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ICT BUSINESS REGISTRATION - CLASSIFICATION METHODOLOGY FOR JORDAN

Final Report

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ICT BUSINESS REGISTRATION-CLASSIFICATION METHODOLOGY FOR JORDAN

Final Report

USAID JORDAN ECONOMIC DEVELOPMENT PROGRAM

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BEARINGPOINT, INC.

USAID/JORDAN
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CONTENTS

PROJECT OVERVIEW

INTRODUCTION

The USAID-funded Sustainable Achievement of Business Expansion and Quality (SABEQ) program is a broad economic development initiative implemented by BearingPoint, Inc. and a broad team of international and Jordanian partner firms. By both supporting improvements in the business environment and providing assistance to expand innovation and productivity in Jordanian businesses, SABEQ's Sectors, Solutions, and Components all support the common objective of enhancing private the sector - Jordan's companies, innovators and entrepreneurs - as a powerful engine of economic growth. The Information and Communication Technology (ICT) Classification Project is a component of SABEQ's ICT Sector, dedicated to increasing the output of the ICT Sector in Jordan. The project's objective is to create and make easily accessible indicators for the performance of Jordan's ICT Sector.

This data will support members of the government, international agencies, and the private sector in making well-informed decisions about how to expand the sector, equipping it with appropriate resources, investment and policy infrastructure.

Without these indicators, no clear insight into the strengths or weaknesses of the Jordanian ICT sector can exist, resulting in less effective government policy and business activity. Accurate statistical information is not only important for domestic actors – foreign investors often need the ability to formulate a clear picture of a sector before they feel secure in participating in investments.

For these reasons, accurate, properly categorized statistical data and indicators is critical to allow the ICT Sector to flourish.

OBJECTIVE

The objective of this project is to help make available reliable and transparent indicators for the performance and size of the Jordanian Information and Communications Technology (ICT) Sector. The regular availability of internationally recognized core indicators for the performance of the ICT Sector requires several intermediary steps. These steps includes the identification of these indicators, identifying the enterprises that comprise the ICT Sector and should be subject to measurement, classification of these enterprises according to a standardized classification methodology, and the regular gathering of data from these enterprises.

ICT SECTOR INDICATORS

The question of which indicators should be utilized to measure the performance of the ICT Sector is made somewhat easier by the presence of the ITU-sponsored Partnership on Measuring ICT for Development. The project should endorse the use of internationally-recognized indicators for measuring the ICT Sector.

The Partnership has established four core indicators for national ICT sectors and trade in ICT goods (the UN Statistical Commission has also adopted these indicators):

Table 1: Core indicators on the ICT sector and trade in ICT goods
As identified by the Partnership on Measuring ICT for Development

Indicator Name	Description
ICT 1	Proportion of total business sector workforce involved in the ICT sector
ICT 2	Value added in the ICT sector (as a percentage of total business sector value added)
ICT 3	ICT goods imports as a percentage of total imports
ICT 4	ICT goods exports as a percentage of total exports

From: *"Partnership on Measuring ICT for Development - Core ICT Indicators",* 2005.[1]

The ICT 1 indicator considers the "total business sector workforce" the entire active Jordanian workforce, of that workforce involved in the ICT Sector is used to calculate the indicator, as a percent. The ICT 2 indicator should compute value added for the ICT Sector according to the System of National Accounts (SNA) standards. ICT 3 and 4 can typically be computed from trade data.

Establishing these indicators raises the issue of what subset of all possible Jordanian enterprise should be considered part of the ICT Sector? Several international organizations have worked to create a consistent, recognized definition of a nation's ICT sector; it's important that the Jordanian government and private sector recognize this definition in order to allow for sound economic analysis and transparent statistical presentation.

"It is recommended that countries use the definition of the ICT sector agreed by WPIIS in 1998 (and revised in 2007)."

- *United Nations Partnership for Measuring ICT in Development, ICT Sector Classifications*[2]

The Organization for Economic Co-operation and Development's (OECD) Working Party on Indicators for the Information Society (WPIIS) has established and continued to update the definition for what comprises a nation's ICT sector. The sector definition is carefully structured, and governed by a guiding principal that helps clarify what enterprises should be considered part of the ICT sector.

[1] http://www.itu.int/ITU-D/ict/partnership/material/set_core_ICT_indicators.pdf

[2] http:// www.unescap.org/icstd/events/Info-Society-Stats-Workshop-2007/ICT-sector-classifications.pdf

Throughout this project, the presence of these international definitions - of what measures should be used to indicate the performance of the ICT Sector and what enterprises comprise the ICT Sector – should be acknowledged. Attempting to create a bespoke indicator set or sector definition will only contribute to the existing confusion surrounding the definition and performance of the ICT Sector in Jordan.

SCOPE & APPROACH

1.1.1 SCOPE

The scope of this project is to identify and classify the Jordanian ICT Sector to promote a better understanding of its size and performance.

