Achievement of Market-Friendly Initiatives and Results Program (AMIR 2.0 Program)

Funded By U.S. Agency for International Development

ICT Literacy Training at the
Jordanian Ministry of Information and Communication Technology:
Business Plan

Final Report

Deliverable for ICTI Component, Task No. 431.7
Contract No. 278-C-00-02-00201-00

July 2002

This report was prepared by Professor Ahmad I. Abu-El-Haija, in collaboration with Chemonics International Inc., prime contractor to the U.S. Agency for International Development for the AMIR Program in Jordan.

Table of Contents

EXECUTIVE SUMMARY 1
BACKGROUND 2
MISSION 3
GOALS 4
- **Support of the National e-Government Initiative** 4
- **ICT Industry Capacity Building** 4
- **Coordination of Donors in ICT Sector** 4

THE PROJECT MANAGEMENT UNIT (PMU) 5
- **Objectives of the PMU** 5
- **Reporting Structure** 5
- **Human Resources** 5
- **Appointment of PMU Personnel** 6
- **Offices, Furniture, and Equipment for PMU** 6
- **Role of MoICT Concerning the PMU** 6
- **Terms of Reference of PMU Manager** 6
- **Required Skills of PMU Manager** 8

TARGET BENEFICIARIES OF ICT LITERACY TRAINING 8
- **Participating Organizations** 8
- **Selection Criteria** 9
- **Incentives** 9
- **Awareness** 10

STAKEHOLDERS AND THEIR DUTIES AND RESPONSIBILITIES 10
A GLOBAL COMPUTER LITERACY TRAINING BENCHMARK 14
- **The International Computer Driving License (ICDL)** 14
- **Aims and Advantages of The ICDL** 15
- **The Global Impact of The ICDL** 16
- **Benefits of Adopting ICDL in Jordan** 17
- **Adoption of the ICDL by the UNESCO Cairo Office (UCO)** 18
- **ICDL Recognition in the Arab Region** 19

RELEVANT ICDL MODULES FOR e-GOVERNMENT 20
ICDL TESTING CENTERS IN JORDAN 22
ICDL TRAINING CENTERS 23
BUDGET AND FINANCIAL PLAN 24
PLAN OF ACTION 25
MONITORING AND ASSESSMENT 27
RISKS 29
PRIOR OBLIGATIONS AND PREREQUISITES 29
RECOMMENDATIONS 29
Annex 1 – Draft MoU between MoICT and UNESCO Cairo Office 30
Annex 2 – ICDL Accredited Centers in Jordan 34
Annex 3 - Information for Tendering the Printing of Training Material 36

EXECUTIVE SUMMARY

This Project aims at upgrading the basic computing skills of the employees at the Government and other public organizations in Jordan through the wide-scale adoption of the International Computer Driving License (ICDL). The ICDL is an International certificate, which demonstrates a person's competence in computing knowledge and skills in accordance with international standards. The ICDL syllabus and tests, designed and regularly updated by a panel of experts to ensure its relevance to the working world and advances in technology, cover the key concepts of computing, their practical applications and use in the workplace and society. **This training provides Jordan with a competent and professional generation of computer users** capable of using the basic skills of Information Technology (IT) at International standards with a view to enhance the quality of production and consequently contribute positively to the economic development of the country. UNESCO Cairo Office (UCO) has just completed the translation of the ICDL training and testing material into Arabic language in order to overcome the language barrier and facilitate the widespread adoption and implementation of the Concept in the region.

The majority of the training will be conducted at the private training centers in Jordan. Therefore, **the project will strengthen the private ICT sector in the country**. On the other hand, this will encourage many private centers to raise the level of their facilities for training and certification to the international standards and will request from UNESCO Cairo Office that their centers become ICDL accredited. At the end of the project, it is expected to have about 18,000 individuals from all public organizations in Jordan registered in the ICDL Program, of those at least 15,000 will have completed four modules and earned the ICDL Primer. Furthermore, it is expected to have about 12 more Centers from the private sector operating as accredited ICDL Training and Testing Centers. At the time of preparing this study, there are only two accredited centers from the private sector, compared to 11 centers from the public sector.

The Ministry of Information and Communication Technology (MoICT) will execute the Project. The Project Director, the ICT Education and Training Advisor at MoICT, will be managing all the technical, financial, and administrative functions pertaining to the Project. A Senior ICT Consultant will be assisting MoICT in the overall planning, guidance, monitoring, and follow-up and coordination of the Project activities. A Steering Committee comprising different stakeholders, such as MoICT, AMIR, Ministry of Planning, UCO, UNDP, Int@j, and Senior ICT Consultant(s) will be established to direct the Project in the most beneficial way.

The total Project budget is about US$3,954,000 over 4 years. Of this amount, about US$418,000 is needed for the year 2002 to establish the Project Management Unit and train about 2,000 employees. The budget will be solicited from a number of donors, partner institutions and funding agencies (e.g., UNDP, UNESCO, USAID, etc.), in addition to funds that will be provided by the Government of Jordan. **This Project will coordinate the collaboration of donors in this sector to secure the necessary funds and ensure efficient and effective implementation**.

Finally, this Business Plan sets the foundation and the guiding principles for the ICT literacy training at MoICT. MoICT is expected to modify this Plan as may be necessary according to inputs, feedback and other varying parameters, and hence the Plan is dynamic.

BACKGROUND

1. As the world moves into the twenty first century, a global knowledge and information society is emerging, spanning all regions. Knowledge and information have become significant factors for production and services. They affect the international division of labor, determine the competitiveness of economies and corporations, generate new growth patterns and, in the process, spawn new products, jobs and livelihoods. Information Technology (IT) is a means to revolutionize the knowledge society and serve as a transmission belt to generate, access, disseminate and share knowledge, data, information, communications and best practices at all societal levels.

2. In tandem with globalization, an increasingly networked world economy has transpired and it is expanding dramatically. For instance, the IT sector is growing at twice the rate of the world economy. By the year 2010, the IT sector in Japan will account for the same GDP share as the automobile sector today. The IT industry in the United States presently accounts for 1/3 of US economic growth and employs 7.4 million individuals at wages that are more than 60 per cent higher than the private sector average. To help prepare for this rapidly evolving information revolution, governments and private enterprises in developed countries have devoted considerable attention and resources to the capacity building of human resources in an effort to create a knowledgeable work force that is well prepared and properly positioned to benefit from this technology and effectively utilize it en-route to the establishment of well-founded knowledge-based economies.

3. The fruits of IT are not, however, equitably distributed globally. This is particularly the case in the Arab region, where efforts aimed at the rapid incorporation and effective utilization of IT in all sectors of the economy are, by and large, hindered by the shortage of efficient and knowledgeable human resources. As such, capacity building in IT basic skills and knowledge are urgently needed in the Arab region in order to prepare and equip the labor force to be capable of competing in a global market progressively dominated by high IT skills and capabilities. It is essential for the Arab populations to become active players in the IT revolution in order to contribute effectively to the sustainable development of their countries and be able to enjoy the benefits already being reaped by the industrialized countries in this field.

4. At the Davos Economic Forum held in February 2000, His Majesty King Abdullah II announced that the Hashemite Kingdom of Jordan would strive not only to take full advantage of the potential that IT holds, but also to develop a leadership position in the Middle East in the area of IT-based services. Subsequently, Jordan organized regional as well as domestic IT conferences to map out an overall strategy that could make this happen within the next few years. The conferences concluded that rapid development of Jordan's human resource base in the IT field would be the key to attract foreign as well as domestic investment in IT and related industries in the country. In order to make effective use of the ICT in the country, the Government of Jordan is embarking on an e-Government initiative, which is designed to make the government more accessible to the citizens and businesses of Jordan. Responsibility for e-Government has been delegated to the Ministry of

Information and Communications Technology (MoICT). But this necessitates the development of an ambitious plan to build its capacity in information technology (IT) in order to be able to support the e-Government initiative.

5. With the support of AMIR, a high-level task force drawn from both the public and private sectors has been assembled to advise MoICT on the way forward. The task force has begun the implementation of an aggressive and ambitious plan for a Government Secure Network (GSN), through which government ministries can communicate, using a standard communications platform such as electronic mail. This is occurring in line with a Security and Interoperability framework. Further still, a Program Management Office is being established to operate and manage the initiative. It has the specific function of ensuring that standard templates, methodologies, and procedures are implemented across the board in actual e-government projects. Accordingly, three e-government fast track projects were chosen for their technical and operational readiness, and progress has already been made in implementation. In parallel to this, AMIR is rigorously working on supporting ICT industry growth to institutionalize the private sector as part of the initiative.

6. All the above initiatives and projects will clearly involve major capital outlay and resource management. In order to make efficient and effective use of the resources, it is necessary; therefore, that an overall ICT training strategy is drafted, and a clear action plan is developed and executed. That is, given the country's computer literacy base, the staff computer aptitude, the existing ICT infrastructure, and the availability of technical assistance from a variety of sources, funds must be allocated to training resources wisely, to train the cadre at the governmental and public organizations as per the training strategy, in order to most effectively support the implementation of Jordan's e-Government Initiative.

