ECONOMIC AND SOCIAL COMMISSION FOR WESTERN ASIA (ESCWA)

NATIONAL PROFILE OF THE INFORMATION SOCIETY IN THE SULTANATE OF OMAN

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ABBREVIATIONS

ADSL	Asymmetric Digital Subscriber Line (ADSL)
ATM	Asynchronous Transfer Mode
CERT	Computer Emergency Response Team
COI	Heritage and Culture Communities of Interest
CTLCs	Community Technology Learning Centers
DGCS	Directorate General of Civil Status
DSF	Digital Solidarity Fund
G2B	Government to Business
G2C	Government to citizen
GTO	General Telecommunications Organization
HEAC	Higher Education Admissions Centre
HEIs	Higher Education Institutions
ICANN	International Corporation for Assigned Names and Numbers
ICDL	International Computer Driving License
ICT	Information and Communication Technology
IFS	Integrated Finance System
ITA	Information Technology Authority
ITTS	IT Technical Secretariat
KOM	Knowledge Oasis-Muscat
MDGs	Millennium Development Goals
MoCIROP	Ministry of Commerce and Industry
MoE	Ministry of Education
MoF	Ministry of Finance
MoH	Ministry of Health
MoHEs	Ministry of Higher Education
MoNE	Ministry of National Economy
NRS	National Registration System
OEPPA	Oman Establishment for Press, Publication and Advertising
OMANTEL	Oman telecommunication Company
OMNIC	Oman Network Information Centre
ONA	Oman News Agency
OSO	Oman Statistics Online
OSS	One Stop Shop
OWAM	Oman Women's Association
PDO	Petroleum Development Oman
ROP	Royal Oman Police
SOC	Security Operation Centre
SQU	Sultan Qaboos University
SRC	Scientific Research Council
TB	Government Tender Board
TKM	The Knowledge Mine
TLD	Top Level Domain
TRIPS	Trade Related aspects of Intellectual Property Rights
WG-AND	Working Group of Arabic Domain Names
WiMAX	World-wide Interoperability for Microwave Access
WIPO	World Intellectual Property Organization
WSIS	World Summit on the Information Society

Introduction[1]

Oman is situated in the Southwest Asia, nestled amidst the Arabian Sea, Gulf of Oman, and Persian Gulf, bordering the Republic of Yemen, in the south, Kingdom of Saudi Arabia and in the west United Arab Emirates (UAE). It is considered one of the fifteen states that constitute the famed "Cradle of Humanity." With a land area of about 309.5 thousand Square kms and a coastline of 1700 kms, it is the third largest country in the Arabian Peninsula.

It is recognised that the country's greatest and most precious resource is its people. Therefore, their potential must be developed to enable them to build their present and prepare for the future. Consequently, the development of human resources has been a corner stone of Oman's development strategy.

As per the Royal Decrees 6/91 issued in 1991 and 108/06 issued in 2006, the Sultanate is divided into nine main administrative Governorates and Regions, namely: four Governorates and five Regions.

Table 1: Socio Economic Indicators - 2005

Indicator	Value
Population (in 1000s) (Mid year estimates)	2,509
GDP at market price (Million. US$)	30,834
Average annual rate of growth of GDP	24.6
GNI per capita (US$)	11,692
Merchandise imports (Million. US$)	8,970
Merchandise exports (Million. US$)	18,692
Oil & Gas Revenues as a % of total government Revenue.	78.8

Source: Ministry of National Economy –Statistical Year Book, October 2006.

Oman has adopted Vision for Oman's Economy: Oman 2020. Currently, Oman is in its Seventh 7th Five Year Development Plan. In line with the Vision, the Seventh Five Year Development Plan (2006-2010) lays emphasis on upgrading the Information Technology (IT) sector by implementing the national strategy for Oman's Digital Society, with emphasis on establishing the basis of the e-Government, and also to expand research and development activities to include most sectors of the national economy.

I. THE ROLE OF THE GOVERNMENT AND ALL STAKEHOLDERS

A. NATIONAL INFORMATION SOCIETY POLICIES AND E-STRATEGIES[2]

Following a Council of Ministers' decision in 1998, the National Information Technology Committee (NITC) was set up to oversee the development of the Sultanate's IT sector and to work towards the implementation of e-government initiative. The Minister of National Economy headed this committee. A new one was created in 2001 named IT TASK Force (ITTF) comprising representatives of the competent departments and bodies and focusing on wider IT related issues.

The ITTF had the realisation of Digital Oman as its main vision. It sets forth its efforts to develop a National IT Strategy along with a Road map for the implementation of this strategy. Due to its efforts the Digital Oman Strategy was developed and approved in 2002. Subsequently the IT Executive Committee (ITEC) was formed in 2003-2006 to oversee the implementation of the Digital Oman Strategy.

IT Technical Secretariat (ITTS) was set up under the supervision of ITEC, as the operational entity undertaking the country's plans to introduce E-government and create a 'digital society'. ITEC also took the initiative to set up an Information Technology Authority (ITA) in accordance with the recommendations of

[1] Source: Oman Digital Society report 2007, p12-13
[2] Excerpts from Oman Digital Society report 2007, p15

the Digital Oman strategy – road map.

The government's commitment to ICT developments and penetration is further emphasized by the establishment of ITA by the Royal Degree No. 52/2006, issued on the 31st May 2006. This autonomous body is affiliated to the Minister of National Economy (MoNE).

ITA serves as a competency centre on best practices in e-Governance and in harnessing Information and Communication Technologies (ICT), thereby offering efficient and timely services, integrating processes and improving efficiency in service delivery. ITA performs its core functions through its different offices of specialized focus and it is responsible for implementing national IT infrastructure projects and supervising all projects related to Digital Oman Strategy implementation while providing professional leadership to various other e-Governance initiatives of the Sultanate[3]. ITA works with the vision 'to transform the Sultanate of Oman into a sustainable Knowledge Society by leveraging Information and Communication Technologies to enhance government services, enrich businesses and empower individuals'[4].

Within this context, eOman, the digital society plan of action, was incorporated within the road map to include range of initiatives related to the provision of government services through electronic channels, building ICT capacity within various segments of corporate sector and the common public. This road map serves as a guideline for ITA to define and follow up on its annual business plan.

B. PUBLIC/PRIVATE PARTNERSHIP (PPP) OR MULTI-SECTOR PARTNERSHIP (MSP)[5]

National level e-Government initiatives are championed, executed and coordinated by the ITA. At a regional level, each regional municipality undertakes ICT initiatives in which ITA plays a consultant's role. On the other hand, most ministries have regional head offices which oversee the realization of a knowledge society within their region. All the regional efforts are coordinated and synchronised with the central offices at the capital area – Muscat.

Knowledge Oasis-Muscat (KOM) is the Information Technology park of Oman. It is a public-private sector led initiative committed to creating a multi-stakeholder environment. In such an environment, entrepreneurs, small and medium-sized enterprises as well as established multi-nationals can innovate and nourish the ICT sector within the region.

Currently, it hosts about 25 ICT based companies including multi-national companies like Hewlett-Packard, Huawei Technologies and NCR Corporation. More global ICT companies such as ORACLE, SAP, Motorola and Microsoft are to locate their offices at KOM soon. KOM already hosts turn-key outsource call centres and customer communication service call-centres like Infocom, GulfAir and Omanline with well trained, multilingual Customer Service Representatives.

A substantial potential has been identified in Oman for developing software requirements such as banking, telecommunications, government's programme of e-governance, IT-enabled services and call centres and ultimately providing a source of qualified IT professionals for the entire Gulf region. Clustering IT companies and IT higher education institutions within a single campus, KOM is expanding by attracting ICT companies to base their operations at KOM. It works closely with the Ministry of Commerce and Industry, the Oman Chamber of Commerce, the Omani Centre for Investment Promotion, Export and Development, permitting and regulatory organizations, utility providers and others to develop the partnerships that assure business success. Moreover, it assists companies in finding appropriate office accommodation, facilitating permitting, assessing infrastructure needs, reviewing incentives available for projects as well as helping firms market and promoting their products/services.

The Knowledge Mine (TKM) is an incubator facility for companies wishing to start an office

[3] http://www.eoman.gov.om/english/about_ita.html
[4] http://www.itec.gov.om/english/mission_vision.html
[5] Source: Oman Digital Society report 2007, p27-28

immediately before moving to a bigger space for full-scale operations. It is a community-based catalyst whose mission is to grow knowledge-based businesses. Infrastructural, secretarial and administrative support to the operations would be readily available at the TKM. The government would be providing to business establishments on Knowledge Oasis a package of most attractive and internationally competitive incentives, including up to 100 per cent foreign ownership, duty-free import of hardware equipment and special facilities for immigration with multi-entry visas to IT professionals of companies establishing their presence on Knowledge Oasis.

C. ROLE OF NON GOVERNMENTAL ORGANIZATION[6]

As a public-private partnership initiative the Ministry of Education (MoE) in association with the **Petroleum Development Oman (PDO)** had set up a multimedia centre for developing educative materials using modern technologies. It is a unit in which Omanis develop and create multimedia educational resources that will benefit all members of the Omani community. It is truly a win-win situation where learning and development benefits young Omanis creating the materials and also benefits those Omani scholars and teachers in the schools and colleges who use those resources in academic environments. Currently the centre hosts interactive materials for Grade 4 and 5**.**[7].

A state-of-the-art computer facility is operated at Al **Wafa Technical Centre at Omar Ibn al Khatab Institute for visually impaired**. The project was funded with the support of Petroleum Development Oman (PDO) in co-operation with the institute for students with visual impairment. The fully equipped computer laboratory will serve the educational needs of the visually impaired students using the latest trends in hardware and software including the Text-to-Speech (TTS) technology, which displays Arabic text in Braille language. Other advancements include Braille printers and tools that provide the visually impaired access to exchange computerised information. The staff of the institute will benefit from the introduction of computer-based teaching methods for education and training. Technology is providing new opportunities to learn, to communicate and to work. It provides the visually impaired with a tool to allow them to fulfil their potential.

The **Oman Women's Association in Muscat** (OWAM) is now equipped to train women across the country in IT skills and capabilities following collaboration with Microsoft Oman. A group of Omani women are celebrating the completion of Microsoft's Unlimited Potential (UP) curriculum, which will enable them to pass on their new expertise to at least 750 members of the OWAM in the three regions of Salalah, Buraimi and Muscat. Microsoft donated its UP Curriculum and trainers to OWAM in this first phase an amount of $52,000. Plans are in place currently to expand the programme following this first phase to the remaining 42 women associations. The OWAM was established in 1970 in order to empower women by building their knowledge and skills, and promoting their personal and professional capabilities.