While the Jordanian ICT Sector is a major contributor to the Jordanian economy, it is not the only sector in need of a classification system. A consistent application of a standard industrial coding and economic performance indicators will support economic analysis for the entire economy; however, that is not in-scope for this project.

1.1.2 APPROACH

In order to establish and regularly produce these indicators, 1) enterprises within the ICT Sector must be appropriately identified as comprising the "ICT Sector", 2) once identified, the ICT Sector must be consistently classified according to international guidelines, and 3) data must be gathered reliably, on a regular basis and according to statistical best practices.

To achieve these objectives, the following approach was taken:

1. Identify international indicators for the performance of the ICT Sector;
2. Identify an internationally accepted definition of what enterprises comprise a nation's ICT Sector;
3. Identify the appropriate international classification system to be used to classify enterprises within the ICT Sector;
4. Analyze the unique aspects of the ICT Sector as it exists in Jordan; and
5. Recommend an implementation approach to both to utilizing the indicators, sector definition, and classification system.

IDENTIFYING THE ICT SECTOR

According to the Organization for Economic Co-operation and Development (OECD), the guiding principal for what constitutes an ICT enterprise is:

"The production (goods and services) of a candidate industry must primarily be intended to fulfill or enable the function of information processing and communication by electronic means, including transmission and display"

- *The OECD WPIIS's "Guiding Principal" for identifying enterprises within ICT sectors.*[3]

This principal provides a good starting point for what comprises the ICT Sector in Jordan, and will be used throughout the recommended approach. Additionally, the UN's statistical guidelines on identifying industrial sectors, Jordan-specific knowledge (such as trade group surveys from int@j), and any other available information, will be taken into account.

Frequently, the definition of an industrial sector is a difficult and contentious issue. The OECD, by its own admission, is unable to come to absolute agreement on what should comprise a generic ICT Sector. Past debates have centered on whether the conceptual framework for the definition of the ICT sector was sound and if the definition was sufficiently inclusive or should be made more exclusive. Their proposed classification approach, just that - a proposal for countries to consider in defining their own ICT Sector. However, given the critical need for consistent measures and sector definition, it suggested that the Jordanian Government use the OECD closely for the time being, and update it frequently as required by the specific needs of the various stakeholders.

ENTERPRISES TO CONSIDER

To create a clear picture of what the Jordanian ICT Sector consists of, it is useful to establish a baseline understanding of the economic units that will be defined as within the Sector. Economic participants that will be part of the definition of the ICT Sector, and become part of the eventual analysis frame, include:

- Institutional Units: An institutional unit is the most basic unit of activity. An institutional unit may be defined as "...a economic entity that is capable, in its own right, of owning assets, incurring liabilities and engaging in economic activities and in transactions with other entities."[4]
- Legal Entities: A sub-definition of institutional units, legal entities comprise almost all (non-financial) enterprises in the economy.
- Corporations: A sub-definition of all legal-entities, corporations are "legal entities that are incorporated for the purpose of producing goods and services for the market, that may be a source of profit or other financial gain to its owner(s) and are collectively owned by shareowners that have the authority to appoint directors responsible for their general management."

[3] http:// www.unescap.org/icstd/events/Info-Society-Stats-Workshop-2007/ICT-sector-classifications.pdf

[4] http://unstats.un.org/unsd/sna1993/tocLev8.asp?L1=4&L2=1

- Partnerships: A sub-definition of all legal entities, partnerships exist to protect their owners from liability.

Corporations and partnerships are the only types of enterprises that will become part of the ICT Sector definition. Other types of institutional units and enterprises, such as households, unrecognized (gray-market) enterprises, co-operatives, and state-sponsored enterprises, will not be included. Exclusion of these entities is due to their lack of contribution to the indicator objectives of the project, or the difficulty in gathering data about these activities.

Conclusion: Only enterprises that meet the definition of corporations or partnerships will be included in the definition of the Jordanian ICT Sector.

PRIMARY VS. SECONDARY OR ANCILLARY ACTIVITY

Companies classified as part of the ICT Sector in Jordan will be done so only if their primary activity is within the classification domain. Secondary or ancillary activities can be considered, but should not be considered for purposes of the identification. According to the UN Statistical Commission's draft guidelines on industrial classification:

"An activity that contributes most to the value added of the unit, or the activity the value added of which exceeds that of any other activity undertaken by the unit is called its principal activity. It is not necessary that the principal activity account for 50 per cent or more of the total value added of a unit."[5]

Conclusion: Only enterprises that are either identified, or self-identify as having a primary activity that falls within the ICT Sector will be defined as being within the Sector.