MISSION

7. This Project will contribute to expanding computer literacy for all segments of the governmental and public organizations in Jordan by means of **improving to international standards the level of IT competence and proficiency**, with a view to enhance productivity and achieve economic development, and also **strengthen the ICT private sector** and **enhance the coordination among donors**.

8. In the first phase that will be implemented in the summer of 2002 on a pilot-basis, the project aims at training about 1,000 employees from about 10 carefully selected organizations on four Modules of the International Computer Driver's License (ICDL) and earning he ICDL Primer. In subsequent phases of the project to be implemented in 2002-2005, it aims at training about 17,000 more employees to attain the same competencies, with about 20% of them finishing all 7 Modules of the ICDL. By the conclusion of the project in December 2005, at least 80% of the trainees should be able to pass all modules (i.e., master all skills they learnt), and the remaining 20% should be able to pass at least 70% of the Modules they learnt (e.g., pass 3 out of 4 Modules, or pass 5 out of 7 Modules).

GOALS

9. This project is being established with the main objective of supporting the e-Government initiative by improving the ICT literacy of government employees to that of international standards, to enable them deal with the different aspects of the e-Government. Since the training will be mainly provided by the private sector training centers, and the testing and certification will be provided by accredited ICDL testing centers, the project also aims at strengthening the ICT industry capacity building and the cooperation among the different organizations dealing with ICT, as well as improving such services in Jordan through encouraging competition. Finally, it is anticipated that MoICT will attempt to secure the funds necessary to implement this project, and hence one of the goals will be the coordination of donors and their collaboration in the ICT sector.

Support of the National e-Government Initiative

10. This project aims at training a large number of employees working at the Government and other public organizations in basic ICT skills. After the employees acquire the necessary skills, and then successfully pass the required tests, they will be provided with international certificates. This training is necessary to enable these employees undertake further training on different components of the e-Government, and consequently deal with the software, applications and systems, which constitute parts of the e-Government at their respective organizations. This type of training is not only necessary, but also essential, to support the national e-Government plans of Jordan.

ICT Industry Capacity Building

11. Training thousands of employees over the coming few years needs the collaboration of many training providers, especially from the private sector. Testing the employees in the different ICDL Modules also needs the collaboration of several ICDL accredited centers to hold such tests. This will encourage the existing training centers to expand their operation, other new private training centers to be established, and a number of these training centers to apply to become ICDL accredited centers. This will strengthen further the ICT private sector in Jordan, as these ICT training centers need to expand their operations, recruit more staff to conduct the training, train their staff on training methods, and so forth. The net result will be **enhancing the capacity of the ICT industry in Jordan**, which is one of the main goals of this project.

Coordination of Donors in ICT Sector

12. The International Computer Driving License (ICDL) was introduced to the Arab region through the UNESCO Regional Office for Science and Technology in the Arab States in Cairo (hereinafter referred to as UNESCO Cairo Office, or UCO). UCO is the licensing agency of ICDL in most of the Arab countries. UCO, which is making good efforts to increase the ICDL widespread in the Arab region, may be one of the parties to participate in this training project. The ICDL was introduced to Jordan through a project, which

was jointly funded by UNDP, Amman, and UCO. Hence UNDP Jordan may be another main party to participate in this project. Suggestions for the roles of UCO and UNDP are given later in this document.

13. MoICT and AMIR are advised to present and discuss this document with a number of donors for the possibility of securing the necessary funds for implementing the training activities suggested in this project document. This project should be able to attract some donors to participate in its different activities as mentioned above. Hence, the project will **enhance coordination among different donors and their participation in the ICT sector**. This is one of the main goals of the project, which will be achieved as described above.

THE PROJECT MANAGEMENT UNIT (PMU)

Objectives of the PMU

14. It is necessary that MoICT establishes a Project Management Unit (PMU) and provides it with the necessary needs. This unit will be in charge of management and coordination of all ICT training projects, which are necessary for the e-Government initiative. Among its responsibilities will be the planning, coordination, follow-up, review, and evaluation of the training programs, and the coordination with all concerned parties inside and outside MoICT to fulfill its duties.

Reporting Structure

15. The ICT Education and Training Advisor at MoICT will supervise the PMU in all technical, administrative and financial matters, who will be accountable towards the Secretary General of MoICT. The diagram on the next page explains the reporting structure of the PMU Manager within the MoICT.

Human Resources

16. The PMU needs a number of full-time staff as shown below. The number of personnel will need to be increased when the number of trainees and/or the number of training programs is expanded. The following persons shall be sufficient for the first phase of training, which will be carried out in 2002:

- **PMU Manager:**

17. The PMU Manager will be responsible for all the activities of the Unit, and the preparation of the work plans (to be approved by the Steering Committee), and also the development and update of the training programs and follow-up their implementation, and preparing regular reports about the progress of work in the Unit and obstacles encountered. The PMU Manager should be of high caliber to ensure the quality of training and implementation of this plan. The detailed Terms of Reference and qualifications and experience of the PMU Manager are given below.

- **Training Specialist:**

18. To be responsible for implementing the training programs under the direction of the PMU manager, and following up all the training activities and their evaluation. He/she will also be responsible for the coordination among the different governmental organizations, training and testing centers, and other stakeholders.

- **Programmer/Database administrator:**

19. Will be in charge of administering the training database and its continuous update, so that it contains complete and up-to-date information about all ICT training activities for the e-Government initiative (names and details of all trainees, details of training centers, trainers, examination centers, training programs with their dates, participants, etc.). Donors and other organizations will be contacted for the possibility of obtaining the needed database.

Appointment of PMU Personnel

20. All staff in the PMU should be selected by the ICT training Consultant, in coordination with the concerned parties at MoICT. Since the work in this unit will require extra efforts and site visits to training and testing centers to oversee the training activities, it is suggested to offer the team of the PMU reasonable incentives as compensations for their extra efforts.

Offices, Furniture, and Equipment for PMU

21. The MoICT shall provide the PMU the needed office space, and shall secure to it the necessary furniture and equipment (personal computers, printer, scanner, telephone with direct line and fax, photocopier, etc.). Moreover, arrangements should be made to allow the PMU team use reasonable transportation facilities for the field visits whenever needed.

Role of MoICT Concerning the PMU

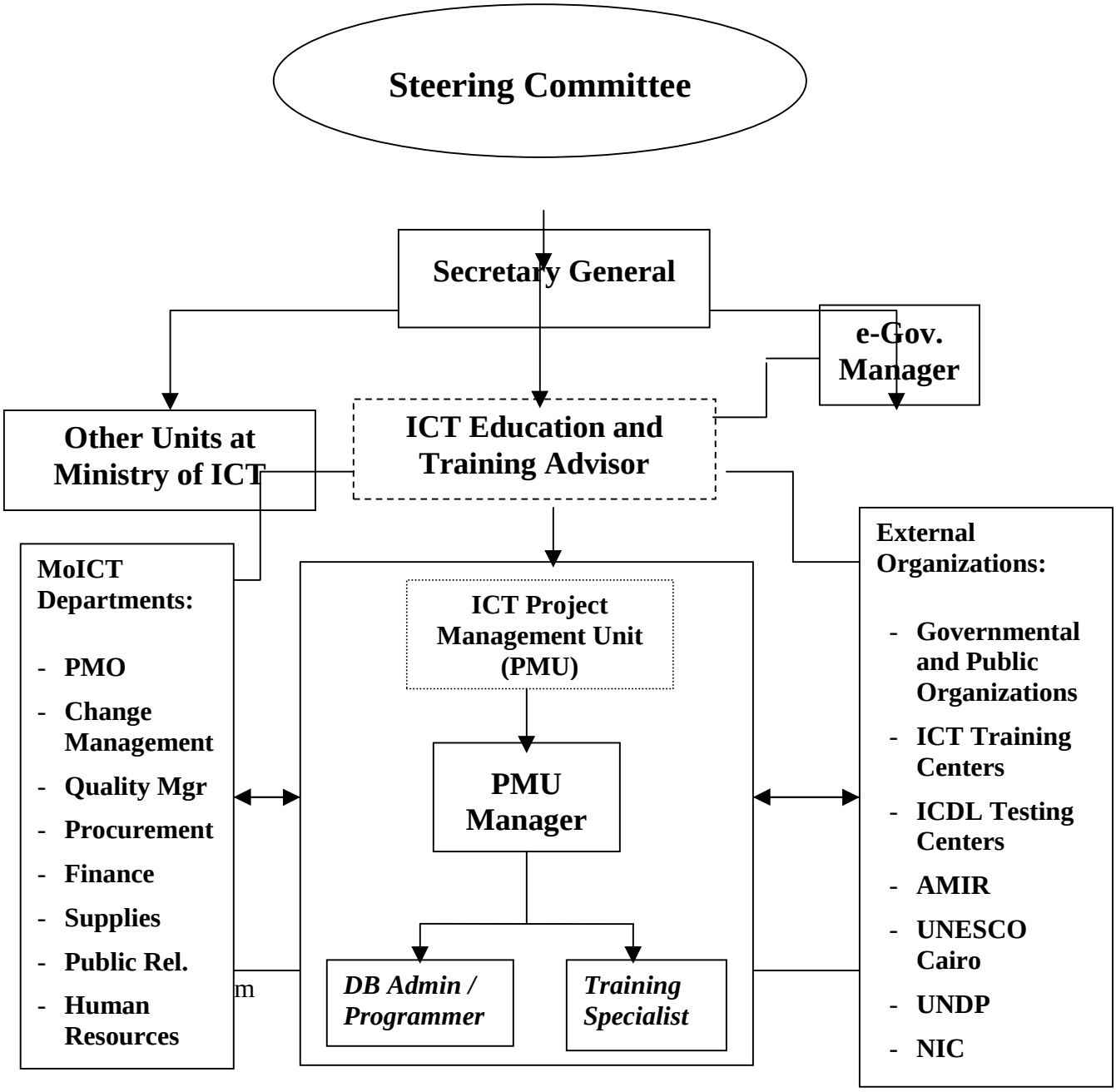
22. MoICT will establish the standards of training to that of international standards, define the roles and responsibilities of all parties involved, the processes and methodology for conducting the training and evaluation, the collaboration among all stakeholders, the quality control aspects, and will train the PMU staff on how to perform their duties.