The **Oman Information Communication Technology Society** will be formalised in 2007 with representatives from the public and private sector. Founder members are from major sectors like IT, Telecommunication, Banking, Oil & Gas and other public service and private sector organisations. The Society's initial constitution reflects the keenness of the various segments that are currently pioneering ICT adoption and would like to network together for creating more awareness within the society of the potentials of IT. The main objective of this society is to collaborate and coordinate the efforts of the ICT community within Oman. It emphasizes a cooperative focus in order to create and nurture a technology culture within Oman. The society envisions working along side with national level projects and supporting their implementation in every possible manner. It also aspires to spread around the regions as the network spreads.

D. PROGRESS TOWARDS FULFILLMENT OF NATIONAL POLICIES AND STRATEGIES

Oman has adopted an integrated approach in developing its ICT strategy, which sets out detailed recommendations and a plan of action to realise these objectives. Following this strategy, ITA envisages

[6] Excerpts from Oman Digital Society report 2007, p36 & 45
[7] www.eoman.net

transformation of the Sultanate of Oman into a sustainable knowledge-based society by leveraging Information and Communication Technologies to enhance government services enrich businesses and empower individuals.

Some of the key initiatives of ITA for a digital Oman are as follows[8]:

- Setting up a unified e-Government architecture including IT infrastructure, applications and shareable databases of services and public information;
- Creating an IT governance framework, standards and guidelines for national information and communication technologies (ICT) sector infrastructure, and a security framework;
- Enabling customer-centric e-Government services for both individuals and businesses and streamlining them within the common IT infrastructure;
- Developing plans and policies for training and development of human resources in IT while enhancing existing competencies;
- Deploying ICT education and training programs suitable for various segments of the society based on systematic studies and comprehensive planning.

ITA has initiated various projects in three main areas infrastructure, awareness, electronic services delivery and capacity building[9]; some of the most important are detailed below.

ITA's has initiated to interconnect government agencies through the Convergent government network by signing an agreement with Omantel in mid 2006. It has also signed volume-licensing agreement for procuring office productivity software with Microsoft and Oracle.

ITA is developing a centralized gateway (Ubar portal) to offer electronic services from various Government organizations accessible to the public through multiple electronic channels. Several e-service flagship projects will be integrated through this common e-government gateway and the first phase of its presence is charted during the end of the second quarter of 2007.

ITA also initiated the e-Payment gateway project to enable citizens to make their payment online through multiple payment instruments and thus take Oman to a higher level of e-services and e-commerce is in development. The gateway will be available for use in line with the Ubar Portal whose phase one will be operational by mid 2007.

For governing electronic transactions, the electronic transactions legislation of Oman regarding protection of privacy and validation digital signatures and electronic-message regulations is expected to be enacted by the competent authorities during 2007.

In the e-services track, ITA has assisted several Government organizations in implementing IT initiatives to deliver e-services including the National Statistics Online project, e-Tendering, One Stop Shop, Education Portal and the National Registration System for Civilians. Most of these e-services projects are underway successfully. The One Stop Shop is a major e-service involving six ministries and entities to enable a single-window service for Commercial Registration of new companies electronically. In this quick win project of the G2B sector, phase one is successfully operational and the project is advancing to its second phase.

The National Registration System for civil registrations developed and adopted by the Directorate General of Civil Status (DGCS) is an integrated computer system with archive of accurate information about vital social events like Birth, Marriage, Divorce, Death, Residency and Nationality for all citizens and

[8] http://www.itec.gov.om/english/ita_initiatives.html
[9] www.itu.int/wsis/c2/docs/2007-May-16/documents/ALC2C4C6_3_5-WSIS-Stocktaking.ppt

residents of Oman. This project being the first of its kind in the region to have been implemented using the chip-based smart cards is running successfully.[10]

For building IT capacity within the society, a comprehensive plan to enhance national IT skills has been proposed to include a National IT training project for implementation, within the government sector and for the community at large over a three year period. Developments of the national ICT sector has been recommended by nurturing incubator programs which will enhance local IT investments and support the expansion of telecommunication infrastructure to all sectors of the society.

The Digital Literacy Training pilot program[11] for 400 civil service employees has been completed in 2007 successfully. The second phase of this project targets training about 104,000 civil employees by 2010. This program aims to provide IT training opportunities to government and to build ICT literacy amongst Omani citizens and create new avenues of employment.

Committed to increase the levels of PC penetration within Oman, a project for providing low-cost PCs pre-loaded with licensed software and with Internet connectivity has been initiated. Measures are in place to address the bridging of the digital divide by undertaking targeted messages and means to reach the entire society.

In its focus on IT governance, ITA is working towards creating a service delivery model, an IT governance framework, standards and guidelines for national ICT infrastructure, security framework.

II. ICT INFRASTRUCTURE

The success of the Digital-Oman initiatives depends on how well the society is being transformed to move towards being a digital society; and on the successful implementation of the ICT infrastructure and the associated tele-communication projects. The growth of the telecommunication sector has been rapid due to efforts undertaken by the government with respect to privatisation and liberalisation. [12]

A. INFRASTRUCTURE[13]

The General Telecommunications Organisation (GTO), the government agency in-charge of communications in the Sultanate since the early 1970s corporatised into Oman Telecommunication Company (OMANTEL), which was later privatised in March 2002. Omantel currently provides the countries fixed-line and Internet services. The Sultanate's strategy to fully liberalize the sector has provision would allow a new operator for fixed line and Internet services in the near future. The mobile services sector currently has two license operators namely Oman Mobile and Nawras. For data pertaining to Information Society Core Indicators which includes ICT infrastructure refer to Annex1.

[10] Source: Oman Digital Society report 2007, p47
[11] http://www.eoman.gov.om/english/press_releases16.html
[12] Source: Oman Digital Society report 2007, p20
[13] Source: Oman Digital Society report 2007, p20

Table 2. Current penetration levels of ICT services in Oman

	Numbers
1. Number of Fixed Line Subscribers	271,411
- Post paid subscribers	225,918
- Pre paid subscribers	38,649
- Card Pay phone	6,844
2. Number of Mobile Subscribers	2,026,301
- Post paid subscribers	260,515
- Pre paid subscribers	1,765,786
3. Number of internet Subscribers	65,678
- Dial- up subscribers	48,827
- DSL subscribers	15,498
- Leased Line Subscribers	272
- Internet (Others)	1,081

Source: Telecommunication Regulatory Authority (TRA) – End of First Quarter 2007.

Oman Telecommunications Company (Omantel) has launched its wireless Internet service for post-paid Internet customers recently. The new service, post-paid Wi-Fi, will now enable ADSL and Dial-up subscribers to do wireless surfing at 20 hotspots that have been set up in busy commercial areas across the capital Muscat[14].

B. INVESTMENTS IN ICT INFRASTRUCTURE AND DEVELOPMENT OF NEW SERVICES

TRA has recently announced that companies, establishments and individuals are required to obtain second-grade permits for providing internet services, pursuant to the provisions of the Law Organising Telecommunications and in implementation of the general plan of communications sector in the Sultanate. The TRA, effective from June 2007, would begin to receive applications to this effect and this will significantly affect the penetration of Internet in Oman, thereby resulting in bridging the 'digital divide' by opening up the Internet services market.

Opening of the new telecom service for companies, establishments and individuals came within the steps taken by the Sultanate for opening the communications sector for competition, and such steps also included issuance of license for Oman Telecommunications Company (Omantel) to provide fixed phone, mobile and internet services as well as issuance of another license to the Omani-Qatari Telecommunications Company (Nawras) to be the second operator of the international mobile phone (GSM) service. Provision of these services by small companies, establishments and individuals would eliminate the dominance of mega companies from this service and would provide individuals with opportunities to establish their own projects.

The main directions of the Seventh Five Year-Development Plan (2006-2010) include the following:

- Upgrading the Information Technology sector through implementing the National Strategy for Oman Digital Society with special emphasis on establishing sound basis for the E-Government;
- Special priority to be given to the research and development activities in the public and private sectors.

[14] http://www.ameinfo.com/119344.html

C. ICT CONNECTIVITY[15]

Oman is a relatively vast country with spread out population clusters. This poses the challenge of tele-connectivity while balancing the cost factor. Nevertheless, there are ambitious projects underway for this as follows:

(a) Oman Telecommunications Company (Omantel) has completed several Fibre Optic Projects in the interior regions of the Sultanate via fibre optic links. Omantel has also linked the area between Shannah and Masirah Island with Microwave Link to provide necessary protection to the **submarine fibre optic link** and functions as a substitute in case of cut-off in the Fibre Optic Link. The Fibre Optic Project provides various telecom services including fixed, mobile and Internet services across the Sultanate, particularly in rural areas. Additional submarine fibre optic links and microwave links have been added, to act as a substitute in case of cut-off or a failure in the fibre optic link.

The project will cater to the needs of customers, government departments and corporate houses. The transmission capacity was increased to 2.5 Gb, which would minimise the congestion in the network. The project would also provide fixed and Internet services in the areas along with the fiber optic link via the **Wireless Local Loop system** (WLL), which would provide 200 remote villages with telecom services.

(b) Oman Mobile has won the Best Wireless Network Integrator in the Middle East award in recognition for its efforts to create a wireless network connecting remote areas notwithstanding the varying topography of the Sultanate. With over 1.2 million subscribers the company provides services such as SMS, MMS, GPRS, news and weather forecast services, parking payment through mobile, mini-bill facility, roaming services, translation services, etc. The Secondary School students received their exam results via SMS services of Oman Mobile.

(c) Omantel recently commissioned the new wireless Internet service "WiFi Ibhar" for laptop and notebook users. The "Ibhar" service, which means surfing in Arabic, has been received very well by the market, in addition to the ever-growing demand for the fast ADSL Internet.

In a move towards liberalising the telecommunications sector, the newcomer Nawras (www.nawras.com.om) began its operations on the 16th March 2005. Nawras has made the market more competitive while increasing the geographical reach across the Sultanate. Nawras, which covers 82 per cent of populated area in the country, is planning to provide 95-96 per cent mobile coverage by the end of its fifth year of operation.

Nawras has around 440,000 customers as of August 2006. It provides voice and data services through its next generation mobile broadband network with a better voice quality and a fast and reliable mobile data access using EDGE technology. Nawras provides large network coverage through its own broadband network as well as Oman Mobile's network. It offers its customers wireless high-speed Internet access through affordable packages that can be purchased easily and set up within minutes.

D. ICT EQUIPMENT AND SERVICES[16]

Oman's key infrastructure provider is the Oman Telecommunication Company (Omantel). In cooperation with other telecom operators, it provides telephony services, Internet and email facilities, broadband and wireless connectivity and a range of other services.