[5] http:// unstats.un.org/unsd/isdts/docs/StatisticalUnits.pdf

TREATMENT OF SUB-SECTORS

TREATMENT OF OUTSOURCING

The treatment of outsourcing within the classification of ICT the ICT industry has been raised by the project's counterparts as an area in need of clarification. According to the UN Statistical Commission, when enterprises become involved in either utilizing outsourcing, or providing outsourced support services, the principal remains classified to the same ISIC code that is associated with its primary activity, the secondary takes the ISIC code of the activity which they are attempting to execute:

"In this case, the principal carries out the core production process (of a good or a service), but outsources certain support functions, such as accounting or computer services, to the contractor. In such a case, the principal remains classified to the same ISIC class that represents the core production process. The contractor is classified to the specific support activity it is carrying out, e.g. ISIC class 6920 (Accounting, bookkeeping and auditing activities; tax consultancy) or 6202 (Computer consultancy and computer facilities management)."[6]

Conclusion: For the purposes of this assessment, outsourcing enterprises should have their primary purpose be the activity they are responsible for performing (technical support, accounting), but are not to be considered part of the ICT sector as a whole.

TREATMENT OF THE CONTENT AND MEDIA SECTOR

The OECD defines the ICT Sector as a combination of four sectors (and their associated ISIC codes): the ICT manufacturing industries, ICT repair industries, ICT trade industries and ICT services industries. Notably, this definition excludes the Content industry, as there appears to have been a lack of total agreement on the interaction between traditional content producers and the ICT Sector:

"It has been generally accepted that ICT industries thus defined were not the only ones that mattered for industrial policy analysis related to the "information economy". Very early on, the WPIIS considered the broader concept of "information economy", a concept it defined as the combination of the ICT sector and the Content Sector."

WPIIS failed to reach consensus on as to if the Content Sector was to be included. Given that the Jordanian Government seeks to influence industrial policy around the ICT Sector, and not the “information economy”, these classes are not relevant to either the OECD guiding principal, or ICT in Jordan. They should be excluded from the sector definition.

The 2007 OECD sector definition for the Content Sector consists of the following ISIC codes (The guiding principal used for the identification of a "Content" enterprise was "Content corresponds to an organized message intended for human beings published in mass communication media and related media activities. The value of such a product to the

[6] http://unstats.un.org/unsd/isdts/docs/Draft-IRIS-2008.doc

consumer does not lie in its tangible qualities but in its information, educational, cultural or entertainment content".)[7]:

Table 2: OECD Content & Media Sector Definition

As identified by the OECD's Working Party on Indicators for the Information Society

ISIC 4 Class	Description
581	Publishing of books, periodicals and other publishing activities
5811	Book publishing
5812	Publishing of directories and mailing lists
5813	Publishing of newspapers, journals and periodicals
5819	Other publishing activities
591	Motion picture, video and television programme activities
5911	Motion picture, video and television programme production activities
5912	Motion picture, video and television programme post-production activities
5913	Motion picture, video and television programme distribution activities
5914	Motion picture projection activities
592	Sound recording and music publishing activities
60	Programming and broadcasting activities
601	Radio broadcasting
602	Television programming and broadcasting activities
639	Other information service activities
6391	News agency activities
6399	Other information service activities n.e.c.

From: *"OED WPIIS Information Economy – Sector Definitions Based on the International Standard Industry Classification (ISIC 4)",* 2007.[8]

Conclusion: These classes are not relevant to either the OECD guiding principal, or ICT in Jordan. They should be excluded from the sector definition.

[7] http:// unstats.un.org/unsd/class/intercop/training/escwa07/escwa07-12.PPS

[8] http://www.unescap.org/icstd/events/Info-Society-Stats-Workshop-2007/ICT-sector-classifications.pdf

TREATMENT OF THE TELECOMMUNICATIONS SECTOR

According to the OECD WPIIS working group, telecommunication and other technology-centric industries meet the guiding principal definition of an ICT sector enterprise and are included within the sector definition. Additionally, in Jordan, the Telecommunication Regulatory Commission (TRC) has joint authority for the regulation of both telecommunication companies and ICT firms. Thus, this determination is also supported by the regulatory infrastructure.

Conclusion: The Telecommunications industry will remain within the ICT Sector.

TREATMENT OF ICT RETAIL ESTABLISHMENTS

During the WPIIS working group session, ICT retail and wholesale establishments were raised as possible members of the ICT sector definition. In the end, WPIIS choose only to include wholesale enterprises in the sector definition. They give this rationale:

"There is no similar argument for ICT retail industries, nor the same level of support for the inclusion of retail activities in the ICT sector. Those that argue for inclusion generally do so for the purpose of consistency. Those against inclusion tend to argue that specialty stores' low share of the total ICT retail market means that statistics are incomplete and therefore somewhat misleading."[9]

Conclusion: The ICT Sector definition will exclude ICT retail activities.

