name	# of Male	# of Female	Total
Project Management Professional Trianing	General	Project Management Training	2-Dec-09	8-Dec-09	40	Classroom Training preparing for test to earn certificate	$7,768	ICTU	3	2	5
Clarify Roles of ICTU-HQ and Corporatized Water Companies	ICTU-HQ	IT Manage-ment	6-Jan-10	8-Jan-10	20	Workshop	$5,666	Sector IT Directors	7	2	9
Communication Strategies	Gender	Work skills	22-Feb-10	23-Feb-10	16	workshop	$226	ICTU women	0	2	2
SharePoint Developer Training	Collaboration & Web Presence	SharePoint	14-Mar-10	16-Mar-10	27	On-job	None	Aqaba Water ICT Unit	5	1	6
BizTalk Developer Training	Collaboration & Web Presence	BizTalk	17-Mar-10	18-Mar-10	21	On-job	None	Aqaba Water ICT Unit	5	1	6
Cisco Certified Network Administrator	Infrastructure, eGovernment and eReadiness	Network	12-Apr-10	10-May-10	40	On-job	None	Infrastructure Dept (ICTU-HQ)	8	3	11
Fundamental of Network and systems	Infrastructure, eGovernment and eReadiness	Network	1-Aug-10	5-Aug-10	20	On-job	None	WAJ Reomte Site	5	4	9
Total No. of trainees									**33**	**15**	**48**

The ITMP-IP project also designed and delivered a series of training activities by project staff to fit within the project budget and be responsive to ICTU-HQ training needs. These are each less than 15 hours duration and so are not to be reported to USAID's centralized database TrainNet. These are listed below.

ANNUAL TRAINING REPORT FISCAL YEAR 2010

Below 15 Hours

Training Program Name	Component	Field of Study	Start	End	Total Hours	Training Type	Cost	Group Name	# of Male	# of Female	Total
Microsoft Office SharePoint Server (MOSS) End User Training	Collaboration & Web Presence	Microsoft Office SharePoint Server 2007	15-Oct-09	19-Oct-09	8	Hands on Labs	$14	eGoverment Team	3	3	6
Training of Trainers for Tasks Management Sites	Collaboration & Web Presence	Workflow Automation	19-Jan-10	19-Jan-10	3	On-the-job	None	ICTU-HQ E-Government Team	0	2	2
Diversity and Inclusion	Gender	Engendering the public sector	17-Feb-10	17-Feb-10	8	Workshop	None	ICTU Women	0	9	9
ICT Service Catalogue Pre-Workshop Training	ICTU-HQ	Business Management	21-Feb-10	21-Feb-10	2	Workshop	None	ICTU-HQ Staff and HQ Org Process Owners	25	8	33
What is Gender?	Gender	Gender	22-Feb-10	22-Feb-10	4	Workshop	None	ICTU Women	0	14	14
ICT Service Catalogue Workshop Training	ICTU-HQ	Business Management	1-Mar-10	2-Mar-10	12	Workshop	$10,000	ICTU Staff & HQ Org Process Owners	51	13	64
Asset Mgmt - Maintenance Mgmt Best Practices	AM-MM	IT Management	22-Mar-10	22-Mar-10	3	Workshop	None	CEO & Directors Miyahuna	10	2	12
Asset Mgmt - Maintenance Mgmt Best Practices	AM-MM	IT Management	24-Mar-10	24-Mar-10	1.5	Presentation	None	Minister, SGs WAJ & JVA, ICTU Director	4	1	5
Convention of Elimination of all forms of Descrimination Against Women	Gender	Gender	5-Apr-10	5-Apr-10	4	Workshop	None	ICTU women		10	10
Task Mgmt System Administrator Training	Collaboration & Web Presence	MOSS	18-Apr-10	18-Apr-10	4	Hands-on	None	eGov team (ICTU-HQ)	3	3	6
Task Mgmt System End User Training	Collaboration & Web Presence	MOSS	25-Apr-10	29-Apr-10	10	Hands-on	None	Apps Dept (ICTU-HQ)	7	7	14
Task Mgmt System End User Training	Collaboration & Web Presence	MOSS	2-May-10	11-May-10	10	Hands-on	None	ICTU-HQ	19	5	24
Civil Service Law	Gender	Employee Rights	2-Jun-10	2-Jun-10	4	workshop	None	ICTU Women		10	29
Communication Skills and Cross Gender Communication	ICTU-HQ	Gender and HR	3-Aug-10	3-Aug-10	8	wokshop	$1,304	ICTU	22	7	228
Total No. of Trainees									**144**	**94**	**276**

ANNEX 6: LIST OF EQUIPMENT AND MATERIALS PURCHASED

Below is a list of materials purchased by the ITMP-IP project during Year 2.

QTY	ITEM/ DESCRIPTION	UNIT PRICE $	TOTAL PRICE	VENDOR	DATE PURCHASED	PO / VOUCHER #	LOCATION
1	Gas cylinder	$63.56	$63.56	Hassan	6-Sep-09	00118	ITMP Office
1	Plastic chair	$6.21	$6.21	Military Supermarket	20-Oct-09	00136	ITMP Office
1	Plastic chair	$6.21	$6.21	Military Supermarket	20-Oct-09	00136	ITMP Office
1	Plastic chair	$6.21	$6.21	Military Supermarket	20-Oct-09	00136	ITMP Office
1	Plastic chair	$6.21	$6.21	Military Supermarket	20-Oct-09	00136	ITMP Office
1	Plastic chair	$6.21	$6.21	Military Supermarket	20-Oct-09	00136	ITMP Office
1	Plastic chair	$6.21	$6.21	Military Supermarket	20-Oct-09	00136	ITMP Office
1	Wireless Modem for the internet	$38.84	$38.84	Wi-Tribe	23-Nov-09	176-12-09	ITMP Office
1	White board for flip charts	$134.18	$134.18	G.A.S	20-Feb-10	00215	ITMP Office
1	Hanging files drawer	$56.50	$56.50	Oksh shop	29-Jul-10	Petty cash 265	ITMP Office
1500	Printed business cards double	$0.14	$204.80	Al - fareeq	10-Sep-10	PO 13/2009	ITMP Office
1	File Cabanet for the Office	$190.60	$190.60	Al shalal	6-Sep-10	PO 14/2009	ITMP Office
200	Printed greeting cards	$1.66	$332.00	Al - fareeq	15-Dec-10	PO 19/2009	ITMP Office
300	Printed business cards double sided	$0.18	$53.10	Al - fareeq	12-Feb-10	PO 01/2010	ITMP Office
5	Roll up Banners	$38.94	$194.70	Al - fareeq	21-Feb-10	PO 03/2010	ITMP Office
82	Tag names	$0.21	$17.42	Al - fareeq	21-Feb-10	PO 03/2010	ITMP Office
300	Printed business cards double sided; 300 cards.	$0.14	$42.48	Al - fareeq	12-Feb-10	PO 01/2010	ITMP Office
1	Safe for the project office	$88.50	$88.50	Midas Furniture	22-Jun-10	PO 08/2010	ITMP Office
300	Printed business cards double sided	$0.14	$42.48	Al - fareeq	1-Jul-10	PO 09/2010	ITMP Office

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