Terms of Reference of PMU Manager

23. The PMU Manager will be responsible, under the direction of the ICT Education and Training Advisor, for planning, implementing, supervising, monitoring, and evaluating all the ICT training activities at the MoICT. This includes managing the implementation of all day-to-day project activities to achieve the intended objectives of the Project.

24. Responsibilities of the PMU Manager will include:

- Preparing a detailed project work plan with specific milestones and indicators to achieve the required objectives in consultation and coordination with the ICT Training Consultant.
- Developing the ICT training plan and programmes, and the necessary documents for all other project-related activities, in consultation with the Advisor, ICT Education and Training.
- Ensuring that project activities are implemented, and objectives achieved, in accordance with approved time lines and procedures.
- Monitoring and evaluating the progress of all project activities and expenditures on an ongoing basis, and fulfilling the subsequent reporting requirements such as the financial reports and progress reports, in coordination with the Advisor, ICT Education and Training.
- Supervising the performance of the PMU staff.
- Preparing periodic reports about the progress of the project and a detailed final report presenting all the project activities.
- Carrying out and organizing training and information workshops as may be needed.



Required Skills of PMU Manager

25. The PMU Manager shall possess the following qualifications and skills:

- A university degree (B.Sc. or Masters) relevant to education, sciences, or any other pertinent discipline.
- At least five years experience in the training sector, with special emphasis on ICT training (academic institutions, etc.) or continuing education programs, and good managerial experience and leadership skills.
- Full computer literacy, particularly knowledge of and routine in the use of word processing, spreadsheets, presentations, etc.
- Full oral proficiency in both written and spoken English and Arabic, and the ability to express ideas and write reports in both languages.
- Good interpersonal and communication skills and ability to work with teams.
- A good knowledge of the employment sector, market needs, and the education and training sectors in Jordan.

TARGET BENEFICIARIES OF ICT LITERACY TRAINING

Participating Organizations

26. The project shall include all organizations participating in the e-Government initiative. The organizations currently identified include the following ministries and public departments:

- Prime Ministry.
- Ministry of Information and Communication Technology (MoICT).
- Ministry of Planning (MoP).
- Ministry of Education (MoE).
- Ministry of Industry and Trade (MoIT).
- Ministry of Finance (MoF).
- Ministry of Public Works (MoPW).
- Municipality of Greater Amman (MoGA).
- Central Bank of Jordan (CBoJ).
- Customs Department.
- Department of Social Services (DoSS).
- Department of Statistics (DoS).
- Capital Markets.
- National Library.
- National Information Center (NIC).
- Jordan Investment Board (JIB).
- Jordan Export Development Corporation (JEDCO).
- Jordan Import/Export Corporation (JIEC).
- Jordan Institute of Standards and Metrology (JISM).

27. The primary beneficiaries of this Project are the employees of the different Ministries and Organizations mentioned above. The number of participants from each organization will have to be decided upon by the MoICT and the organizations themselves. There are about 90,000 employees at the governmental and public organizations. It is estimated that about 20% of these employees use the e-Government applications and the ICT in their jobs. Hence, the number of persons that should be trained on basic ICT skills is about 18,000 persons. The number of people that will be trained in the piloting phase of the project is around 1,000 persons. These should be selected from a prioritized short list from the 19 above-mentioned organizations. The indirect beneficiaries of the Project are the citizens of Jordan who will be using the services of the e-Government. The business system, private and public sectors, and the overall structure in Jordan will also benefit tremendously from this Project by way of creating and maintaining a strengthened and skilled human resource pool of employees and trainers to carry out IT and computer skills courses.

Selection Criteria

28. The selection criteria for the first batch of employees are of paramount importance. These employees will be the ambassadors at their organizations to promote the ICT literacy and its importance to the work and lives of people. Several factors should be taken into consideration when selecting the first batch of employees, such as:

- They should have access to computers at their work locations, either during the training program, or shortly after they complete the training.
- They should be ready to use computers in their daily work; i.e., the types of jobs they do are more efficiently done with the use of computers.
- The tasks they perform are considered essential parts of the e-Government.
- They should hold the B.A. or B.Sc. in relevant disciplines.
- Preference should be given to people holding senior positions.
- Preference should be given to people who possess some knowledge about computers.
- Participants should be interested in this type of training, and encouraged to do so through the introduction of proper incentives.

Incentives

29. In order for the training project to succeed, which is essential to the success of the e-Government, it is necessary to design an effective incentive structure. The Ministry of Education (MoE) handled this issue by introducing a complete structure for the ranks of the teachers, and required the ICDL (or equivalent) as one of the necessary conditions for the promotion from Assistant Teacher to Teacher. Such a promotion entitles the employee to 10% increase in the salary. The regulations that MoE developed earlier have just been approved by the Cabinet of Ministers end of May 2002. It is necessary to provide similar incentives to the Government employees after passing the ICDL tests and possessing the ICDL certificate. Some of the suggestions are:

- Certain increment (2 - 5%) in salary after the acquisition of the ICDL.
- ICDL enhances the chances for promotion to administrative positions (division head, department chairperson, etc.), because of the ability to deal with the electronic environment.
- Faster promotion to next grade. For example, with the acquisition of the ICDL, the employee may be promoted in four years instead of five.

30. Since the issue of incentives touches upon all government employees, it is suggested that it is first discussed between MoICT and other Ministries until a consensus is reached. Then MoICT may submit a solid proposal to the Cabinet of Ministers for discussion and approval.

Awareness

31. It is important for MoICT to plan and implement an awareness campaign targeted at the employees and the citizens at large before and during the ICT training project. Such a campaign should explain the benefits of the e-Government initiative and the need for ICT literacy as a strategic direction to Jordan. The campaign should use different sources of communications to convey the message clearly to all concerned people. Concerning the first batch of trainees (1,000 persons), further awareness sessions should be designed to them, so that they are comfortable with the training and to take it seriously as it should be.

STAKEHOLDERS AND THEIR DUTIES AND RESPONSIBILITIES

32. The main stakeholders involved in this project are: MoICT having the mandate of the e-Government initiative and the Executing Agency of this project, the governmental and other public organizations whose employees will be trained through this project, the training centers, and the ICDL testing centers. Stakeholders should also include other international organizations that are needed to provide technical and/or other assistance.

33. MoICT has the difficult task of preparing and executing the training plans, and coordinating among all other parties involved in this project. The MoICT will make available to the ICT Education and Training Advisor, as well as the Senior Consultant and the PMU team, all relevant information on the e-Government initiative, IT capacity training Projects, both on-going and in pipeline. Moreover, the MoICT will provide the needed support to assist in the implementation of the Project and establish effective linkages with other on-going projects for the MoICT.

34. The PMU, whose structure was described earlier, will be the arm of MoICT, which will handle most of the tasks mentioned above, under the direct supervision of the ICT Education and Training Advisor. MoICT will be responsible for:

    - Reviewing all existing IT capacity building Projects and activities directed at the employees of the government and public organizations, which will be part of the e-Government.

- Reviewing available facilities and resources and office automation plans (present and anticipated) at the organizations.
- Developing a comprehensive strategy for IT capacity building for the e-Government initiative.
- Preparing a detailed priority action plan and required resources and facilities for the implementation of the capacity building strategy.
- Designing, planning, and allocating the facilities and resources necessary for the ongoing stages of capacity building programs and activities.
- Supervising the implementation of the ongoing capacity building activities.
- Identifying potential donors and partner institutions for supporting the various modules and components of the capacity building strategy, and enter into dialogues/agreements for potential cooperation and support.
- Identifying mechanisms, means and modalities for enhancing the capacity of the Governmental organizations in designing and implementing in-house training activities.