Asymmetric Digital Subscriber Line (ADSL) has created a higher bandwidth highway for Internet connection. As an incremental technology this service will enable businesses to offer video-on-demand about their products (or services) or universities to broadcast lectures or even deliver on-demand entertainment or

[15] Source: Oman Digital Society report 2007, p22-23
[16] Source: Oman Digital Society report 2007, p22 & 44

health services.

Omantel has drawn up plans for the rollout of an Asynchronous Transfer Mode (ATM) backbone and a Digital Subscriber Line (DSL) to 'customer' premises, considering satellite and MMDS as strategic alternatives for broadband access in remote areas. Initially broadband access to geographically remote areas should be concentrated on schools, health care centres, businesses and cyber-cafes.

Omantel inked deals with Flag Telecom with the key objectives to transform Oman into a key Internet transit point between the Middle East and Africa, by extending the marine cable network. Falcon project is the first self-maintenance marine cables network with high capacity and high quality connectivity in the region.

The National PC Initiative aims to address capacity building and ICT sector enhancement. This initiative intends to build capacity in the general population by creating a PC bundle offer that is affordable.

E. INTERNET GOVERNANCE[17]

Wireless connectivity for broadband services is available for adoption in Oman. Currently both mobile communication service providers offer a wireless connectivity for accessing the Internet. Such a service connects to the Internet, using a WiFi enabled laptop, PDA or mobile device. The key benefit is the ability to access one's office remotely increasing productivity and offering flexibility. By providing access to the Internet and the corporate network remotely, it is possible to conduct meetings and presentations in public venues as well as turn waiting time into productive time by processing vital emails.

'Ibhar' is a broadband wireless service provided by Omantel enabling access to the internet wirelessly at various public places such as cafes, restaurants, hotels, shopping malls, airports etc. 'Ibhar' Prepaid Card holders can go online to activate their Prepaid Card. To know the 'Ibhar' Username, Password, Activation Date, Expiry Date, Time left and Card Serial Number, one can send his/her details through a simple SMS to Omantel or use the toll-free line.

Nawras also supports broadband connectivity through a state of the art broadband mobile network based on EDGE technology. One can access all services from making & receiving calls, sending and receiving SMS and picture messages, downloading games and ring tones to accessing the Internet through wireless connectivity. Nawras Internet can also be used outside Oman, wherever Nawras provides Data Roaming service in which case Data Roaming tariffs apply. Currently Omantel's 'Ibhar' WiFi hotspots are located mainly in Muscat but will soon be spreading to key locations across the Sultanate.

ITU Regional Workshop on 'IP Based Regulations Awareness' held during the third week of May 2007 in Oman in association with TRA considered the potentials of WiMax for the Sultanate. It was highlighted in this workshop that WiMAX (World-wide Interoperability for Microwave Access) aims to provide wireless data over long distances, in different ways. It will be for point-to-point links to full mobile cellular type access. It will enable the user to surf the Internet on a laptop computer without connecting the laptop to a wall socket. WiMax services are being evaluated currently for their suitability to local requirements.

F. TRADITIONAL MEDIA[18]

Newspapers, magazines, radio and television transmissions have witnessed rapid developments during the past few years. The table below measures this development by the end of 2005.

[17] Source: Oman Digital Society report 2007, p24
[18] Excerpts from Oman Digital Society report 2007, p69

Table 3. Media, Television & Radio Transmission/ Broadcasting End of 2005[19]

	Description	No.	Hours during the year
1	Daily Newspapers (Arabic/English)	6	
2	Periodical Magazines	43	
3	TV Transmission (Hours/Daily)	48	17,520
4	Radio Transmissions (Hours/Daily)	54	19,710

Source: Ministry of National Economy –Statistical Year Book, October 2006.

The media in Oman has been active in observing and guiding the society through modern electronic channels. Currently Oman News Agency (ONA) is the Sultanate's official news agency. Oman Establishment for Press, Publication and Advertising (OEPPA) is the largest press establishment in Oman. It runs several publications including the English daily 'Oman Observer' and the Arabic daily 'Oman Daily'. It also publishes a weekly economic magazine called 'Money Works'. It publishes a pure IT magazine called 'Digital Oman', quarterly in association with Information Technology Authority and Knowledge Oasis Muscat.

All dailies have their respective online versions. Although most of them have replication printed material, some websites have sophisticated content-based organisation, which is easy to search even from the archives. In addition Oman Television and Radio have their own websites as well.

III. ACCESS TO INFORMATION AND KNOWLEDGE

A. PUBLIC DOMAIN INFORMATION[20]

The National Statistics Online is yet another flagship project which aims to present socio-economic indicators based on various criteria and timeline in a dynamic and graphical manner.

Oman Statistics Online (OSO) is a free-access online database with quality data compiled and published by the Ministry of National Economy (MoNE) periodically. This data can be used to set baselines, make evaluations and set targets for various developmental activities. OSO system provides valid data anytime and anywhere through electronic media and hence increases the opportunity to access quality data. Its implementation is in complete alignment with the Vision 2020, Five-year development plan and Oman's support to the millennium development goals (MDGs) of the UN. The project is expected to ensure availability of authentic information through electronic channels to promote the quality of research and planning in various economic aspects. This system will be online in the third quarter of 2007.

The Petroleum Development Oman has a public technical library, which also includes electronic resources. The archives of the Ministry of Information and Broadcasting contain several multimedia data. However there is no exclusive digital library for the public at this point in time.

B. ACCESS TO INFORMATION AND PUBLIC INFORMATION

The Ministry of National Economy compiles several key data and indicators, which are published on a monthly and yearly basis. These are available in print, digital media and online for open access. Several other dailies and magazines publish online through their websites for public access. A few Arabic publications are exclusively for women. Digital Oman is currently the only ICT focused quarterly magazine catering to the technology sector.

[19] www.moneoman.gov.om/stat_book/2006/fscommand/SYB_2006_CD/information/inform_2-21.htm
[20] Source: Oman Digital Society report 2007, p30-31

C. MULTI-PURPOSE COMMUNITY PUBLIC ACCESS POINTS

Ministry of heritage & Culture has planned to implement a Manuscript archiving infrastructure including scanning and indexing to enable conversion of manuscripts and documents into electronic format. Large volumes nearly 3,600 of manuscripts available in hard-copy format will be digitized. It should be possible to:

- Index the Manuscripts;
- Save the digitized manuscripts in various formats.

Journals and Publications which are released by the Ministry from time to time will also be digitized.

In order to publish the manuscripts and documents online for both internal ministry users as well as Internet user community an appropriate web presence will be available.

Apart from the above stated objective a portal will gradually be developed to incorporate rich multi-media content such as virtual tours of forts and castles and also sites of archeological significance.

D. USING DIFFERENT SOFTWARE MODELS

The Government has initiated licensing software agreements with Microsoft and Oracle. These cover public sector use of proprietary software under affordable costs which are subsidized by the vendors. The use of open source software is being currently under evaluation within academic circles as well as research centers.

E. FREE AND OPEN ACCESS TO SCIENTIFIC KNOWLEDGE

The following are some of the objectives of creating a Heritage and Culture Communities of Interest (COI) that will address functions related to National heritage, Preservation of National information assets, Cultural issues, events, access to manuscripts and journals etc.:

- Create robust back-office processes and systems hitherto envisaged as ***"Manuscript Archival System"*** to enable preservation and digitization of the ministries precious national assets;
- Convert information assets currently available in the Ministry's library in the form of physical documents into electronic format;
- Improve the efficiency and effectiveness of the digitization and archival process;
- Creation of a Common Heritage and Culture Portal to enable a highly visible web presence to:
    - Enable access to these electronic copies of manuscripts and publications for the intranet users and later to the internet user community;
    - Enable a innovative web interface to the Education-focused community to have access to Manuscripts and publications dedicated to lifelong learning communities;
    - Provide single and standard point of reference for citizens, visitors and learning communities regarding access to information assets and online services related to cultural diversity and rich heritage of the country;
    - Provide services to e-government Portal;
    - Avoid the costs of establishing multiple such portals.
- Bring-in workflow based document management system which is hitherto envisaged as ***"Ministry Archival System"*** to automate all the correspondence and document flow within the ministry as well as among the participants in other related ministries;
- Create a platform for collaboration across ministries and movement away from fragmented information and service delivery;

- Catalyze the growth of Information and Communication Technologies (ICT) in general and e-commerce in particular in Oman

The project Request for Proposal document has been prepared with the input of expert consultants and is currently being reviewed by the in-house team. Once finalized, this document will be released through a formal tendering process.

IV. ICT CAPACITY BUILDING

A. BASIC LITERACY

Information Technology is now taught in all schools as a separate subject from Grade1 to Grade10 in Basic Education. In Grade 11, the ICDL (International Computer Driving License) is a required course and each student has the opportunity to learn IT skills. There are units in many subjects that require application through exercises in IT. Students in the Basic Education programme make use of the Learning Resource Centres at their schools to practice their IT skills. Students in Grades 5 to 9 of Basic Education have access computer laboratories where both PCs and Lap Tops are available.

B. ICT IN EDUCATION AND TRAINING

Education plays a critical role in the two aims of eOman: developing awareness and building capacity. The majority of the Sultanate's Higher Education Institutions (HEIs) offer programmes in IT or Computer Science, with Sultan Qaboos University and the Government's newly transformed Colleges of Applied Sciences (formerly Colleges of Education), as well as many private universities and colleges, offering major or degrees in IT. And there are two exclusively technology oriented colleges namely the Middle East College of Information Technology and the new Oman-German University of Technology.

The Oman Accreditation Board has developed a high end, state-of-the-art interactive web site; and the MoHE is in the process of upgrading their existing web site to a similar standard. For effective IT capacity building in the area of Human Resources, it is best to begin with the young child. The Ministry of Education has made great strides in expanding access to computers in schools and in integrating e-learning in the curriculum.

Oman's government has plans to use the Internet to increase e-government and e-education. On January 2007, Omantel launched the Easy Learning Service to provide hundreds of electronic training courses in accounting, sales, marketing, and customer services. In February 2007 Omantel began offering sixty free hours of Internet access to new subscribers, describing the initiative as part of a larger plan to spread digital culture[21][22].

The high status of Omani women is reflected in the priority accorded to them in the country's development plans[23]. According to the 2003 Census, 49% of the population of the Sultanate is women, many of whom are below the age of 18 and have enjoyed the same educational opportunities as boys of a similar age. The Personal Status Law guarantees Omani women equal rights in both education and employment.

His Majesty Sultan Qaboos has repeatedly called upon the female population to lend their full support to the continuous development of their country and they have responded readily by seeking and securing jobs from government minister to supermarket checkout assistant.