TREATMENT OF INTERNET SERVICE PROVIDERS (ISPS)

ISPs fall within the ICT Sector definition. According to the ISIC Rev.4 coding structure, they are classified by the method through which they deliver access to services. Thus, the fall within the following categories:

- 6110 - Wired telecommunications activities
- 6120 - Wireless telecommunications activities
- 6130 - Satellite telecommunications activities

Conclusion: ISPs fall within the sector, and are coded according to the method by which they deliver service to their customers. Retail ISPs – Internet cafes, etc., are excluded from the definition.

[9] http://www.unescap.org/icstd/events/Info-Society-Stats-Workshop-2007/ICT-sector-classifications.pdf

TREATMENT OF ICT TRAINING CENTERS

ICT training centers fall outside of the definition of the ICT sector, according to the OECD. Training centers provide an educational service, and are defined as part of ISIC class 8549 - Other education n.e.c, specifically.

Conclusion: Training companies fall outside of the definition of the ICT Sector.

OECD SUGGESTED SECTOR DEFINITION

The OECDs Working Party on Indicators for the Information Society (WPIIS) met in 2007 to create a common definition, based on ISIC, for what constitutes a generic "ICT Sector". As discussed in previous sections, this provides only a baseline for consideration by Jordanian stakeholders. The Jordanian ICT Sector definition will take into account the specifics of the ICT Sector as it exists in Jordan.

The 2007 OECD ICT sector definition (ISIC Rev. 4) for the ICT manufacturing, service and telecommunication industries consists of the following ISIC classes and divisions:

Table 3: OECD ICT Sector Definition

As identified by the OECD's Working Party on Indicators for the Information Society[10]

OECD Sub-Sector	ISIC 4 Class	Description
ICT Manufacturing Industries	2610	Manufacture of electronic components and boards
	2620	Manufacture of computers and peripheral equipment
	2630	Manufacture of communication equipment
	2640	Manufacture of consumer electronics
	2680	Manufacture of magnetic and optical media
ICT Trade Industries	4651	Wholesale of computers, computer peripheral equipment and software
	4652	Wholesale of electronic and telecommunications equipment and parts
ICT Services Industries	5820	Software publishing
	61	Telecommunications
	6110	Wired telecommunications activities
	6120	Wireless telecommunications activities
	6130	Satellite telecommunications activities
	6190	Other telecommunications activities
	62	Computer programming, consultancy and related activities
	6201	Computer programming activities
	6202	Computer consultancy and computer facilities management activities
	6209	Other information technology and computer service activities
	631	Data processing, hosting and related activities; web portals
	6311	Data processing, hosting and related activities
	6312	Web portals
	951	Repair of computers and communication equipment
	9511	Repair of computers and peripheral equipment
	9512	Repair of communication equipment

[10] http://www.unescap.org/icstd/events/Info-Society-Stats-Workshop-2007/ICT-sector-classifications.pdf

Conclusion: The OECD suggested sector definition should be followed as closely as possible to maintain international comparability. Minor modifications can be made to suit the specifics of the Jordanian economy and ICT Sector, but not in a way that would significantly distort the analysis of the sector.

INT@J SURVEY CATEGORIES

int@j, the Jordanian ICT trade group, periodically surveys its membership to determine the size and scope of the Jordanian ICT Sector. As of this writing, the most recent year for which data is available is 2006. The int@j survey was reviewed to provide a basis for understanding the scope of the Jordanian ICT Sector and the overlap with the OECD sector definition.

Although the survey provides a valuable snapshot of the organization's membership, the analysis methodology and sample size extrapolation detracts from its reliability:

- The survey does not include the four major telecommunications companies, which should be considered part of the analysis;
- The survey is limited to int@j's membership;
- The survey utilizes non-internationally standardized classification categories; and
- The survey is internally inconsistent, utilizing different categories for different indicators.

These limitations aside, the int@j survey presents the only available, recent picture of the Jordanian ICT industry, and will be used as to confirm that the OECD sector definition has the required classification classes to classify the activities of the Jordanian ICT Sector. The figure below depicts the 2006 int@j survey results, with a comparison showing the likely ISIC classes and if the category falls in or out of the OECD ICT sector definition:

Table 4: int@j Survey Categories Mapped to ISIC Revision 4 Classes

Domestic Production Category	ISIC Rev. 4 Coding	Notes	Percentage	Revenue
Other Services	Need clarification from int@j	NA	26.42%	$152,854,023.00
Hardware Sales	Class: 4651 - Wholesale of computers, computer peripheral equipment and software	Falls in OECD sector def., but wholesale only	25.74%	$148,919,854.00
ISP, Internet Services, Online Transactions and Subscriptions	Class 6110, 6120 or 6130, dependent on service method	Falls in OECD sector def.	8.28%	$47,904,289.00
Telecom / Frame Relay / Networking Systems and Management	Class 6110, 6120 or 6130 or 6190, dependent on primary activity	Falls in OECD sector def.	6.55%	$37,895,301.00
IT Training, Application Support Services, and Call Centers	Class: 8220 - Activities of call centres and Class: 8549 - Other education n.e.c.	Outside of OECD sector def.	5.86%	$33,903,277.00
Hardware / Firmware Technology Provision	Class: 4651 - Wholesale of computers, computer peripheral equipment and software	Falls in OECD sector def., but wholesale only	5.59%	$32,341,181.00
Complete Software Development	Class: 6201 - Computer programming activities	Falls in OECD sector def.	5.13%	$29,679,831.00
IT Consulting, Research and Strategies Development	Class: 6202 - Computer consultancy and computer facilities management activities	Falls in OECD sector def.	4.35%	$25,167,108.00
In-house-Developed Packaged S/W Sales	Class: 6201 - Computer programming activities	Falls in OECD sector def.	3.56%	$20,596,530.00
Off-the-Shelf Packaged Software Re-Sales	Class: 4741 - Retail sale of computers, peripheral units, software and telecommunications equipment in specialized stores	Outside of OECD sector def.	3.52%	$20,365,108.00
Project Management	Class: 6202 - Computer consultancy and computer facilities management activities	Falls in OECD sector def.	1.17%	$6,769,084.00
Web Design, Development and Administration	Class: 6201 - Computer programming activities, but need clarification from int@j	Falls in OECD sector def.	1.15%	$6,653,373.00
System Documentation	Class: 6201 - Computer programming activities, but need clarification from int@j	Falls in OECD sector def.	0.88%	$5,091,277.00
System Development	Class: 6201 - Computer programming activities, but need clarification from int@j	Falls in OECD sector def.	0.76%	$4,397,012.00
System Design	Class: 6201 - Computer programming activities, but need clarification from int@j	Falls in OECD sector def.	0.51%	$2,950,626.00
Remote Sensing and GIS	Class: 6202 - Computer consultancy and computer facilities management activities	Falls in OECD sector def.	0.47%	$2,719,205.00
Interactive Media, Graphic Design and Printing	Falls under content & publishing, Division 59 or 60	Outside of OECD sector def.	0.06%	$347,133.00
Export Production Category			**Percentage**	**Revenue**
In-house-Developed Packaged S/W Sales	Class: 6201 - Computer programming activities	Falls in OECD sector def.	19.43%	$37,212,409.00
Other Services	Need clarification from int@j	NA	15.08%	$28,881,273.00
Telecom / Frame Relay / Networking Systems and Management	Class 6110, 6120 or 6130 or 6190, dependent on primary activity	Falls in OECD sector def.	11.95%	$22,886,685.00
Complete Software Development	Class: 6201 - Computer programming activities	Falls in OECD sector def.	11.31%	$21,660,955.00
IT Consulting, Research and Strategies Development	Class: 6202 - Computer consultancy and computer facilities management activities	Falls in OECD sector def.	10.01%	$19,171,190.00
System Documentation	Class: 6201 - Computer programming activities, but need clarification from int@j	Falls in OECD sector def.	8.67%	$16,604,817.00

Hardware Sales	Class: 4651 - Wholesale of computers, computer peripheral equipment and software	Falls in OECD sector def., but wholesale only	4.11%	$7,871,488.00
ISP, Internet Services, Online Transactions and Subscriptions	Class 6110, 6120 or 6130, dependent on service method	Falls in OECD sector def.	3.99%	$7,641,663.00
IT Training, Application Support Services, and Call Centers	Class: 8220 - Activities of call centres and Class: 8549 - Other education n.e.c.	Outside of OECD sector def.	3.92%	$7,507,600.00
System Design	Class: 6201 - Computer programming activities, but need clarification from int@j	Falls in OECD sector def.	2.95%	$5,649,851.00
Off-the-Shelf Packaged Software Re-Sales	Class: 4741 - Retail sale of computers, peripheral units, software and telecommunications equipment in specialized stores	Outside of OECD sector def.	2.79%	$5,343,418.00
System Development	Class: 6201 - Computer programming activities, but need clarification from int@j	Falls in OECD sector def.	2.46%	$4,711,401.00
Interactive Media, Graphic Design and Printing	Falls under content & publishing, Division 59 or 60	Outside of OECD sector def.	1.57%	$3,006,870.00
Project Management	Class: 6202 - Computer consultancy and computer facilities management activities	Falls in OECD sector def.	1.17%	$2,240,788.00
Remote Sensing and GIS	Class: 6202 - Computer consultancy and computer facilities management activities	Falls in OECD sector def.	0.24%	$459,650.00
Hardware / Firmware Technology Provision	Class: 4651 - Wholesale of computers, computer peripheral equipment and software	Falls in OECD sector def., but wholesale only	0.21%	$402,193.00
Web Design, Development and Administration	Class: 6201 - Computer programming activities, but need clarification from int@j	Falls in OECD sector def.	0.14%	$268,128.00
Total			**100.00%**	**$770,074,591.00**

From: *"int@j ICT Sector Survey)",* 2006.