35. The organizations benefiting from the training include all the Participating Organizations mentioned earlier and more. Their role is vital to the success of the ICT capacity building project and to the success of the e-Government initiative in general. The MoICT must oversee the training program to ensure its compliance with the set objectives and its adherence to the Terms of Reference, which will lead to its success. The responsibilities of these organizations include the following:

- Identifying a senior person as the Training Coordinator who will be in charge of all issues related to the training and liaising with MoICT for this purpose. This Coordinator should have sufficient power to facilitate the training and resolve any issues that may arise during the training.
- Identification of the most suitable candidates for ICT training according to the criteria adopted by MoICT.
- Providing the candidates with release time during the training and testing periods.
- Providing the candidates with access time to the computer and Internet during training and after that.
- Following up the progress of training for all candidates, and taking the necessary measures with those who may be absent.
- Suggesting the proper incentives for the employees after they pass the ICDL, and obtaining the approvals on such incentive system from concerned authorities.
- Conducting an assessment at the end of each phase of training, including questionnaires and interviews with the concerned employees, and feeding the results back to MoICT to improve subsequent phases of training.

36. The training and testing centers should be committed to provide first class training and test environments. The training centers should be asked to adhere

to certain criteria, which are necessary to obtain quality training. These criteria may include the following:

- The training facilities (hardware, software, applications) shall be appropriate and uses up-to-date technology.
- The center shall provide the most suitable environment (temperature, absence of noise, sufficient space, etc.) that is conducive to learning.
- Trainers should possess the ICDL and should have at least two years of training experience in ICT literacy.
- Trainers should have participated in training workshops or seminars, to prove their ability to conduct the training.
- The center shall adhere to the ICDL training material, which will be provided by MoICT.
- The trainer shall allocate enough time to cover each concept/skill so that the material is fully covered in the allocated time frame.
- The number of trainees in each session shall not exceed 20 under all circumstances.
- The training center shall report to MoICT about the presence and absence of trainees after each group completes the training.

37. The testing centers, whether the same or different from the training centers, have other responsibilities. Each test center should:

- Agree with MoICT on the test schedules at least two weeks prior to conducting the tests.
- Inform MoICT with the results of the ICDL tests at most one week after test completion.
- Make necessary arrangements with MoICT and/or other organizations, as may be the case, to hold tests for those who fail (i.e., repeat tests) within two weeks after the results of the tests are announced.
- Ensure that the proper environment is available all through the durations of the tests.

38. The MoICT should be the owner of this project as mentioned earlier, and shall be responsible for the coordination and communication among all stakeholders. To simplify the communication process, a coordination committee shall be established involving the training and development directors at the selected organizations. The **Steering Committee comprising the stakeholders, such as MoICT, AMIR, UCO, UNDP, Ministry of Planning, Int@j, and Senior Consultant(s) in ICT training, will oversee and direct all the activities of the Project**.

39. Concerning the coordination with other international agencies, the MoICT is encouraged to contact UCO and request their assistance in the e-Government initiative through their participation in this project, which focuses on ICT literacy training that leads to ICDL certification. It is necessary that MoICT and UCO sign a Memorandum of Understanding (MoU) to be the umbrella of the

forthcoming collaboration. A sample draft MoU is attached in ***Annex 1***. Some of the urgent issues that MoICT needs the assistance of UCO, in order to commence the training program include the following:

- Providing MoICT with the copyright to print the training material for the employees at reduced rate.

- Provision of the Skills Cards for the governmental employees (in large quantities) and offering MoICT volume discount.

- Holding workshops to train the trainers and the ICDL testers at the private sector training centers, to enable them train the employees in ICT literacy skills and hold the ICDL tests. **This is essential for the capacity building of the private sector to ensure the long-term sustainability of the project**.

40. MoICT and AMIR are advised to present and discuss this document with a number of donors for the possibility of securing the necessary funds for implementing the training activities suggested in this project document. The United Nations Development Programme (UNDP) has participated in other ICT initiatives in Jordan, such as the Jordan Information Technology Community Centers (JITCC's), which are spread in many geographic locations of the country. Moreover, and as mentioned earlier, UNDP introduced with UCO the ICDL program in Jordan. Therefore, UNDP should also be among the organizations to be contacted for support of this project.

41. UNDP is in a prime position to assist the Government through its ongoing experiences with IT initiatives in the country, its ability to build partnerships, to coordinate between the various parties involved, and to obtain knowledge from global sources and lessons from other experiences to build capacities. This along with its ability to assist in fund raising efforts makes it in a better position to assist in this initiative.

42. UNDP has identified ICT and Development as one of its main focus areas, and is being separately addressed by Common Country Assessment exercise (CCA). Furthermore, the importance of this issue is demonstrated in the fact that the Regional Bureau for Arab States has been designed as the focal point for ICT and Development. This has been reflected on Jordan's Country Office focus areas with the inclusion of a separate Team for ICT and Development.

43. To date, UNDP Jordan has several initiatives in this field. The current on-going project, Jordan IT Community Centers (JITCCs), which is executed by the National Information Center (NIC) aims to address the important issue of digital divide by establishing 100 IT Community Centers before year-end. These 100 JITCCs will also constitute the backbone of a national network of JITCC connected to each other as nodes of one national network.

44. Another project that ahs been successfully completed aimed at introducing ICT into Higher Education. Through this Project, UNDP and UCO addressed priority areas believed necessary to upgrade the higher education sector and to bridge the gap between the academic profiles of present university graduates

and the industry needs. Through this project, a long-range national strategy has been developed governing the rapid incorporation and effective utilization of the recent ICT in the higher education system in Jordan. This strategy, after being presented in a national conference, has been adopted by the Council of Ministers.

45. Finally, UNDP and UCO are currently assisting the Ministry of Education in developing an ICT Training Strategy to enable the Ministry to move into the e-learning environment.

46. Some of the issues that UNDP can be requested to provide include:

- Participation in the development of the ICT training strategy in support of the e-Government initiative.
- Assistance in establishing the Project Management Unit, and its provision with some of the needed resources.
- Technical assistance in other parts of the project.

A GLOBAL COMPUTER LITERACY TRAINING BENCHMARK

47. *Computer Literacy For All*, a slogan promoted and endorsed by UNESCO and other leading United Nations Organizations, is, however, faced by the proliferation of different IT training courses and options that make varying and conflicting claims without any objective evidence to support such assertions. This makes training and capacity building programs wasteful, fragmented and often difficult to evaluate. To overcome this difficulty, a global computer training benchmark emerged in Europe in the mid-late nineties and has since spread to other countries outside of Europe. Referred to as the Computer Driving License, the Concept offers a standardized approach to basic computer skills training and certification and confirms the acquisition of recognized, up to date and relevant IT qualifications. As a result, the Computer Driving License Concept, described in detail in the following Section, has been embraced by all kinds of organizations worldwide, including banks, building societies, hospitals, local government, universities, colleges, and private companies. These organizations vary in size from small entities to large corporations with hundreds of employees and tens or hundreds of millions of dollars budgets.

The International Computer Driving License (ICDL)

48. The ICDL is an International certificate, which demonstrates a person's competence in computing knowledge and skills in accordance with international standards. It is owned and managed by a non-profit Foundation based in Dublin, Ireland. The ICDL syllabus and tests are designed and regularly updated by a panel of experts to ensure its relevance to the working world and advances in technology. The syllabus covers the key concepts of computing, their practical applications and use in the workplace and society. It consists of seven modules, each of which must be passed before the ICDL certificate is awarded. The modules are:

- Basic Concepts of information technology
- Using the computer and managing files
- Word processing
- Spreadsheets
- Database
- Presentation
- Information and communication

49. Proper mastery of the above seven topics will provide sufficient knowledge and skills for the majority of computer users. Such knowledge also provides a solid foundation for acquiring more advanced skills for those who wish to do so. In fact, the ICDL Foundation has recently released an advanced ICDL syllabus and tests as a natural sequel to two of the ICDL modules listed above (word processing and spreadsheets). Advanced versions of the other modules are expected before the end of the current year.

50. ICDL is open to anyone regardless of age, education, experience or background. When a candidate registers to start the certification process he/she receives an International Computer Skills Card on which the progress through the seven tests is recorded. As each module is passed, the accredited testing body will sign the Skills Card for that module. The modules may be taken over any period of time, in any order, even all at once, thus offering maximum flexibility. When all the modules have been successfully completed, the Skills Card is exchanged for the ICDL certificate.

51. The ICDL Foundation awards a license to one national Licensee in every country to use the ICDL concept and to establish an ICDL dissemination program in that country. The Licensee may enter into contracts with different centers in the public and private sector to act as accredited test centers. These include universities, vocational colleges and schools, as well as private and state-run training centers. The Licensee will distribute the Skills Cards to the approved centers, for a prescribed fee that helps cover its expenses. It will be responsible for monitoring the quality and integrity of test administration and certification at each center.