[21] http://opennet.net/research/profiles/oman
[22] http://www.omantel.net.om/services/business/internet/Terms_and_condtions_internet_cafe.pdf
[23] Women in Oman http://www.omanet.om/english/social/dev2.asp?cat=hist

C. TRAINING PROGRAMMES FOR CAPACITY BUILDING IN THE USE OF ICT[24]

The National IT Training & Awareness Initiative is a nation-wide initiative from ITA aimed at developing ICT skills and capability and increasing ICT awareness within the government and the community. In achieving its goals for furthering IT literacy and awareness levels within the society, the initiative also aims to contribute to the development of a local ICT industry and to provide increased employment opportunities for the youth of Oman.

The initiative has been divided into two key projects - Government IT Training and Community IT Training. ITA conducted a preliminary market investigation to evaluate internationally recognised digital literacy programs and vendors to determine which programs and vendors would be suitable for these projects and is currently running a pilot to evaluate two of these programs and vendors. The pilot is also evaluating an implementation model for national government IT training. Based on the evaluation of the pilot a national level implementation plan will be devised as a cost effective model for government IT training and awareness across the nation. The Government IT Training project aims to train and certify between 120,000-200,000 civil service employees over a 3-year period 2007-2010.

The Community IT Training project aims to set up community technology learning centres (CTLCs) through out the country. The primary purpose of these centres will be to reduce computer illiteracy and bridge the digital divide by providing free or low cost IT education to the community. The impact of this will be felt in technology usage, capacity building and social development. ITA is currently evaluating implementation options and plans to launch pilot programs in the second quarter of 2007 in order to prepare a framework for national implementation of community IT training.

D. RESEARCH AND DEVELOPMENT[25]

Royal Decree No.54/2005, issued on 22nd June 2005, established the Scientific Research Council (SRC) and defined its prerogatives. The Council encourages and regulates matters related to scientific research. It is the prime authority in this field and liaises between the different bodies and institutions involved in the sector.

At the moment, the Research Council is working on developing an effective, efficient, flexible and transparent organizational framework and administrative structure for its management; including the staff and resources required to perform its various activities, and the regulations that facilitate its operations. The latter will eventually be implemented in an e-based management system. The best administrative environment and infrastructure would be established to carry out the activities that are mandated by the Royal Decree.

The Formulation of a Science and Technology Policy that consists of clear strategies and a detailed road map, to ensure its successful implementation, is the second priority on the table for the SRC. This national policy shall also include R&D and innovation strategies for major sectors of the economy such as:

- Education & Human Resources;
- Health & Social Services;
- Energy & Industry;
- Culture, Humanities & Basic Sciences;
- Biological & Environmental Resources;
- Information Technology & Communications.

It is envisaged that the Science and Technology Policy would be ready in approximately 15 months and that the implementation would start in early 2008.

[24] Source: Oman Digital Society report 2007, p34
[25] Source: Oman Digital Society report 2007, p35

V. BUILDING CONFIDENCE AND SECURITY IN THE USE OF ICT

A. USE OF ELECTRONIC TRANSACTIONS AND DOCUMENTS[26]

For online content, the only Internet Service Provider – Omantel filters any immoral, illegal and undignified material available through their Internet connectivity. In line with many international Internet Service Providers (ISPs), Omantel blocks sites based on site content, in particular pornographic sites and others that encourage hacking. In case a potentially useful site has been misclassified, Omantel provides means for communication through email and errors are corrected within 72hours. The Sultanate prohibits pornography from entering Oman. Items subject to confiscation at the airport include compact discs, video and audiocassettes.

B. ONLINE TRANSACTION SECURITY[27]

The Telecommunication Regulation Authority (TRA) regulating the telecommunications sector works in accordance with the **Telecom Act** (Royal Decree No: 30/2002) which has provisions regarding the use of any electronic means for communication including radio waves. The above act also penalises violations by way of misuse of any telecommunication medium under the control of TRA with high penalties and imprisonment. Online transactions for true eCommerce are expected to begin after the national e-payment gateway is operational.

C. COUNTERING MISUSE OF ICTS[28]

Realising the harmful result of spamming and its resulting deterioration in efficiency, TRA undertook a public consultation on SPAM mail (unsolicited emails) issues. The compilations were made available to the public in a paper format.

D. PRIVACY & DATA PROTECTION[29]

The Security Policy Framework drafted by the Information Technology Authority (ITA) has been derived based on a structured collection of independent guidelines, processes and practices. The framework aims to ensure the protection of information assets from unauthorized access to or modification of information, whether in storage, processing, or transit. The framework is based on existing, accepted standards, guidelines, and collections of practices and reflects the behaviours of an initial community of high performing organizations. Both business and government organizations can implement the framework with practices they choose or are required to use for their market sector and country.

E. INFORMATION SECURITY AND NETWORK SECURITY

The Sultanate of Oman is committed to protect the rights of copyright owners. Oman joined the World Intellectual Property Organisation (WIPO) in February 1997, which provided valuable assistance in the drafting of Oman's intellectual property laws. In June 1996 Oman implemented laws to protect copyrights under Royal Decree No. 47/96 which was repealed by the Royal Decree No:37/00 in June 2000.

The copyrighted materials specifically include computer software and databases. Oman's copyright law prohibits reproduction of software without formal permission. If caught with pirated software, either an individual or a company may be prosecuted under the provisions of Omani Copyright Laws. All illegal copies of computer software along with the articles used for illegal duplication will be confiscated under the

[26] Source: Oman Digital Society report 2007, p71
[27] Source: Oman Digital Society report 2007, p71
[28] Source: Oman Digital Society report 2007, p72
[29] Source: Oman Digital Society report 2007, p40

law and the penalties include a fine up to OMR 2000 (US $ 5,200) and a prison sentence of up to two years.[30]

ITA is in the process of setting up a Security Operation Centre (SOC) as a Centre of Excellence for Security. This will enhance Government network security and facilitate dissemination of security policies and awareness across the public sector. ITA is also currently working on establishing a dedicated Computer Emergency Response Team (CERT).

VI. ENABLING ENVIRONMENT

A. LEGAL AND REGULATORY ENVIRONMENT[31]

Oman's Digital Society initiatives require substantial legal protection for the various entities in the use of ICT for official and personal communications and transactions. To increase the trust that citizens and businesses have in electronic transactions, ITA has initiated the formulation of e-Legislation for electronic transactions in Oman.

The forthcoming **electronics transactions law** addresses key issues such as: validity of e-transactions, intellectual property protection, taxation and data protection, legal recognition for electronic signatures, admissibility and evidential value of data messages, electronic payment validity and jurisdictional matters, issues of electronic messages and protection for privacy and security. The law drafted by a professional law firm has been reviewed by the ITA and is being reviewed by the legal authorities. It is expected that a final version of the law would be enacted in 2007.

Oman has its laws in accordance with the IPR laws along with its accession into the World Trade Organisation's TRIPS (Trade Related aspects of Intellectual Property Rights) agreement. Copy rights are protected under Royal Decree No. 37/2000 while Trademarks are registered and governed under the Royal Decree No. 38/2000 and Royal Decree No. 82/2000 acts as the Omani Patent Law.

Copyrights protection in Oman comes into existence when the literary work is created and it continues for 50 years after the author's death. Financial rights such as royalties are afforded under this law. Infringement of copyright is punishable by 2years imprisonment or 2000 RO fine. Computer programs can be protected as a literary work and so includes the right to control the reproduction and the translation of the original program's code into another computer language. It would also include compiling and decompiling of programs. The Royal Decree 37/2007 issued recently endorses Oman joining some of the International treaties for the protection of Intellectual Property Rights within the country at par with International standards.

B. SECURE STORAGE AND ARCHIVAL[32]

The **Electronic Transactions Law** of Oman addresses issues of electronic messages and protection for privacy and security with due diligence measures for storage of electronic information. The law has been presented to the cabinet and is expected to be enacted during 2007.

C. DOMAIN NAME MANAGEMENT

According to ISO 3166 **standard domain name codes**, .om (Sultanate of Oman) is the two-letter country code, referred to as the 'Top Level Domain' (TLD), in Internet terminology, assigned to the Sultanate of Oman by the International Corporation for Assigned Names & Numbers (ICANN).

Registration of domain names under the '.om' TLD is managed solely by the Oman Network Information Centre (OMNIC) under the Ministerial Decree No.44/2001. The mission of OMNIC is to

[30] Source: Oman Digital Society report 2007, p72
[31] Excerpts from Oman Digital Society report 2007, p39 & p70
[32] Source: Oman Digital Society report 2007, p39 & p41

provide an equitable, just and competent technical and administrative management of domain name registrations and IP address allocations for Internet community in the Sultanate of Oman.

D. STANDARDIZATION IN ICT

The **Interoperability Framework** was developed to set out the government's technical guidelines and specifications for achieving interoperability and Information and Communication Technology (ICT) systems coherence across the government IT Systems of Oman. The Interoperability Framework defined the essential prerequisites for web-enabled government.

The main thrust of the Interoperability Framework was to adopt the Internet and World Wide Web specifications for all government IT systems. The Interoperability Framework adopted guidelines and specifications that are well defined and supported by Standards bodies. The interoperability framework addressed core areas such as Interconnection, Systems Interoperability, Metadata, Delivery Channels and Security.

As the framework evolved and discussed with other departments it was found that there is a need for a broader framework to address a wider scope for standards implementation. A Standards committee was formed consisting of members from various related departments to discuss, review and publish standards.

Hence, **ITA standards framework** is presently being defined. It incorporates a list of verticals including Interoperability, Networking, Information Security, Project Management, E-Payment and IT infrastructure.

E. SUPPORTING MEASURES

In a move to improve job opportunities and enhance knowledge transfer, ITA launched the first Innovation and Support Centre of the Sultanate on the 26th of March 2007 in association with Microsoft, Oman.

This centre will be hosted in the Knowledge Oasis, Muscat and will boast world-class capabilities, managed and operated by highly trained Omani talent. A dedicated support unit comprising resident Microsoft engineers will provide reactive and proactive services to various government entities. In addition, the centre will create readiness and training programs on infrastructure, IT support and applications to be continuously delivered to multiple batched of new Omani graduates. Microsoft consultants will also work with a local team to identify, design and implement new innovative solutions to benefit the Government of Oman.

The initiative will create more quality job opportunities for local Omani graduates in the ICT sector. It is part of several other initiatives with Microsoft to enhance employability and improve ICT skills in Oman. The centre will start by employing 20 Omanis that will work closely with Microsoft engineers and consultants to provide the government with innovative ICT solutions. The centre will provide local Omani graduates access to multi-national best practices and advanced training programs which will enhance employability and upgrade their ICT skills.