From this analysis, it can be determined that int@j considers certain industries not within the OECD sector definition as part of the Jordanian ICT Sector. These are:

- IT Training, Application Support Services, and Call Centers;
- Interactive Media, Graphic Design and Printing;
- Retail Hardware Sales, Hardware / Firmware Technology Provision; and
- Off-the-Shelf Packaged Software Re-Sales.

Conclusion: As it is important that the ICT Sector definition stay closely aligned with the international definition for the sector, these types of enterprises should be removed from the definition of the ICT Sector in Jordan.

CLASSIFYING THE ICT SECTOR

USING ISIC

The international classification system, ISIC, should be implemented as the standardized classification framework for the ICT Sector. As the OECD sector definition and the Partnership for Measuring ICT in Development's indicators are both reliant on ISIC, to take fully adopt these international frameworks, adoption of ISIC is crucial as well.

The United Nation's Statistical Department, in their "Options for national implementation of ISIC"[11] document that national implementations of ISIC can take one of four different options:

1. *Adopt ISIC "as-is"*
2. *Use the complete ISIC and add subdivisions to reflect nationally important industries (but maintain the ISIC coding structure) – can be "numerically truncated" back to ISIC*
3. *As above, but with changes of the coding structure (example: NACE) – requires correspondence table*
4. *Elevating lower level ISIC categories to higher national levels, (e.g. combine ISIC categories at 2- or 3-digit level)*

After consultation with stakeholders and examination of other nation's experience with ISIC, it is recommended that Option 2 be used:

ISIC link through "numerical truncation"

ISIC Rev.4		National Classification	
2310	Manufacture of glass and glass products	23101	Manufacture of flat glass
		23102	Shaping and processing of flat glass
		23103	Manufacture of hollow glass
		23104	Manufacture of glass fibres
		23109	Manufacture and processing of other glass, including technical glassware
2391	Manufacture of refractory products	23910	Manufacture of refractory products
2392	Manufacture of clay building materials	23921	Manufacture of ceramic tiles and flags
		23922	Manufacture of bricks, tiles and construction products, in baked clay

International comparability is maintained.
No additional tools are required.

[11] unstats.un.org/unsd/class/intercop/training/escwa07/escwa07-19.PPS

It is recognized that companies be identified or self-identify within the range of all available ISIC codes. When those companies fall within the OECD sector definition, they will be considered as part of the “ICT Sector”. Also, it is recommended that key stakeholders meet annually to update existing and create new sub-classifications.

At the current time, there appears to be no Jordan national ICT industries that fall outside of the ISIC classification framework, or that require classification at a level below those available. The UN also recommends that sufficient detail be collected when data is recorded to allow sufficient collection of detail at a latter time. But, that "When introducing additional detail, check if the specialization for this activity really warrants a separate class."

Giving the nascent nature of Jordan’s ICT Sector, over categorization based on individual perception of the market is not recommended; ISIC provides a sufficient class catalogue to support current analysis requirements.

RECOMMENDATIONS

In order to maintain compliance with international standards, provide consistent information to stakeholders, and encourage investment and sector development, it is recommended that the Jordanian ICT Sector be established to include:

- The OECD's 2007 ICT Sector Definition, including all identified ISIC classes;
- Other content and media sector items exclusive of class 6399 should not be included within the ICT Sector Definition;
- The Partnership on Measuring ICT for Development ICT indicators - ICT-1, ICT-2, ICT-3 and ICT-4, should be used to monitor the performance of the sector;
- The sector should be classified according to the draft ISIC Revision 4 class system until the final revision has been issued; and

UPDATES AND GOVERNANCE

In order to keep the sector definition, classification structure, and indicators relevant, each should be updated on a regular basis with the involvement of key stakeholders. Representatives of each stakeholder group should meet annually in order any provide inputs to updates. The following stakeholder groups should be involved in the update process:

Table 5: Key Stakeholders
As identified by the Project

Stakeholder Name	Description
int@J	Jordanian technology trade organization depends on statistics about company registration to publish reports, increase investment.
Department of Statistics	Creates existing economic surveys, needs to have insight into the data gathering and analysis.
Ministry of ICT	Government IT Ministry, sets policy, regulates the private sector.
Ministry of Industry and Trade Company Controller Directorate	Records company registration data currently performs company classifications.

IMPLEMENTATION

Once the ICT Sector has been identified and appropriately classified, company registration data will need to be associated with ISIC categories in order to determine the subset of all corporations and partnership-type enterprises are part of the Sector. Once this is accomplished, the performance of those enterprises against the ICT indicators described in the previous section can be measured. However, without an authoritative source of company registration data, and a unique company registration number, gathering this data is difficult, making any future analysis unreliable. Aggregation of company registration data is discussed further in the overall Project Action Plan.