52. ICDL is governed by a set of standards and quality guidelines to ensure that the Concept is operated in a consistent fashion in all countries. There is also a regular audit by the Foundation to ensure adherence to the quality assurance guidelines by all licensees. Each Licensee is in turn responsible for accrediting and auditing its approved test centers to ensure compliance with the Foundation's requirements for proper and secure administration of tests, record keeping and management of Skills Cards and certificates. To this end, each Licensee develops a system of guidelines, forms, procedures and organization that best suit the culture and priority needs of its country and region of operations.

Aims and Advantages of The ICDL

53. The ICDL is set out to be the Global Standard for IT skills. Its aims are to:

- Raise the general level of competence in ICT in all sectors of the society
- Enhance mobility in business and improve productivity at work

- Enable employers to make efficient investment in ICT
- Ensure that best practice and quality issues are understood and implemented

54. The ICDL helps individuals to:

- Work and achieve IT proficiency, at their own time, pace, and place
- Confirm to potential employers anywhere the acquisition of recognized, up to date and relevant IT qualifications

55. The ICDL helps employers to:

- Obtain proof of IT competency of potential employees
- Invest efficiently in the training of employees and avoid confusion resulting from conflicting claims made by different training providers or centers

56. The ICDL helps training providers (schools, colleges, universities, companies) to:

- Focus and streamline existing programs in basic IT training programs toward a globally accepted qualification
- Incorporate the contents of the ICDL syllabus into day and evening classes at colleges and training companies as well as school and university curricula with no accreditation or permission needed. The syllabus can also be made available to large number of trainees through distance learning technologies and methods, while testing may be carried out at approved and audited test centers.

57. It is seriously believed that the adoption of ICDL offers a strategic solution in benchmarking and standardizing the basic IT training and certification. It represents a unique approach to advance computer literacy in Jordan.

The Global Impact of The ICDL

58. Although only in its fifth year of operation, the Foundation has currently 32 Licensees operating in 55 countries worldwide in more than 25 languages. The development and recognition of the Concept has been quite remarkable. In March 2001, the number of registrants in the qualification approached the 1.2 million figure and the number of certified accredited test centers is close to 10,000.

59. The high penetration rate of this unique qualification in most European countries is an indication of its popularity and recognition. For some of the European countries where the Concept was first adopted, this rate ranges between 1.6 and 3.5% of the total population of these countries. Considering only the working population, the rate increases and ranges between 3.0 and 7.5%. The following table gives an indication of the ICDL penetration rates at some European countries:

Country	Population	Registrants by 31/12/00	% of Total Population	% of Working Population

Sweden	8,911,296	310,196	3.50	7.50
Denmark	5,356,845	149,204	2.80	5.00
Ireland	3,632,944	98,439	2.70	4.50
Norway	4,438,547	70,481	1.60	3.00

60. The ICDL is thus set to become the most widely recognized qualification in work-related computer use. This is because it is targeted at the full spectrum of needed computer skills and all sectors of the user population and because of the independence and credibility of the organizations behind it.

Benefits of Adopting ICDL in Jordan

61. Although the need and demand for ICDL, as a benchmark of IT qualifications and skills, is proving to be of global proportions, it is estimated that the need to adopt it in Jordan will be especially high. The reasons are:

- One of the most difficult issues facing IT training and employers in the country is the lack of widely acceptable standards by which skills and qualifications in the new and rapidly changing field of IT can be measured. Widely conflicting claims from different IT training providers, further complicate the situation. This problem exits in all countries, which explains the instant success of the ICDL concept. But it is much more so in developing countries, due to the absence of active independent professional societies whose role is to promote quality standards of competence and good practice in every field. In this respect, ICDL offers an ideal opportunity for benchmarking and standardizing of basic IT training and certification in Jordan and the Arab region.

- Due to the lack of well defined syllabus and certification for basic IT training, it is very common in most Arab public universities that IT skills and activities are confined to a limited number of faculty, staff and students in each university, mainly in the science, medicine and engineering disciplines. The majority of faculty and staff remain largely unexposed to the new technology. As a result, the teaching and research of the majority of faculty and post-graduates is still deprived of any access to the new methods and resources made available by the use of IT. Another consequence of this situation is that faculty demand for IT services and basic network infrastructure is still limited and unarticulated. This explains the lack of proper IT infrastructure and services in most Arab public universities, at a time when such essential facilities have become available to secondary and primary schools in developed countries.

The adoption of ICDL could, therefore, offer a strategic solution to this unhealthy and unsustainable state of affairs. It makes effective and certifiable large-scale training feasible to achieve, over relatively short periods of time and at affordable costs. Similar situations and solutions apply, no doubt, to other Arab organizations, such as hospitals, government offices, and companies.

- Adoption of ICT in Jordan would result on focusing demand on those IT books and software that cover the ICDL syllabus. The ensuing growth in demand and competition should result in improved quality and lower costs that would benefit the ordinary user.

- One of the features of the ICDL system is that the entrusted Licensee in each country is allowed to reproduce the global tests in the national language of the country concerned. Implementation of such measures in the Arab region can provide a healthy choice for registrants of the ICDL in using either the Arabic or English version of the test. This undoubtedly will ensure that much wider sectors of the society are reached.

- As mentioned earlier, the Foundation has recently developed a syllabus for an Advanced ICDL. The adoption of the ordinary ICDL, followed by the Advanced ICDL in Jordan, could act as an important accelerating agent for bringing global IT standards to the region and bridging the IT gap between Jordan and the rest of the World.

Adoption of the ICDL by the UNESCO Cairo Office (UCO)

62. The UNESCO Cairo Office (UCO) has taken active steps since April 2000 to familiarize the Arab Region with the ICDL Program and its potential benefit as a benchmark for IT basic qualifications and skills. The UCO Senior Staff made extensive contacts with the education, public, and business sectors in Egypt, Jordan, Kuwait, Morocco, Lebanon and Syria. Moreover, the UCO invited the Training Manager and the ECDL Program Officer at the Oxford University Computing Services for a one-week mission to Egypt. The purpose of this endeavor was three fold: a) to introduce and explain the concept to representatives of the various sectors in Egypt, (b) to familiarize the UCO staff with the intricate details governing the successful operation of the program; and c) to assess the feasibility of establishing the ICDL Program in Arab Region.

63. These efforts have shown unanimous enthusiasm and high demand for introducing this facility in the Region. Consequently, the UCO submitted an official request to the ICDL Foundation in Ireland to become a designated Licensee for the operation of the ICDL Program in the Arab States. The request was approved in August 2000 prompting the UCO to identify a number of test centers around the region for possible designation as certified ICDL Test Centers. Similarly, a number of IT experts and academicians were selected to serve as Quality Assurance Officers (QAO) for the Program in several countries of the region.

64. To familiarize the prospective test center mangers, testers and QAO of the ICDL Program operation, introduce them to the QA system used by the Foundation, and provide them with the opportunity to sit for the ICDL exams and earn the ICDL, the UCO organized two comprehensive training workshops in Egypt and Jordan in October 2000 and January 2001, respectively. The Chief Executive Officer of the United Kingdom (UK) ECDL operation and the Manager of one of the leading UK accredited Test Centers offered the workshops. Moreover, the UCO developed all the necessary documents and material for the operation and marketing of the Program (e.g., Skills Cards,

ICDL Certificates, Test Centers Certificates, Brochures, Posters, etc.) A web site for the exclusive use of the ICDL Program in the Arab Region (http://www.icdl-unesco.org) was also developed by the UCO and hosted by a leading provider in the United States of America. Finally, the UCO officially launched the ICDL Programme in late January 2001 through a network of 17 centers in Egypt, Jordan, the United Arab Emirates, Syria, and Lebanon. Implementation of the Program in other countries of the region is following.

ICDL Recognition in the Arab Region

65. In spite of the young ICDL operation in the Arab region, the concept is gaining wider recognition as evidenced by the rapid growth over the last few months. In particular, the ICDL syllabus has been adopted by the Ministries of Education (MoE) in Jordan and Kuwait as the curricula for the basic course in basic computer literacy. Moreover, the Ministries of Education in a number of Arab States (Egypt, Jordan, Kuwait, Morocco, Sudan, and Tunisia) have adopted the ICDL concept as the main platform for certification of basic computer skills and knowledge. Noteworthy herein is the leading initiative currently being pursued by Jordan in this regard.

66. Guided by an ambitious national plan to build its capacity in information technology (IT), the Ministry of Education (MoE) in Jordan has developed a strategic project for the reform of the educational system dedicated towards transforming the educational structure into an e-learning system that aims to build its human resources through the rapid incorporation and effective utilization of IT throughout the educational enterprises. An essential ingredient in this strategy is the proficiency in basic computer skills, which the MoE plans to fulfill through the ICDL concept. It should be noted that Jordan is currently one of the leading countries in the region in terms of its support and adoption of the ICDL program. Twelve centers are already accredited and more are in the process. Moreover, about 20 Quality Assurance Officers and supervisors are already supporting the program in Jordan.