VII. ICT APPLICATIONS

A. E-GOVERNMENT[33]

National Registration System (NRS) developed and adopted by the Directorate General of Civil Status (DGCS), of Royal Oman Police (ROP) is an integrated computer system with archive of accurate information about social events relating to Birth, Marriage, Divorce, Death, Residency & Nationality for all

[33] Source: Oman Digital Society report 2007, p27,p32 &p42-50

citizens and residents of Oman. The system generates a unique civil number for each individual at the time of registration. This civil number will be printed on the ID cards and will be used to verify the individual's identification. The electronic standards-based ID card issued is capable of multiple applications with a high level of security with Biometric recognition allowing the authentication of the holder. The card is capable of storing large amounts of data, which can be read at portable terminals and electronically validated.

One Stop Shop (OSS) is a G2B initiative to support on-line company registration through the **Ministry of Commerce and Industry** (MoCI). Six Ministries and entities participate in the OSS and enable a single-window service for Commercial Registration of new companies with minimal paperwork. National IT Council of Oman identified the 'OSS' as a major e-government initiative. The main aim of this initiative is to create "a favourable investment environment that is conducive to the development and prosperity of the Omani economy'. The entire Business Process Re-engineering was done by the MoCI with External Consultants under guidance of ITA. The system is now operational moving on to its second phase and there has been a tremendous response to this service with a huge saving in terms of cost and time. Public Point-of-access to the OSS is planned to be extended beyond the Web to telephone, self-service kiosks and help desks at the Ministry headquarters and at its regional offices. This e-service has simplified the entire process and combined with investor-friendly policies has brought efficiency into the operations.

The **Ministry of Finance** (MoF) has pioneered public sector computing in Oman since the mid 1970s. As the financial nerve centre for the public sector, this ministry currently manages a nationwide network of over 45 ministries and independent units with 2500 user accounts, to process the budget, procurement and payment cycle of all civil entities centrally in accordance with the Omani Financial Law 56/82 and its amendments 9/85, 14/88 and 47/98. The aim of the Information Technology Department of the MoF is to support the ministry in its primary role of managing and controlling public finance. This function includes facilitating and controlling public expenditure, processing and assisting in the prompt payment of salary to civil employees; oversee servicing of debt and supporting other internal financial operations of the Ministry.

The comprehensive real-time online **Integrated Finance System** (IFS) processes all payments to all suppliers as well as employees across all the civil ministries and also provides for centralized audit and budgetary controls through a bilingual (Arabic and English) interface. With the aid of the system it is now possible to formulate the national budget, consolidate public expenditure accounts and manage public debt efficiently. The entire network is secured and accessible through a structured user authentication and workflow process. The IFS also produces timely and useful financial reports for multiple and single facility public sector organizations while conforming to internationally accepted accounting principles. This application enables controlled and accurate bookkeeping and assists the Accounting, Budgeting and Treasury Departments with powerful reporting functions.

The **payroll processing of civil employees** of the Sultanate is performed by systems developed in accordance with the Civil Service Law (Royal Decree No: 8/80 with all subsequent amendments up to 120/2004) since the 1980s. This system supports transactions of over 100,000 employees across various civil ministries and may be termed as one of the largest payroll implementations in the Middle East. Various modules of this system facilitate employee appointment, performance evaluation, promotions and increments, leave management, pay calculations and all the way up to the end-of service benefit management.

The Ministry of National Economy (MoNE) wishes to promote and spread out the usage of **Geographic Information System** (GIS) through the different departments and directorates to become an integral part of its business operations, by consolidating its GIS data resources to improve users data access, provide better data management and data protection and to enhance data quality. This requires restructuring the huge amount of available spatial data sets, developing an Enterprise Geo-database and building GIS user's applications. This project is currently in the tender evaluation phase.

Arising out of the Oman government's strategy towards a Digital Society and the implementation of e-government, the **Ubar Portal** has been proposed as the main entry point for accessing Government

information and services online. The eServices Initialisation Project aims to facilitate the successful implementation of the portal through the identification, review and prioritisation of services to be migrated to electronic delivery. The e-services initialisation project aims to identify, review and prioritise all current government to business ("G2B") and government to citizen ("G2C") services offered by Omani government ministries ("ministries") & other relevant agencies ("agencies") and to create a timetable for the electronic delivery of these services. A structured approach will help in seamless integration of e-services offered by different entities through a life-event model of the Ubar – common portal gateway. The project is in the contract phase and is expected to be completed by the end of the first quarter of 2008.

As part of the e-Oman/Digital Society Initiative, Information Technology Authority (ITA) and Government Tender Board (Oman TB) are working closely to **automate all tendering and procurement processes** in government that will be integrated with Ubar portal as one of the Quick Win projects. The primary objective is to establish a centralized state of the art procurement management system & processes to maximize value propositions. This will help in achieving higher efficiency and will also enhance elements of transparency and accuracy in Government Procurement process with considerable cost reduction

The system will create a common **E-Tendering Portal** for all entities with common back-office processes and systems to provide a single and standard point of reference for all vendors. It will have a scalable portal interface for the suppliers for automating the complete tender process, from indent to Award resulting in the reduction of tendering process time and increase in process efficiency. The system will have a completely arabised interface with high level of security features like Secure Socket Layer (SSL), Digital Signatures and time stamping. Modern communication and collaboration facilities are built-in for facilitating interaction with suppliers and provide a push mechanism to notify the appropriate registered set of suppliers of procurements through facilities like SMS, E-Mail, E-Fax etc.

B. E-BUSINESS[34]

The Information Technology Authority (ITA) signs agreements with MasterCard Worldwide and Bank Muscat to launch the national **e-Payment Gateway** to provide an e-governance infrastructure and full e-commerce facilities that allows secure online payments (e-payments). The e-Payment Gateway which will support multiple acquiring banks will be operational in line with Oman's forthcoming e-Government Gateway, the UBAR Portal.

Through a robust and secure Internet Payment gateway, e-Government shared services could be paid for electronically using major credit cards, debit cards and other electronic payment instruments. These payments can be performed both while the Citizen is physically present at one of the Government locations (e.g. at the Ministry of Commerce and Industry's 'One Stop Shop') as well as when using the internet (e.g. via the eGovernment Ubar Portal). A payment gateway provides the capability to accept payment instructions and access back end payments networks to authorise, clear and settle payment transactions.

The payment gateway which is expected to be operational in 2007 will enable citizen to be able to engage in true e-commerce transactions with both government departments and other business community through a range of electronic channels, primarily the Internet. In a more advanced phase the e-Payment gateway service will accept a variety of other payment instruments such as mobile phone payments, e-Purse smart cards, Interactive Voice Response System (IVR) order, email order etc. These future phases will aim at developing an efficient e-Commerce environment in Oman.

Oman Telecommunications Company (Omantel) uses Omania E-Commerce Company's (Tejari Oman) **electronic purchase solutions** known as "Tejari Transact". Tejari Transact is an electronic procurement platform whereby suppliers and buyers transact either in spot purchasing or auctions. By implementing such e-procurement solutions, organizations can reduce transaction costs, increase client base and cut the costs of purchases and brokerage with their business partners. Bank Muscat (winner of the

[34] Source: Oman Digital Society report 2007, p26-27 & p64

country's best Internet bank award) also moved its **procurement processes online** via Tejari Transact. By becoming a member of Tejari Transact, Bank Muscat will be able to make all major purchasing and procurement online. Oman Aviation Services from the aviation sector is already member of this electronic trading platform.

C. E-LEARNING[35]

In order to build the Intellectual capital of the country great emphasis is placed on enhancing the capacity of the youth. Information Technology is now taught in schools as a separate subject from Grade 1 to Grade 10 in the new Basic Education system. In Grade 11 the ICDL – an accredited International Computer Driving License is an essential course and each student of this grade gets an opportunity to learn basic IT skills before entering a collegiate study program.

As of date approximately 370 accredited school-based training centres have been established with over 13,000 ICDL certified teachers as part of a government move to offer computer education to students at all levels by the Ministry of Education. Over 100,000 students have been trained and tested at about 18 ICDL accredited testing centres.

Some private universities are specially focused on offering IT oriented programmes of study and the trend of offering e-MBA in association with UK, US and Australian universities is increasing.

The Ministry of Education (MoE) is also involved in an Education Portal initiative, which is linking schools together electronically, putting them into a single administrative boundary. Students as well as their parents can access the MoE website to take advantage of a number of IT services. The first phase of the portal is due to be launched by the end of 2007.

When complete, the Education Portal infrastructure will result in Internet access for all schools in the Sultanate. It is creating a cooperative network among all of the Sultanate's schools and regional administrative units by introducing MPLS (Multi-Protocol Label Switching) to provide ministry-wide applications such as IP telephony, messaging and collaboration.

D. E-HEALTH[36]

The **Ministry of Health** (MoH) decided since early 90s to re-engineer and streamline its activities by introducing Information and Communication Technology (ICT) in all its processes at all levels, and this is progressing very well. Currently ICT is part of every new health project. The Governorate of Muscat, Dakhiliyah and Al Wusta Health Regions have all their healthcare facilities computerised. Also, all the major healthcare facilities (Tertiary and Secondary Care Hospitals and extended health centres) across the country are also computerized.

The **Al Shifa System** - a comprehensive Hospital Information Management System developed by the ministry is implemented in about 140 MoH institutions across Oman. The system integrates patient data flow and creates a paperless workplace allowing clinicians and nurses give more quality time to patients rather than for paper work.

The Ministry of Health (MoH) website offers up-to-date informative content regarding medical statistics and health alerts. It hosts the **e-recruitment system** with details of job openings, which are again processed electronically.

Tele-medicine workshop session including a live telecast of surgeries by eminent plastic surgeons was organized at the International Conference on Plastic and Reconstructive Surgery in Oman. Several such tele-education projects enable medical professional in Oman access programmes from leading foreign academic

[35] Excerpts from Oman Digital Society report 2007, p36
[36] Excerpts from Oman Digital Society report 2007, p58-60

institutions online through the Internet to upgrade their knowledge and practice without having to travel or to break their career.

The current process of registering patients at different hospitals and health care centers will be centralized at a single point of contact with the implementation of e-National medical record system that is being tied up with National Registration System (NRS) activities.

With **e-National Medical Record**, it will become easy to enable fast retrieval of patients' records and patients' movements from one department to another including different clinics, laboratory services, radiological services including the pharmacy. Electronic records would definitely have important cost savings through preventing duplicate investigations and treatments. The e-National Medical Record would help eliminate duplication of medication, lab and radiology investigations, facilitate follow-up and ensure appropriate and safe patient care.