APPENDIX A – OTHER INDICATORS

Table 6:Other Indicators

These indicators have been requested by the other project stakeholders, and will be possible once consistent classification and sector definition is complete.

Category	Indicator
Economic Performance Measures	Annual ICT Sector Growth
	ICT Sector GDP Contribution %
	ICT Sector Revenue from Domestic Activities
	ICT Sector Total (Domestic + Export) Revenue
	ICT Sector Foreign Direct Investment (FDI) (cumulative, all years possible)
	ICT Sector Annual FDI
	ICT Sector Services Revenue
	ICT Sector Commodities Revenue
Competitiveness	ICT Sector Revenue from Export Activities
	ICT Sector Revenue from Import Activities
	ICT Sector Productivity
Innovation	Expenditures on R&D
	New patent filings
Other Indicators	Sub-Sector Revenue
	ICT Sector Tax Revenue Contribution %
	Number of firms in the ICT Sector
	ICT Sector Total Employment
	Annual ICT Sector Employment Turnover
	Number of Main (fixed) telephone lines
	Number of Mobile Cellular Subscribers
	Number of International telephone traffic minutes
	Number of Personal computers

APPENDIX B - ICT CLASSIFICATION PROJECT ACTION PLAN

2.0 PROJECT OVERVIEW

2.1 INTRODUCTION

The USAID-funded Sustainable Achievement of Business Expansion and Quality (SABEQ) program is a broad economic development initiative implemented by BearingPoint, Inc. and a broad team of international and Jordanian partner firms. By both supporting improvements in the business environment and providing assistance to expand innovation and productivity in Jordanian businesses, SABEQ's Sectors, Solutions, and Components all support the common objective of enhancing private the sector - Jordan's companies, innovators and entrepreneurs - as a powerful engine of economic growth. The Information and Communication Technology (ICT) Classification Project is a component of SABEQ's ICT Sector, dedicated to increasing the output of the ICT Sector in Jordan. The project's objective is to create and make easily accessible indicators for the performance of Jordan's ICT Sector.

This data will support members of the government, international agencies, and the private sector in making well-informed decisions about how to expand the sector, equipping it with appropriate resources, investment and policy infrastructure.

2.2 OBJECTIVE

The objective of this project is to help make available reliable and transparent indicators for the performance and size of the Jordanian Information and Communications Technology (ICT) Sector. The regular availability of internationally recognized core indicators for the performance of the ICT Sector requires several intermediary steps. These steps includes the identification of these indicators, identifying the enterprises that comprise the ICT Sector and should be subject to measurement, classification of these enterprises according to a standardized classification methodology, and the regular gathering of data from these enterprises.

The Project Action Plan Deliverable will set define the process by which the classification approach can be adopted and implemented.

2.3 SCOPE & APPROACH

1.1 Problem Statement

Stakeholders are unable to gather accurate statistical information about the ICT Sector. This problem is compounded by the inconsistent classification systems used by the different parties. Trade groups, the Department of Statistics, the MIT, the Chambers of Commerce and Industry, and other entities, use either fully or partially proprietary classification systems. These varying systems are often out of sync with one another, and are difficult to keep up to date and manage. When available, statistics are often contradictory and misleading, discouraging foreign investment. There is little understanding of the true size and scope of the sector.

According to the United Nations, "The importance of economic statistics to poverty reduction and national development cannot be over-emphasized." (Workshop on Improving Basic Economic Statistics In Support Of National Accounts, 2007). Central to the issue of inaccurate economic data is an outdated company registration process. The method by which the MIT registers companies does not support the data collection needs of the various stakeholders. The data captured about the company is either incorrect, misclassified, or does not capture all of the data required to support stakeholders.

The ICT Sector is particularly harmed by this inadequacy. As a sector that is critical to the growth of the economy's productivity, adequate statistical information would allow:

- Allow government and industry to conduct studies on the sector's productivity and contribution to the Jordanian economy.
- Allow industry to assess impact of economic and regulatory changes.
- Allow government and industry to identify key export markets, and to assist in deliberations on trade or investment agreement.
- Allow analysts and policymakers to assess the impact of the ICT sector on the Jordanian economy.
- Allow government and industry to understand behavior of multinational companies and FDI in relation to the ICT Sector.

Adapted From the Bureau of Economic Analysis, Who uses BEA Measures?

To accomplish these objectives, the project will:

- Provide properly categorized company information including sub-sectors and practice areas, by issuing the Implementation Memorandum of Understanding (MoU)
- Contract a survey firm to develop the Jordan ICT Yearbook
- Work to develop a plan for creating an ICT Business Registry

1.2 Scope

The scope of this project is to identify and classify the Jordanian ICT Sector to promote a better understanding of its size and performance.

While the Jordanian ICT Sector is a major contributor to the Jordanian economy, it is not the only sector in need of a classification system. A consistent application of a standard industrial coding and economic performance indicators will support economic analysis for the entire economy; however, that is not in-scope for this project.