67. Realizing the importance of the ICDL, and capitalizing on the readily available and fully operational ICDL qualification system in Jordan, the Ministry of Education decided to certify all its personnel starting with teachers who will be teaching the newly introduced course in basic computer skills to Grades 7, 11 and 12. An initial plan has been drafted in this respect as follows:

Stages	Target	Time Table
Stage I	One- Train 100 trainers, of whom 20 were chosen as trainers for Phase Two. Two- The trainers participated in training 1100 teachers (Computer Science) for grades 7, 11 & 12	July – Sept. 2001
Stage II	Train 1950 teachers (English + Mathematics)	Sept. 2001 – Mar. 2002

Stage III	Train 6,500 teachers (first three grades)	Summer 2002
Stage IV	Train about 30,000 teachers (different grades)	2002 and 2003
Stage V	Train remaining teachers (about 20,000) in addition to new teachers	2004 onwards

68. Based upon the success of the ICDL worldwide, in the Arab countries, and in Jordan, as evidenced above, it is logical to adopt the same benchmark in Jordan for ICT literacy training for the e-Government initiative. It is believed that this Concept will significantly contribute to raising the general level of competence in ICT in all sectors of the Jordanian society and to enhance mobility in business and improve productivity at work. It will enable employers to make efficient investments in ICT and will ensure that the basic needed skills and knowledge of IT are understood and implemented.

RELEVANT ICDL MODULES FOR e-GOVERNMENT

69. As explained above, the ICDL consists of seven Modules. Module 1, **Basic Concepts of Information Technology,** informs the candidate about the basic physical make-up of a personal computer to enable him/her understand some of the basic concepts of Information Technology (IT) such as data storage and memory, the context for computer-based software applications in society, and the uses of information networks within computing. The candidate shall also appreciate how IT systems are found in everyday situations and how personal computers can affect health. The candidate shall be made aware of some of the security and legal issues associated with computers. This Module is essential to everyone, and most of it is being currently taught at public schools in Jordan.

70. Module 2 on **Using the Computer and Managing Files** enables the candidate to demonstrate knowledge and competence in using the basic functions of a personal computer and its operating system. The candidate shall be able to operate effectively within the desktop environment. He or she shall be able to manage and organize files and directories/folders and know how to copy, move and delete files and directories/folders. The candidate shall learn the ability to work with desktop icons and to manipulate windows. The candidate shall demonstrate the ability to use search features, simple editing tools and print management facilities available within the operating system. Mastering the skills of this Module is the first step in using the computer for any application, and hence this Module is essential to all candidates.

71. Module 3 on **Word Processing** enables the candidate to demonstrate the ability to use a word processing application on a personal computer. He or she shall understand and be able to accomplish basic operations associated with creating, formatting and finishing a word processing document ready for distribution. The candidate shall demonstrate competence in using some of the more advanced features associated with word processing applications such as creating standard tables, using pictures and images within a document, importing objects and using mail merge tools. Since everyone needs the word-

processing in the daily work and life (to write letters, brief reports, etc.), this Module is again necessary to all candidates.

72. Module 4 is on **Spreadsheets**. It enables the candidate to understand the basic concepts of spreadsheets and to demonstrate the ability to use a spreadsheet application on a personal computer. He or she shall understand and be able to accomplish basic operations associated with developing, formatting and using a spreadsheet. The candidate shall be able to accomplish standard mathematical and logical operations using basic formulas and functions. The candidate shall demonstrate competence in using some of the more advanced features of a spreadsheet application such as importing objects, and creating graphs and charts. This Module is necessary to persons who work with tables and calculations (people in finance, statistics, planning, etc.).

73. Module 5 is on **Database**, and enables the candidate to understand the basic concepts of databases and demonstrate the ability to use a database on a personal computer. The module is divided into two sections; the first section teaches the candidate to design and plan a simple database using a standard database package; the second section allows the candidate to demonstrate that he or she can retrieve information from an existing database by using the query, select and sort tools available in the database. The candidate shall also be able to create and modify reports. Clearly, this Module is necessary to people who work with information that may be stored in the computer as a database, such as information on personnel files, courses at schools, information on training, etc.

74. Module 6 is devoted to **Presentations**. It enables the candidate to demonstrate competence in using presentation tools on a personal computer. The candidate shall be able to accomplish basic tasks such as creating, formatting and preparing presentations for distribution and display. The candidate shall demonstrate the ability to create a variety of presentations for different target audiences or situations. The candidate shall demonstrate the ability to accomplish basic operations with graphics and charts and to use various slide show effects. This Module is needed by persons who usually make lectures, seminars, etc. about their work, present their organizations work to guests, at conferences, and so forth.

75. Module 7 on **Information and Communication** is divided into two sections. The first section, Information, requires the candidate to accomplish basic Web search tasks using a Web browser application and available search engine tools, to bookmark search results and to print Web pages and search reports. The second section, Communication, requires the candidate to demonstrate their ability to use electronic mail software to send and receive messages, to attach documents or files to a message and to organize and manage message folders or directories within electronic mail software. This Module is necessary to all people who need to access the network for information, and also to use the email in the daily works, instead of the regular mail or faxes. The Module is necessary to employees who will be working in the e-Government environment.

76. Based upon the above, it is necessary to require all employees to receive training on the following four Modules:
    - Module 1: Basic Concepts of Information Technology.
    - Module 2: Using the Computer and Managing Files.
    - Module 3: Word Processing.
    - Module 7: Information and Communication.

    One or more of the other Modules may be required from employees based upon the functions they perform in their duties. ***This issue needs further analysis in order to make a sound recommendation, and consequently come up with the right decision.***

ICDL TESTING CENTERS IN JORDAN

77. As of early June 2002, and after about 18 months of the ICDL operation in Jordan, there are now 13 testing centers that are accredited by UNESCO Cairo Office. The names and contact details of these centers are given in ***Annex 2***.

78. It is to be noted that 11 of the above testing centers belong to public organizations (Universities, UNRWA, Royal Scientific Society, and Air Force), and only 2 centers are owned by the private sector: Philadelphia Test Center and Beyond 2000. On the other hand, six of the centers are located in the Greater Amman area, two in Irbid, two in Zarqa, one in Mafraq, one in Karak, and one between Jerash and Amman. For testing the employees who work in Amman (after proper training is conducted), the six centers in Amman can be used for this purpose, and Philadelphia Test Center may also be used for the same purpose.

79. The testing capacity of each center is determined by the number of PC's accredited by UNESCO Cairo Office (UCO) for holding the exams. The laboratories holding these PC's satisfy certain requirements set out by UCO concerning the hardware, software and licensing, networking, and other supportive infrastructure. The testing capacities of the 13 testing centers as of June 2002 are given in the Table below.

SN	Organization/Test Center	Testing Capacity
1	University of Jordan	30
2	Royal Scientific Society	34
3	Jordan University of Science and Technology	40
4	Yarmouk University, Irbid Campus	22
5	Al-al-Bayt University	13
6	Philadelphia University	24
7	UNRWA – Wadi Al-Sair	20
8	UNRWA – Muqablain	20

9	Yarmouk University, Amman Office	45
10	Computer Training Institute, JAF	15
11	Al-Hashemite University	40
12	Mutah University	20
13	Beyond 2000	15

80. The test for each ICDL Module takes exactly 45 minutes. Test centers must also give sufficient time to the examinees to familiarize themselves with the testing environment before each test. This time is usually about 10-15 minutes, and hence the total time that should be allocated to the tests for every Module is about one hour. Each center can make 6-8 test sessions per day, and one may easily calculate the number of people who can make tests in each center. For example, if a center that has 20 accredited PC's, and if employees need to make tests in 4 Modules, then 40 persons can be tested at this center each day (assuming 8 test sessions will be held). Assuming six working days per week, this center will be able to test 240 persons each week.

81. Future capacities of testing centers in Jordan are difficult to predict, as this depends upon the demand on ICDL in Jordan. Institutions may apply at any time to expand the accredited facilities, whenever they find this economically justifiable.

ICDL TRAINING CENTERS

82. All the testing centers mentioned above hold ICDL training sessions. The training is provided in the ICDL accredited laboratories, as well as in several other laboratories at each organization. The training capacities of these organizations vary quite a bit according to the time of the year. Usually, educational institutions are capable of holding a large number of parallel sessions in the summers and in the breaks between semesters. Each of the above centers can easily train several hundreds of people in the summer of 2002. Some of them can even train 1000 or more people in the summer. Therefore, it is easy to find qualified training centers to train about 1,000 employees in summer 2002 from the above-mentioned centers that are located in Amman area, or nearby, and/or other centers. Detailed plan can be easily made once the funding is secured and the procedure for contracting these centers is cleared.