E. E-EMPLOYMENT[37]

The **Ministry of Civil Service** has offered a job enquiry service in association with a local mobile service operator since the 3rd quarter of 2006. The system will provide information on the time of publication of job advertisements in the newspapers. Through this system, the ministry aims to provide prompt service to citizens, who are searching for jobs. The system will respond to the enquiries of citizens with respect to jobs without reporting to the ministry.

The citizens now can get the required information by sending the details on the job advertisements to the mobile telephone numbers provided. These subscribers will be notified with the dates of job advertisement as appearing in the local newspapers. The system offers facilities to inform job applicants about the status of their application, date of scheduled interviews or tests and their results. Through this service queuing is reduced at the ministry which will result in the employees focus on better service to the public. Applicants benefit by saving their time and effort in physically visiting the ministry for all their enquiries.

The **Ministry of Manpower** is in the process of building the labour force register of the Sultanate. It includes all data and information about the labour force and it thoroughly monitors its detailed data and information and any changes in it. This register is considered as an important project to which the government represented by the Ministry of Manpower accords special attention.

When completed, this system will enable the Sultanate to enter the third millennium (the information millennium) enabling open access to employment details. The labour force register will also help rationalize human resources policies and assist in drafting the appropriate plans and procedures to implement the endorsed polices and assess their impact on the economic and social development and the labour market in Oman.

Currently the ministry enables job application and status verification of application process through a **web-based system**, for Omani nationals seeking jobs and have registered with the Ministry.

The **National IT Training & Awareness Initiative** detailed earlier also includes specialised ICT training based on the IT literacy profile and job profile of the employees. In association with several multi-national companies, vendor certification trainings are also being offered. This enhances existing levels of OT literacy among the employees.

Furthermore, several corporate have implemented e-learning modules within their domains to train their employees. For example Bank Dhofar introduced e-learning to its staff moving away from traditional classroom training. E-learning is an effective way of self-learning by logging in to ones' own personal

[37] Excerpts from Oman Digital Society report 2007, p50

computer and accessing relevant learning modules. Bank Dhofar staff can now learn at the work place with the flexibility of time and access at their convenience and learn about the bank's products and services and enhance their knowledge and skills.

VIII. CULTURAL DIVERSITY AND IDENTITY, LINGUISTIC DIVERSITY AND LOCAL CONTENT

A. USE OF ICT IN SUPPORT OF CULTURAL AND LINGUISTIC DIVERSITY[38]

Ministry of Heritage and Culture started collecting Omani manuscripts and was able to collect 4,300 The **Ministry of Heritage and Culture** website has been launched with comprehensive set of information about the rich heritage of Oman. Details of UNESCO approved archaeological sites, forts, water management systems are all featured informatively in this website.

Ancient scripts dating back to the BCs have been restored and an electronic archive has been made available. In addition the rich folklore of music and theatre has been documented informatively in the site. Details about the museums, restoration of traditional forts of Oman, ongoing renovation projects, schedule of exhibitions organised to promote local culture are also made available online. A photo gallery and video gallery are available with media highlighting the rich marine and bio reserves of the country.

The manuscripts in addition to ancient rare archaeological documents and in addition to ancient rare aspects of life in Oman. The manuscripts and documents house attracts several researchers from several educational institutes who use the resources of the house in their higher studies. The hand written manuscripts and documents are stored in microfilm while others are stored in CD-ROMs.

B. LOCAL AND NATIONAL DIGITAL CONTENT DEVELOPMENT

The Digital Oman strategy emphasizes on the need for localization/arabisation of digital content for the benefit of the common citizen. Accordingly most websites belonging to the public sector have either a pure Arabic website or a bilingual Arabic/English website with almost mirrored contents.

In addition the software interfaces of the computing applications at the ministries have an Arabic interface and any new applications for e-services and internal systems are encouraged to use a Unicode character set which enables use of Arabic character set in the interfaces as well data storage. Most ministry publications are in Arabic and the ministry of national economy has been publishing economic and social statistics and indicators periodically in both Arabic and English.

Most IT contracts include the condition that all application components must fully support localized languages in building the site pages as well as in indexing and searching content. It is mandatory to have native full Arabic support as well as Unicode in all the solution components. Arabic support must include screen contextual analysis, orientation adjustment, logical cursor movements and locale settings. A locale here refers to the combination of a language and a set of cultural conventions such as date format and currency symbol of a region (or territory).

C. ARABIC DOMAIN NAME SYSTEM – ADNS

With a move to render the Internet more multilingual, ESCWA is taking efforts at regional level to develop the framework for domain names in Arabic. The outcome of this synchronised effort is required and will be considered at the national level. This effort is considered as an important direction for local empowerment and Internet governance. The recommendations made in this regard by the Working Group of Arabic Domain Names (WG-ADN) would be considered by the Council of Arab Ministers for Information

[38] Source: Oman Digital Society report 2007, p67

and Communication Technology[39].

D. ICT TOOLS, AND R&D PROGRAMMES

Many government agencies are using different technology tools for their work. Ministry of Education and Sultan Qaboos University use translations machine tools and electronic dictionaries and terminology thesauri. For archiving its manuscript Ministry of Heritage is using optical character recognition-OCR. Other Ministries are using general application software.

IX. MEDIA

The media, in their various forms and with a diversity of ownership, as an actor, have an essential role in the development of the Information Society and are recognized as an important contributor to freedom of expression and plurality of information as it reaches wide audiences and disseminates information.

Filtering of pornography and other illicit content online is pervasive in Oman. In addition to blocking Web sites, the authorities impose legal and physical controls to ensure that the Internet community does not access or publish objectionable or unlawful material. These laws and regulations give rise to self-censorship among writers and publishers, both off- and online.

A. MEDIA INDEPENDENCE AND PLURALISM

- Diversity of media;
- Ownership of media;
- The Media and its contribution to the freedom of expression and plurality of information.

Traditional media like print, radio, television and the Internet essentially disseminate information as per the publishing guidelines set by the Ministry of Information. Most ministries like the Ministries of National Economy, Finance, Education, Defense, Information, Health, etc. produce annual publications along with several other monthly and special edition publications including magazines.

B. THE MEDIA AND ITS ROLE IN THE INFORMATION SOCIETY

- Role of the media: print, broadcast as well as new media in the Information Society.
- Use of traditional media in bridging the knowledge divide and facilitate the flow of cultural content, particularly in rural areas.

Print media cover both English and Arabic publications. Of the 6 newspapers Oman Arabic and Oman Observer- the English are published by Oman Establishment for Press, Publication and Advertising (OEPPA) owned by the Government. All the other dailies are owned by private entities.

Table Newspapers & Magazines published in Oman (as on Dec 2005)

Type/Theme	Number of publications	Frequency of publication
Political	6	Daily
ICT	1	Quarterly
sports	2	Weekly/Monthly
Social	10	Monthly
Legal	1	Monthly
Economic / Commercial	7	Bi-Monthly

[39] www.escwa.org.lb/**information**/publications/edit/upload/ictd-05-tech2.pdf

Auto Mobile	1	Monthly
Administration Affairs	1	Quarterly
Cultural	1	Quarterly
Military	6	Monthly/Bi-Monthly
Tourism	1	Quarterly
Petroleum Affairs	1	Quarterly
Municipality Working Affairs	1	Quarterly
Regional Municipalities & Environmental Affairs	1	Quarterly
Scientific	3	Quarterly
Religious	2	Quarterly
Technical	1	Quarterly
Horse Riding	1	Bi-Annual
Education	2	Quarterly
Civil Service	1	Quarterly

Source: Ministry of National Economy –Statistical Year Book, October 2006.

C. GENDER PORTRAYAL IN THE MEDIA

- Balanced and diverse portrayals of women and men by the media:

Women are given a balanced focus. Women-related issues are discussed in several publications, radio and in television programmes. Any accomplishment by any women is highly praised. Note that several women (authors and journalists) work in the media. Photographs of women are published in accordance to local cultural ethics.

X. INTERNATIONAL AND REGIONAL COOPERATION

A. FINANCING OF ICT NETWORKS AND SERVICES

Financing ICT networks and services is encouraged as a Public-Private cooperative effort. This concept has been the main drive for the start of IT Park Knowledge Oasis Muscat. However, The Knowledge Mine (TKM) provides certain services at subsidised costs for new ICT start-ups. The first six months rent space is free in the incubators area.

A substantial potential has been identified in Oman for developing software requirements such as banking, telecommunications, government's programme of e-governance, IT-enabled services and call centres are ultimately providing a source of qualified IT professionals for the entire Gulf region. Clustering IT companies and IT higher education institutions within a single campus, KOM is expanding by attracting ICT companies to base their operations at KOM. [40]

In a move that will improve job opportunities and enhance knowledge transfer, the IT Authority (ITA) of Oman and Microsoft agreed to launch the first **Innovation and Support Center** in Muscat. The center located in the Knowledge Oasis Muscat will feature world-class capabilities, managed and operated by highly trained Omani talent. A dedicated support unit comprising of resident Microsoft engineers hosted here will provide reactive and proactive services to various government entities. In addition, the center will create readiness and training programs on infrastructure, IT support and applications to be continuously delivered to multiple batched of new Omani graduates.

[40] Source: Oman Digital Society report 2007, p28

B. INFRASTRUCTURE DEVELOPMENT PROJECTS[41]

Deployment of citizen-centric services will require a well-orchestrated business processing taking place over a convergent government network. The Government Network is seen as a comprehensive fully managed network to carry the data between government organisations as well as the citizens and enable e-government service delivery.

In line with this mission, ITA signed an agreement with Oman Telecommunications Company for the implementation and management of this Convergent Government Network based on pre-defined service levels. The network based on IP/MPLS (Internet Protocol / Multi Protocol Label Switching) network with ATM backbone being a key component for the delivery of public services seamlessly will be the first and foremost comprehensive network in terms of functionality and technicality. All government entities will use this network, which will have a unified IP addressing scheme government wide. Considering the safety of the data transfers, the network is designed to achieve the high standards of security laid by the ITA in accordance with the common security framework.

Such a network will create secure and scalable virtual ministry networks between Communities of Interest (COIs). This will lead to reduction of processing costs, as the cost will be based on capacity and not on distance. Provision of help desk support for handling requests and problems within government units is yet another benefit of the unified network. There will be constant monitoring of network performance with provisions for appropriate reporting mechanism within the network management system.

The proposed **Convergent Government Network** will connect governmental sites across the Sultanate. This network will employ state-of-the-art technologies to deliver a reliable and efficient service. The agreement will ensure a scalable and reliable communication infrastructure for delivering public services in a seamless manner through a unified network. ITA is working with Omantel with a comprehensive migration plan for all ministries. The above projects are fully financed by government.

XI. MILLENNIUM DEVELOPMENT GOALS – MDG

A. PROGRESS TOWARD ACHIEVING THE MDG

The Sultanate's participation in the various international activities related to the sustainable developments and ratification of the charters issued in this regard is manifestation of its commitments to its essence and its resolve to go forward achieving the Millennium Development Goals and Targets. Details of the data compiled towards this are available in the appendix 3 of this report.

B. USE OF ICT FOR ACHIEVING THE MDGS[42]

Ubar Portal is designated to be the main gateway to electronic services offered by the public sector of the Sultanate. Citizens will access the Government via an Ubar Portal that links to other portals and web sites hosted by the Government entities and enables seamless execution of e-services. Named after the ancient Omani city of Ubar, the "Atlantis of the desert" and a main trading gateway into Arabian Peninsula, this modern web portal is designed to provide a rich, personalized, unified, and highly customizable experience to its users. Anytime, anywhere access to the portal can occur through multiple channels such as the web and mobile devices. The visitor-authenticated identity will be transmitted to various systems involved in the service delivery and set up the proper authorizations required to complete the service delivery process. The exercise also takes into consideration preparing, upgrading and implementing of the security framework for the government network and the Internet[43].

[41] Source: Oman Digital Society report 2007, p25
[42] Source: Oman Digital Society report 2007, p31
[43] www.itec.gov.om/english/citizens.html

C. ICT FIELD PROJECTS AIMING AT ACHIEVING MDGS

The Education Portal project involves a single sign-on portal for the Ministry's applications and services with a centralised school management system (SMS) to manage schools, students, teachers, zones and the Ministry. This e-learning system includes Self-Paced e-Learning, a Content Composition Platform System, a Collaboration Platform (Virtual Classroom & Live experience) as well as Conference and e-Meeting capability. Initiatives like the Education Portal will make a significant contribution to ITA's aim of advancing computing and information technologies.

The Ministry of Higher Education's (MoHE's) new Higher Education Admissions Centre (HEAC) is an electronic system through which students apply on-line.

After the success of Al-Shifa system the Ministry of Health is developing a new system "e-referral engine" which in its implementation phase and has the objective to facilitate patients' referral from one level of care to another and from one healthcare facility to another. It is expected to enhance continuity of care of patients through ensuring, using a number of procedures, that back-referral notes from referred institutions reach back to the referring healthcare facilities. The e-referral engine will reduce time of the appointment booking process for referred patients, which would have an impact on the care and satisfaction of patients. It is also expected to provide statistics on referrals, as numbers, type, reason of referrals and other parameters that can be analysed to highlight needs for better patient management.

The e-referral engine encompasses request and appointment booking, patient alerts via SMS for institutions under **HealthNet** (ie the MoH-Wide Area Network), consultation feedbacks to the referring clinician (initial, intermediate and final); investigation referrals; and request for a second opinion (clinician to clinician).

XII. WORLD SUMMIT ON THE INFORMATION SOCIETY - WSIS

A. FOLLOW-UP AND EVALUATION

In the second quarter of 2007, the Information Technology Authority will conduct a comprehensive E-Readiness survey in three major sectors: government, education and business. E-Readiness Household survey has already been completed by the Ministry of National Economy. These results will help to identify eOman progress, strength and weakness so as to tackle and finally overcome barriers to wider and better access to information and communication technology

B. INITIATIVES AND PROJECTS[44]

Official statistical information is essential for the development in the economic, demographic, social and environmental spheres for all economies worldwide Strategies for monitoring progress and development are based on timely and accurate statistical data. The National Statistics Online is yet anther flagship project which aims to present socio-economic indicators based on various criteria and timeline in a dynamic and graphical manner.

Oman Statistics Online (OSO) is a free-access online database with quality data compiled and published by the Ministry of National Economy (MoNE) periodically. This data can be used to set baselines, make evaluations and set targets for various developmental activities. OSO system provides valid data anytime and anywhere through electronic media and hence increases the opportunity to access quality data. Its implementation is in complete alignment with the Vision 2020, Five-year development plans and Oman's support to the millennium development goals (MDGs) of the UN. The project is expected to ensure availability of authentic information through electronic channels to promote the quality of research and planning in various economic aspects.

[44] Source: Oman Digital Society report 2007, p30

C. SUCCESS STORIES[45]

The Sultanate joined other nations in celebrating the **first World Information Society Day** premised on the purposes and principles of the Charter of the United Nations, international law and multilateralism, and respecting fully and upholding the Universal Declaration of Human Rights, so that people everywhere can create, access, utilize and share information and knowledge, to achieve their full potential and to attain the internationally-agreed development goals and objectives, including the Millennium Development Goals as part of The World Summit on the Information Society Tunis 2005 plan of action and commitments.

The day was chosen based on the recommendations of the IT Summit held in Tunis. A technology forum was organised by the Information Technology Authority to discuss issues relevant to digital divide, improving accessibility and capacity building for both employees and citizens.

Oman's celebration coincides with the launch for the **Digital Oman Awareness and Promotion Campaign** which proves Oman commitment towards empowering its citizens. To mark the day an IT campaign was also flagged off to begin a journey through the various important cities of Oman aiming to spread the ICT awareness amongst the citizens.

ITA's **Oman Digital Society report** as mentioned earlier describes the initiatives completed and in progress under the Plan of Action themes. This reports covers several ICT projects undertaken and in progress during the period 2005-2006.

Oman celebrated the **2nd World Information Society Day**, on the 19th May 2007 heralded by the Information Technology Authority. The theme of the Sultanate's 2nd WIS day celebration was to '**Empower every citizen with ICT Skills**'. On this day, several public and private sector initiatives to build ICT skills within the society during the year 2005-2006 were presented. They are as follows:

- eOman Awareness Road Show - Achievements and the Way Forward by ITA;
- Govt. Digital Literacy Training – Achievements and the Way Forward by ITA;
- LEARN IT - The Barkah IT Literacy Campaign by Middle East College of IT;
- Development of Information Tech. Training and Research Infrastructure by SQU.

The event drew high level of participation from both public and private sector notably the ICT company heads. The second phase of eOman road shows is to combine ICT literacy workshops alongside e-government services awareness programmes targeting the entire community.

[45] Excerpts from Oman Digital Society report 2007, p41-42

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- Oman Economic Review, February 2006 issue available online at www.oeronline.com

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Annex I

MILLENNIUM DEVELOPMENT GOALS INDICATORS FOR OMAN

Year			Eradicate extreme poverty and hunger	Goal 1
2005	**2004**	**2003**	**Indicators**	**Targets**
-	-	-	1. Proportion of population whose income below the purchasing power of $1 a day.	1. Halve, between 1990 and 2015, the proportion of people whose income is less than one dollar a day
-	-	-	2. Poverty gap ratio.	
*	*	*	3. Share of poorest quintile in national consumption.	
12255	10258	9319	4. Per capita GDP in US $.	
*	*	*	1. Prevalence of underweight children under-five years of age.	2. Halve, between 1990 and 2015, the proportion of people who suffer from hunger
-	-	-	2. Proportion of population below minimum level of dietary energy consumption.	
			Achieve universal primary education	**Goal 2**
2005	**2004**	**2003**	**Indicators**	**Targets**
*	*	92.1%	1. Net enrolment ratio in primary education.	3. Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling
-	-	-	2. Proportion of pupils starting grade 1 who reach grade 5.	
*	*	98%	3. Literacy rate of 15-24 years old.	
Year			**Promote gender equality and empower women**	**Goal 3**
2005	**2004**	**2003**	**Indicators**	**Targets**
			1. Ratios of girls to boys in education stages,	4. Eliminate gender disparity in primary and secondary education preferably by 2005 and to all levels of education no later than 2015.
96%	95%	95%	Primary	
92%	96%	98%	Secondary	
112%	119%	123%	University	
*	*	98%	2. Ratio of literate females to males among 15-24 years old.	
*	*	17.9%	3. Share of women in wage employment in the non-agricultural sector.	
			4. Proportion of seats held by women in national parliament:	
2.4%	2.4%	2.4%	- Majlis Ash Shura	
14.2%	14.2%	14.2%	- Majlis A'dawla	

Year			Reduce child mortality	Goal 4
2005	**2004**	**2003**	**Indicators**	**Targets**
11.1	11.1	11.1	1. Under-five mortality rate.	5. Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate
10.3	10.3	10.3	2. Infant mortality rate.	
99%	98%	98%	3. Proportion of 1 year old children immunized against measles.	
Year			**Improve maternal health**	**Goal 5**
2005	**2004**	**2003**	**Indicators**	**Targets**
18.2	18.5	23.2	1. Maternal mortality ratio.	6. Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio
98%	97%	95%	2. Proportion of births attended by skilled health personnel.	
Year			**Combat HIV/AIDS, malaria and other diseases**	**Goal 6**
2005	**2004**	**2003**	**Indicators**	**Targets**
-	-	-	1. HIV prevalence among pregnant women 15-24 years old.	7. Have halted by 2015 and begun to reverse the spread of HIV/AIDS
-	1.92	3.74	2. Estimates of HIV prevalence among 15-24 years old (per 100,000 people).	
*	*	*	3. Male Condom use prevalence rate (male) + Contraceptive prevalence use rate.	
*	*	*	4. Number of orphan children due to HIV/AIDS	
21.8	25.5	32	1. Prevalence of Malaria (reported cases per 100,000 population).	8. Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases
0	-	-	2. Mortality rates associated with malaria.	
-	-	-	3. Proportion of population residing in malaria risk areas using effective malaria prevention and treatment measures.	
8.5	6.6	4.78	4. Prevalence of Tuberculosis (reported cases per 100,000 population).	
-	0.6	0.7	5. Mortality rates associated with tuberculosis.	
0.89	0.95	0.92	6. Proportion of tuberculosis cases detected and cured under directly observed treatment short course (DOTS).	

Year			Ensure environmental sustainability	Goal 7
2005	**2004**	**2003**	**Indicators**	**Targets**
-	-	-	1. Proportion of land area covered by forest.	9. Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources
29828	29828	29828	2. Land area protected to maintain biological diversity (square kilometres).	
-	-	-	3. Energy use (kg oil equivalent) per $1000 of GDP (PPP).	
-	-	-	4. Carbon dioxide emissions (Metric tons per capita).	
411.85	463.4	443	5. Consumption of the ozone-depleting CFCs gas (ODP tons).	
-	-	-	6. Proportion of population using solid fuels.	
*	*	75.3%	1. Proportion of population with sustainable access to an improved water source, urban and rural.	10. Halve, by 2015, the proportion of people without sustainable access to safe drinking water
			1. Proportion of population with access to improved sanitary facilities:	11. By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers
*	*	93%	- Equipped toilets.	
*	*	95%	- Equipped bathrooms.	
*	*	*	2. Proportion of households with access to secure housing (owned or rented).	