83. In addition to the above centers, there are many other training centers, which are run by the private and public sectors, and who may also be capable of holding ICDL training. Since the capacity needed this summer can be easily handled by ICDL accredited centers, assessing the size and capabilities of such training centers can be done with time in the future, if it is still needed. Also, it is expected that launching this ICT literacy training based upon the ICDL will double the number of ICDL accredited centers in Jordan in less than a year,

with substantial participation from the private sector in this regard. If this is achieved, it is possible in the future to limit the training to ICDL accredited centers only. As a matter of fact, this will encourage the private sector to fulfill the criteria and then obtain the ICDL accreditation to their centers from UNESCO Cairo Office, which will improve the quality of ICT literacy training in Jordan.

BUDGET AND FINANCIAL PLAN

84. The needed budget depends very much upon the number of people that will be trained, and also on how many Modules the training will include. The Table below gives the cost components for the training for budgeting purposes.

SN	Item Description	Estimated Cost	Notes
1	Establishing the PMU (PC's, printers, software, copier, fax, furniture, etc.)	$10,000	Paid only once. PMU with 3 persons.
2	Transportation for PMU Staff to visit governmental organizations and training and testing centers	$100 per person per month. Total per year is about $3,600.	This is for PMU Staff to do their jobs
3	Compensations for PMU staff for extra efforts and overtime	$150 per person per month. Total per year is about $5,400.	As incentives to staff
4	Cost of Training for 4 Modules (1, 2, 3, and 7)	$140 per person	
5	Cost of Training for 7 Modules	$240 per person	
6	Cost of Skills Cards	$20 per card	One S.C. per employee
7	Royalty for printing ICDL training material to all employees	$4,000 one-time fee paid to UCO	MoU with UCO is necessary
8	Cost of Testing	$8 per test (original or repeat)	Each candidate is allowed to repeat 1 out of 4 or 2 out of 7 Modules
9	Cost of Training Material (After permission from UCO to print large quantities)	$1.2 per Module	

85. From the above, the cost to establish the PMU and provide for staff transportation and incentives for one year of operation, in addition to obtaining the license to print the training material will amount to approximately $24,000. The cost for training and testing each candidate will be about $197 per candidate to complete four Modules, and $325 per candidate to complete 7 Modules.

86. The total funding for the project is thus estimated as shown in the Table below.

SN	Description	Approx. Cost
1	Establishing and operating the PMU for one year, and obtaining license to print training material	$24,000
2	Training 2,000 candidates on four Modules in the year 2002 to obtain the ICDL Primer	$394,000
3	Training 16,000 candidates in 2003 - 2005, 13,000 of them on four Modules for the ICDL Primer, and 3,000 on 7 Modules for the full ICDL certificate (cost = 13,000*$197 + 3,000*$325)	$3,536,000
Total Cost of Project for three years		**$3,954,000**

PLAN OF ACTION

87. The Project will be implemented in the period 2002-2005. It can be conveniently divided into four phases as follows.

Phase	No. of Trainees	Period	Approx. Cost
1	1,000 (4 Modules)	June-Sept. 2002	$221,000
2	1,000 (4 Modules)	Oct.-Dec. 2002	$197,000
3	5,000 (4 & 7 Modules)	Jan.-Dec. 2003	$1,113,000
4	5,000 (4 & 7 Modules)	Jan.-Dec. 2004	$1,113,000
5	6,000 (4 & 7 Modules)	Jan.-Dec. 2005	$1,310,000
Total	15,000 on 4 Modules, and 3,000 on 7 Modules	June 2002 – Dec. 2005	$3,954,000

Phase 1

88. This is the piloting and the foundation, and hence the most important, phase of the project. It will involve the establishment of the PMU, the formation of the Steering Committee, starting the process of coordination, developing the

detailed plans of the project, and starting the actual training. This Phase will train about 1,000 people. The activities involved in this Phase, together with the timelines are indicated below.

Phase 2

89. This phase will train about 1,000 more employees in the period October through December 2002. Planning for this phase will be done during the execution of Phase 1. The activities mentioned above that are related to training and testing will be conducted, but the timelines will be shifted about three months. The target date to start the training of this Phase will be around October 1st, and it should be completed before the end of December. This will allow the PMU to use the feedback obtained during the implementation of Phase 1 to improve the planning and implementation of this Phase.

Phases 3 - 5

90. These phases will be conducted in the years 2003 - 2005. Planning for these two phases, including the detailed plan of action and activities, will be developed in November and December 2002, to allow implementation as of January 2003.

SN	Activity	Timeline
1	Decision about training providers (accredited vs. accredited and non-accredited centers, private only vs. private and public centers).	12 June
2	Clear out the process for obtaining training and testing services (tender vs. RFP's), in view of the fact that many centers will be needed simultaneously.	12 June
3	Funding is secured and commitment for project is obtained	16 June
4	Detailed Project Plan fully developed	16 June
5	Steering Committee established and briefed about the program, and liaison officers are appointed	16 June
6	Signing an MoU with UCO for the provision of Skills Cards and the permission to print the training material.	16 June
7	RFP to print 1,000 copies of the training material	16 June
8	PMU is established, in coordination with National Training Institute	19 June
9	Information about training and testing providers collected	19 June
10	Contracting a printing company to print the training material	20 June
11	Technical and financial offers from training and testing providers	26 June
12	Nominations for participants received from all organizations	26 June
13	Training and testing providers are selected and contracted	26 June
14	Training material received by MoICT, at least for 1st batch of trainees	29 June
15	Training schedule finalized and employees are assigned to training sites and provided with copies of training material	30 June
16	Testing schedules developed in coordination with testing centers and communicated to all concerned organizations and individuals	10 July
17	Training program and tests conducted	July-Sept.
18	Evaluations and assessments conducted	July-Oct.
19	Planning for Phase 2 takes place	Aug-Sept.
20	Final report for Phase 1 prepared	10 Oct.

MONITORING AND ASSESSMENT

91. Documentation and evaluation are essential tools in achieving sustainability. These tools provide a means to examine the Project and adjust the operations accordingly. According to the proposed hierarchy for ICT training as discussed earlier, the Steering Committee will be responsible for monitoring and evaluating the Project's overall progress. The SC will be entrusted with the approval of any major changes in the work-plan, budget, etc. Any changes in the milestones and outputs of the Project will be discussed with and agreed upon by the SC. The PMU will be accountable to the Advisor, ICT Education

and Training, and responsible for reporting the day-to-day activities and progress of the Project to the MoICT.

92. Quality assurance and uniformity of training and testing are among the main cornerstones of the project. The UCO has recruited about 20 Quality Assurance Officers (QAO) and supervisors of highly recognized academic and professional backgrounds, on part time and full time consultancy basis, to undertake auditing visits to the various ICDL Training/Testing Centers in Jordan and attending all ICDL tests. Such visits are intended for the initial accreditation of centers and to ensure full compliance with the quality assurance system set by the ECDL Foundation in all aspects of Program operations (e.g., tests administration, Skills Cards distributions and records, central database maintenance and updating, etc.).

93. In addition, the PMU shall design a questionnaire to be completed by all participants to obtain their feedback on the training centers, the trainers, the training material, the tests, testing environment, and all other components of the training and testing. The results shall be analyzed by the PMU and presented through the Advisor, ICT Education and Training to the MoICT, the funding agencies and governmental organizations participating in the training. Also, these results shall be used to improve subsequent phases of the training. The senior Consultant can assist in the evaluation and assessment process.

94. Personnel from the PMU shall conduct regular visits to the training centers to obtain first hand information on the progress of training. This is particularly important during the first two phases of the Project. Such information shall be recorded in the database and used for the renewal of contracts between MoICT and the training and testing centers.

RISKS

95. Several risks are envisaged in this project. The most important will be the following:

- Difficulty of allocating the necessary budget for Phase 1 in such a short period of time.
- Uncertainty about the procedures for procurement of the necessary services for the selection of the training and testing providers.
- Resistance to change and difficulty of acquiring the needed technical skills within the given time.
- Lack of funding to support the different phases of the Project.
- The very demanding and difficult logistic job to be performed by the PMU in this Project requires a very organized and highly professional team, which might not be easy to find from within the available cadre.

PRIOR OBLIGATIONS AND PREREQUISITES

96. Several issues should be settled before the Project is launched. The most important are:

- Full commitment of the MoICT to carry out the Project as an essential step for the success of the e-Government initiative.
- Full commitment and cooperation of the participating governmental organizations, together with their understanding that ICT literacy is essential towards the success of their roles in the e-Government.
- Competent staff for the PMU are identified and selected, and provided with the necessary facilities to enable them start their duties.
- Effective support by all concerned organizations.
- Conducting awareness sessions to the selected employees about importance of ICT literacy, followed by awareness campaign for all employees.

RECOMMENDATIONS

97. The following recommendations will assist in producing a better plan for the project, and will thus make more efficient use of the resources:

- Analysis of the portfolio of the employees of the participating organizations, including the number of people in each organization who need to be trained, the skills they need to acquire, their qualifications, their interest and ability to acquire the needed skills, etc. This analysis can be conducted during the implementation of Phase 1, provided that the participants of Phase 1 are carefully selected according the criteria mentioned earlier.
- It is necessary to consider the development of a plan to train part of the citizens on basic IT skills, as they will be the customers of the e-Government services. The Jordan IT Community Centers that were mentioned earlier may be used for this purpose, and the National Information Center (NIC) might be able to implement such a training program.