Year			Develop a global partnership for development	Goal 8
2005	**2004**	**2003**	**Indicators**	**Targets**
+	+	+	Indicators are being developed.	12. Develop further an open, rule-based, predictable, non-discriminatory trading and financial system
+	+	+	1. Net ODA, total and to the least developed countries, as a percentage of OECD/DAC donors' gross national income.	13. Addressing the special needs of the least developed countries involves:
+	+	+	2. Proportion of total bilateral, sector-allocable ODA of OECD/DAC donors to basic social services (basic education, primary health care, nutrition, safe water and sanitation).	Tariff and quota free access for least developed countries' exports; enhanced programme of debt relief for heavily indebted poor countries (HIPC) and cancellation of official bilateral debt; and more generous ODA for countries committed to poverty reduction
+	+	+	3. Proportion of bilateral ODA of OECD/DAC donors that is untied	

Year			Develop a global partnership for development	Goal 8
2005	**2004**	**2003**	**Indicators**	**Targets**
+	+	+	1. ODA received in landlocked countries as proportion of their gross national incomes (GNIs).	14. Address the special needs of landlocked countries and small island developing States (through the Programme of Action for the Sustainable Development of Small Island Developing States and the outcome of the twenty-second special session of the General Assembly)
+	+	+	2. ODA received in small island developing States as proportion of their GNIs.	
+	+	+	1. Proportion of total developed country imports (by value and excluding arms) from developing countries, admitted free of duties.	15. Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term
+	+	+	2. Average tariffs imposed by developed countries on agricultural products and textiles and clothing from developing countries.	
+	+	+	3. Agricultural support estimate for OECD countries as percentage of their gross domestic product (GDP) .	
+	+	+	4. Proportion of ODA provided to help build trade capacity.	
+	+	+	5. Total number of countries that have reached their HIPC decision points and number that have reached their HIPC completion points (cumulative).	
+	+	+	6. Debt relief committed under HIPC initiative.	
+	+	+	7. Debt service as a percentage of exports of goods and services	
-	-	-	1. Unemployment rate of young people aged 15-24 years, according to gender and global total.	16. In cooperation with developing countries, develop and implement strategies for decent and productive work for youth

Year			Develop a global partnership for development	Goal 8
2005	**2004**	**2003**	**Indicators**	**Targets**
All medicines are provided free of charge			1. Proportion of population with access to affordable essential drugs on a sustainable basis.	17. In co-operation with pharmaceutical companies, provide access to affordable, essential drugs in developing countries
100.4	99.5	100.9	1. Telephone lines per 1000 population.	18. In co-operation with the private sector, make available the benefits of new technologies, especially information and communications
533.0	333.8	253.5	2. Cellular phone subscribers per 1000 population.	
*	*	154.0	3. Personal computers in use per 1000 population.	
*	*	61.0	4. Internet users per 1000 population.	
24.5	20.1	22.1	5. Internet subscribers per 1000 population.	

- Data not available in the report
*Periodic data available through census & surveys
+ Not Applicable

Annex II

REPORT ON FACT FINDING STUDY

OMANI WOMAN INFORMATION TECHNOLOGY AWARENESS AND HER TRAINING REQUIREMENTS

FIELD STUDY COVERING THE GOVERNORATE OF MUSCAT

Prepared by the students of Sociology Department and Sociology Work

Sultan Qaboos University, 2006

Introduction

In line with the Sultanate efforts to provide social care for its citizen, the Omani woman has been recognized to receive special attention and care to activate her role and participation in development efforts on both the family level as well as the community level. That included preparing plans and drawing policies and programs that look after the Omani woman from a rehabilitation point of view , training her, and setting special centers and associations that fulfill the Omani woman's needs and requirement and allow her, accordingly to participate in the development efforts in general and the local development in particular.

To augment this fact finding study a survey was done covering a random sample of female and housewives and educated women in different grades totaling (538) and another sample of totaling to (260) to identify how families support the Omani woman in developing her knowledge and expertise in the field of Information Technology and her training in this field in general. The samples used for the survey were only from Muscat Governorate and its Willayats.

Objectives of the Study:

The study tried to address the following main objectives:

- Identify Omani woman awareness features of Information Technology (IT) and its applications;
- Identify Omani family awareness features of Information Technology (IT) and its applications;
- Define the training requirement in the filed of IT for Omani woman;
- Revealing major difficulties and impediments factors facing the Omani woman in the filed of IT;
- Present number of suggestions that could help in the utilization of the Omani woman to IT and gain the necessary skills for computers.

Outcome of the study:

First: Related to the study first objective "Identify Omani woman awareness of Information Technology (IT) and its applications" the study has concluded that:

1- The Omani woman has a degree of awareness for Information Technology and in particular with the usage of PC as one of the most popular technological tools. The degree of awareness varies from one area of the research to another based on the women's education and place of residence;

2- Despite that the study revealed the presence of IT awareness and the usage of PCs and its importance in day to day life but also revealed that majority don't have or own PCs

Second: Related to the study second objective "Identify Omani family awareness features of Information

Technology (IT) and its applications" the study has concluded that:

1- The Majority of families have agreed on the importance of having the necessary PCs' skills and on the usage training and how to benefit from the PCs in real world;

2- All researches agreed that if the Omani woman starts using the PC, this will increase her effectiveness within her family

Third: Related to the study third objective "**Define the training requirement in the field of IT for Omani Women"** the study concluded that:

1- The assurance on the utmost importance of training the Omani woman on how to use the PC;

2- There is a urge desire among the Omani women to attend training courses to gain necessary PCs' skills;

3- There is a great need within the Omani women to learn number of real life applications skills that will allow them to socially interact in a more positive way in general and will help them to be rehabilitated in the right way to enter the job market;

4- Majority of the women confirmed that if they use the PC after being properly trained that will have a positive impact on herself as well as on her family.

Fourth: Related to the study fourth objective "Revealing major difficulties and impedimental factors facing the Omani woman in the filed of IT" the study has concluded that:

1- Business of the Omani woman with her chore;

2- The low level of education of the majority of housewives and specially in remote areas;

3- High cost of training courses and non availability of these courses in remote areas;

4- Family traditions and customs related to not allowing the Omani woman to join training courses, especially evening ones, or far from her residence.

Fifth: Related to the study objective No. 5 "Present number of suggestions that could help in the utilization of the Omani woman to IT and gain the necessary skills for computers" the study has concluded that:

1- The media must have a more active role in the awareness of information technology;

2- Conduct awareness campaigns to introduce all the community members in general and women inparticular to information technology and the usage of computers either at work or at home;

3- Organizing training courses related to the usage of computers in location where the women can avail of without lot of traveling and suitable timings;

4- The production and publishing of introduction booklets explaining the importance of usage of information technology and computers and, most importantly the publishing of these booklets so that the targeted audiences can benefit from;

5- The ease of purchasing of Personal Computers (PCs) and provide support to those who can not afford to buy in addition to reducing the charges of accessing the internet;

6- Increasing the support to local training institutes that conduct training courses related to IT and PC usage, through variety of schemes that will cover housewives and working ladies that can not afford to pay the tuition fees of these courses and offer these courses free or subsidized;

7- Setting either free training centers or subsidized ones to teach PC skills either in schools or clubs or at the Omani Women Association premises during summer holidays;

8- Organizing specialized training courses to increase the Omani Women awareness and skills showing them how can they improve their quality of life and perform their social duties through the usage of PCs, in addition to open new ventures and alleys for their to join the labor market so that they can be ready and qualified to run small self entrepreneur projects to support their family and children which will have a great positive impact on their active participation in the social development.

Annex III

LIST OF SELECTED OMANI WEBSITES FOR REFERENCE

	Organization	Website
1	Ministry of National Economy	www.moneoman.gov.om
2	Muscat Municipality	www.mm.gov.om
3	Royal Oman Police	www.rop.gov.om
4	The Tender Board	www.tenderboard.gov.om
5	Ministry of Information	www.omanet.om
6	Ministry of National Heritage & culture	www.mnhc.gov.om
7	Ministry of Social Development	www.mosd.gov.om
8	Telecommunication Regulatory Authority	www.tra.gov.om
9	Information Technology Authority	www.ita.gov.om
10	Ministry of Manpower	www.manpower.gov.om
11	Ministry of Health	www.moh.gov.om
12	Ministry of Education	www.moe.gov.om
13	Ministry of Higher Education	www.mohe.gov.om
14	Ministry of Commerce & Industry	www.mocioman.gov.om
15	Ministry of Regional Municipalities & Environment & Water Resources	www.mrmewr.gov.om
16	Oman Chamber of Commerce and Industry	www.chamberoman.com
17	Ministry of Tourism	www.omantourism.gov.om
18	Ministry of Agriculture and Fisheries	www.maf.gov.om
19	Muscat Securities Market	www.msm.gov.om
20	Public Establishment for Industrial Estates	www.peie.om
21	Public Authority for Craft Industries	www.paci.gov.om
22	Knowledge Oasis Muscat – ICT Park	www.kom.om
23	Omani Center for Investment Promotion and Export Development	www.ociped.com
24	Digital Oman ICT Magazine	www.digitaloman.com
25	Petroleum Development Oman	www.pdo.co.om
26	Ministry of Interior	www.moi.gov.om
27	Muscat Security Market	www.msm.gov.om
28	Capital Market Authority	www.cma-oman.com

	Telecommunication	
29	Oman Telecommunications Company	www.omantel.net.om
30	Omanmobile	www.omanmobile.om
31	Nawras	www.nawras.com.om
32	Oman Network Information Center	www.omnic.om
	Banking	
33	Central Bank of Oman	www.cbo-oman.org
34	Bank Muscat	www.bankmuscat.com
35	National Bank of Oman	www.nbo.co.om
36	Oman International Bank	www.oiboman.com
	Educational	
37	Sultan Qaboos University	www.squ.edu.om
38	Modern College of business studies	www.mcbs.edu.om
39	College of banking and financial studies	www.cbfs.edu.om
40	Middle east College of IT	www.mecit.edu.om
	Tourism	
41	Oman Destination	www.destinationoman.com
42	Birds Oman	www.birdsoman.com
43	Arabian Oryx Project	www.oryxoman.com
	Oil and Gas	
44	Petroleum Development Oman	www.pdo.co.om
45	Shell Oman	www.shell.com
46	Oman LNG	www.omanlng.com
47	Oman Society for Petroleum Services	www.opaloman.org
	Port Services	
48	Port Services Company	www.pscoman.com
49	Salalah Port Services	www.salalahport.com