Annex 1

MEMORANDUM OF UNDERSTANDING

Concerning

Promoting Computer Literacy in Jordan

Between

The Ministry of Information and Communication Technology (MoICT) in Jordan

And

UNESCO Cairo Office

June 2002

Preamble

The MINISTRY OF INFORMATION AND COMMUNICATION TECHNOLOGY IN JORDAN (hereinafter referred to as "**The MoICT**"), represented by its Minister, **H.E. Dr. Fawaz Zu'bi**

And

The United Nations Educational, Scientific and Cultural Organization/Regional Office for Science and Technology for the Arab States – **UNESCO CAIRO OFFICE** (hereinafter referred to as "**UCO**"), represented by its Director, a.i., **Dr. Amr Azzouz**,

Recognizing the importance of promoting *Computer Literacy for All* as a means towards developing a competent and professional generation of computer users capable of using the basic skills of Information Technology (IT) with a view to enhance the quality of production and consequently contribute positively to economic development; and

Whereas

UNESCO's mission is to make contribution to "peace and human development in an era of globalization through education, the sciences, culture, and communication….",

UNESCO's Medium-Term Strategy and Programs call for promoting empowerment and participation in the emerging knowledge society through equitable access, capacity building and sharing of knowledge,

UCO serves as a facilitator and coordinator for the global computer literacy for all movement in the region.

UCO has launched, in 2000, the new pioneering **I**nternational **C**omputer **D**riving **L**icence (**ICDL**). This Programme represents a unique approach to promote computer literacy as it offers an international certification demonstrating a person's competence in computing knowledge and skills in accordance with international standards. The Programme has countless benefits for the whole society and it has evolved and expanded significantly in the Arab region since its launching,

The MoICT has set the enhancement of the capabilities of the Jordanian workforce through the effective utilization of information technology as one of its main objectives,

The MoICT has embarked upon a number of leading initiatives and plans, such as the e-Government, to enhance the use of recent technologies in the work place,

The **UCO** and the **MoICT** hereby agree to strengthen their cooperation in this field and to undertake a variety of activities in support of promoting Computer Literacy in Jordan, with particular emphasis on employees of the Government and the public sector, and recent graduates of universities and educational institutions.

• Objectives

The main objective of this undertaking is to create an opportunity for all segments of the Jordanian society to improve their basic computer skills and upgrade them to international acceptable standards through the International Computer Driving Licence (ICDL) training and certification Programme.

Activities

The primary activities of this cooperation shall be:

- Endorsement of the ICDL Programme as an effective vehicle for the promotion of computer literacy in the Jordanian society.
- Support the ICDL training and certification Programme as an integral component of the IT national capacity building initiatives undertaken by the MoICT for the preparation of a national cadre of experienced IT users.
- Development of an implementation strategy and detailed action plans for the operation of the ICDL Training and Certification Programme.

• Terms Of Agreement

The terms of this memorandum of understanding will be effective starting the date of signature of this protocol. Either party may terminate the agreement upon six months notice to the other.

For the Ministry of Information and Communication Technology (MoICT) in Jordan

Dr. Fawaz Zubi
Minister

……

Date and place of Signature:

……...

For UNESCO Cairo Office

Dr. Amr Azzouz
Director, a.i.

……
……

Date and place of Signature:

…….

Annex 2

ICDL Accredited Testing Centers in Jordan
(As of June 15th, 2002)

1. Yarmouk Computer and Information Center
Yarmouk University, Irbid, Jordan
Manager: Dr. Sameh H. Ghawanmeh
Tel: +962-2-7271100 ext 2551/2558
Fax: +962-2-7274725
E-mail: sameh@yu.edu.jo or icdl@yu.edu.jo
URL: http://www.yu.edu.jo

2. Jordan University Computer Testing and Training Center
University of Jordan, Amman, Jordan
Manager: Dr. Ahmad Al Jaber
Tel: +962-6-5355000/4500
Fax: +962-6-5355000
E-mail: jahmed@sci.ju.edu.jo

3. UNRWA - Amman Training Centre
Amman Mugablein, Amman, Jordan
Manager: Dr. Saleh Mohammad Naji
Tel: 4201163/4202161
Fax: 4201163
E-mail: libraryatc@hotmail.com

4. UNRWA- Wadi Seer Training Centre
Wadi Seer, Amman, Jordan
Manager: Mr. J. Maslamani
Tel: 962-6-5811403
Fax: 962-6-5816484
E-mail: wstc@index.com.jo

5. Philadelphia Test Centre
Philadelphia University, Amman, Jordan
Manager: Mr. Adnan Shareef Yahya
Tel: 962-2-6374444
Fax: 962-2-6374440
E-mail: PHILAD@GO.COM.JO

6. Computer Technology, Training & Industrial Studies Centre (CTTISC)
Royal Scientific Society (RSS), Amman, Jordan
Manager: Dr. Saqer Abdel-Rahim
Tel: 962-6-5344701
Fax: 5340520/5344806
E-mail: saqer@rss.gov.jo

7. Al al-Bayt University
P. O. Box 130040, Mafraq, Jordan
Manager: Dr. Ismail Ababneh
Tel: 962 6 4871101
Fax: 962 6 4871232
E-mail: info@alalbayt.aabu.edu.jo

---

8. Jordan University of Science and Technology
P. O. Box 3030, Irbid 22110, Irbid, Jordan
Manager: Dr. Omar Al-Jarrah
Tel: 962-2-7095111 ext. 22794
Fax: 962-2-7095046
E-mail: aljarrah@just.edu.jo

---

9. Computer Training Institute (JAF)
G.H. of Jordan Armed Forces Computer Directorate, Amman, Jordan
Manager: Col. Issa Mohammed Abu-Dabour
Tel: 00962-5-3983298
Fax: 00962-5-3983298
E-mail: jaf_cti@joinnet.com.jo/cti@joinnet.com.jo/issadb@yahoo.com

---

10. Mu'tah University
Computer Center - Mu'tah University, Karak, Jordan
Manager: Dr. Abdel-Rahman AlZoubaidi
Tel: 00962-6-4617860 Ext: 5525
Fax: 00962-6-4654061
E-mail: zoubidy@mutah.edu.jo

---

11. Hashemite University
P. O. Box 150459 Zarqa 13115, Zarka, Jordan
Manager: Dr. Ali Abdul-Amir Al-Rubaie
Tel: 962-5-3826600
Fax: 962-5-3826613
E-mail: ali@hu.edu.jo

---

12. Yarmouk University Liaison Office
Amman, Abou Elhaj Complex, Amman, Jordan
Manager: Dr. Sameh Ghawanmeh
Tel: 962-6-515 5861
Fax: 962-2-727 4725
E-mail: sameh@yu.edu.jo/sameh1298@yahoo.com
URL: http://www.yu.edu.jo

---

13. Beyond 2000
P.O. Box 940746, Amman, Jordan
Manager: Suha N. Atari
Tel: 962-6-566-5048
Fax: 962-6-566-5049
E-mail: info@beyon2000.com.jo

Annex 3

Necessary Information for Tendering the Printing of Training Material

1. The ICDL training material consists of seven modules. Each Module consists of two parts: Training Material, and Exercises.
2. The Arabic version of the training material, which is currently in the final stages of its preparation, has (approximately) the following number of pages:

Module Number	Name	Approx. Number of Pages
1	Introduction to Computers and ICT	100
2	Windows	130
3	Word Processing	195
4	Spreadsheets	180
5	Database	175
6	Presentations	205
7	Communications and Internet	155
Total		**1140**

3. According to the current needs of the Ministry of ICT, it is suggested to train the employees on Modules 1, 2, 3, and 7 of the ICDL curriculum. The total number of pages for these Modules is about 580 pages.
4. There are several options for binding the training material:
   (a) It is possible to bind each Module separately, or
   (b) It is possible to bind each two Modules together, or
   (c) It is possible to bind all the four Modules in one volume.
5. Option (a) of the above is the most costly because it needs separate cover for each Module. Also, some volumes (such as Module 1) will be quite small (about 50 sheets of paper only), if we bind each Module separately.
6. Option (b) might be the most practical, and it is possible to bind Modules 1 and 7 together (about 255 pages total), and Modules 2 and 3 together (about 325 pages total).
7. Option (c), although the least costly, might result in a thick volume.
8. Whatever option is adopted, it is necessary to insert one colored sheet of paper between the training material and exercises of each Module, and also before each Module, when more than one Module are bound together in one volume.
9. Concerned staff at MoICT may prepare the detailed specifications of the paper (weight, size, quality), cover, type of printing, type of binding, etc., as well as the General Conditions of the tender, in order to be consistent with the regulations of the tendering process at the Governmental organizations.