1.3 Approach

In order to establish and regularly produce these indicators, 1) enterprises within the ICT Sector must be appropriately identified as comprising the "ICT Sector", 2) once identified, the ICT Sector must be consistently classified according to international guidelines, and 3) data must be gathered reliably, on a regular basis and according to statistical best practices. The project will achieve this objective by developing and implementing the Implementation MoU. The MoU will be distributed to stakeholders for concurrence and implementation.

The project will also work to use the statistics gathered on the ICT Sector into the "Jordan ICT Yearbook", and provide for a revised ICT Business Registration System.

To achieve these objectives, the following approach will be taken:

1. Identify international indicators for the performance of the ICT Sector;
2. Identify an internationally accepted definition of what enterprises comprise a nation's ICT Sector;
3. Identify the appropriate international classification system to be used to classify enterprises within the ICT Sector;
4. Analyze the unique aspects of the ICT Sector as it exists in Jordan; and
5. Recommend an implementation approach to both to utilizing the indicators, sector definition, and classification system.
6. Complete the Recommended Classification Approach Report & Briefing Presentation
7. Author and Issue the Classification Implementation MoU.
8. Work to gain concurrence amongst project stakeholders on the MoU.
9. Author and Issue the ICT Yearbook RFP.
10. Author and Issue the ICT Business Registry Plan.

1.4 Critical Success Factors

The following factors or characteristics that are deemed critical to the success of a project, such that, in their absence the project will fail.

- Government counterparts and private-sector stakeholders concur to the Implementation MoU and Project Action Plan
- Access to MIT counterparts, especially those within the Company Certification Department (CCD).
- MIT counterpart's will need to grant access to their registration system, and provide the project with fields, data types, and an example record.

- Government and private sector consensus that the program is critical to improving that ICT Sector in Jordan, and that they should participate.

1.5 Assumptions

The project assumes the following related to business, technology, resources, scope, expectations, and schedule:

- That failing to import historical company registration data is not critical to the success of the ICT Yearbook, but will become more critical as the data becomes available in a consistently classified format.
- That ISIC, or a derivative, will be an acceptable classification system for the stakeholders.
- That Government stakeholders are able to sign and approve the MoU.

3.0 PROJECT ORGANIZATION

4.0 Roles and Responsibilities

This section summarizes the roles and responsibilities for the project team and stakeholders

Role	Responsibility
int@J	Jordanian technology trade organization, depends on statistics about company registration to publish reports, increase investment.
Department of Statistics	Creates existing economic surveys, needs to have insight into the data gathering and analysis.
Ministry of ICT	Government IT Ministry, sets policy, regulates the private sector.
GAM License	Amman Municipality, responsible for providing business licenses.
Jordan Tax Office	?? Provides taxpayer registration, ID number.
Chamber of Commerce / Chamber of Industry	Issues pre-certification letters to companies.
Project Advisor	Creates deliverables, interacts with counterparts.
Sector Lead	Managed the activities of a single sector within the larger project.
Chief of Party	Directly responsible for the status of the project and execution of sector activities.
USAID CTO	The project's "client", final acceptance of project work product.

1.6 Key Stakeholders

Key stakeholders are people and groups throughout the Jordanian government and private sectors who have a vested interest in or can affect the success of the project.

Stakeholder Group or Individual	Contact	Key Project Area(s) of Interest
Yara Abdel Samad, Policies and Strategies Director, MOICT	+962 6 5805657, yara.a@moict.gov.jo	MOICT regulates and plans the ICT Sector
Abdelwadoud R. Matouk	Director of Economics Surveys, Department of Statistics	+962 6 5300700 / 079 5 607596, matouk@dos.gov.jo
Raed Bilbessi, Interim CEO of int@J	+962 6 515322, raed.bilbessi@intaj.net	int@j wants to grow the ICT Sector, increase foreign investment, decrease taxes.
Abed Shamlawi, Director, Y-Consult	+962 7 9563 4435, Abed.Shamlawi@Y-Consult.Com	Area Of Interest
Atif Hamdan, IT Director for the CCD	+962 079 5592686, atif.h@ccd.gov.jo	Manages the CCD's company registration system.
Telecommunications Regulatory Commission	To Be Identified	TRC will help in implementing the data collection survey.
Kinan Jaradat, ICT Sector Lead	kjaradat@sabeq-joradan.org	ICT Sector Lead for SABEQ
Jay Hariani, Senior Consultant, BearingPoint	+962 799575795, jay.hariani@bearingpoint.com	ICT Advisor for SABEQ

1.7 Ownership and Accountability

The project is sponsored and funded by USAID, and managed by BearingPoint.

The individuals listed below are ultimately accountable for key project result areas or for the overall success of the project.

Owner	Area(s) of Accountability
Jay Hariani	ICT Advisor, responsible for completion of individual deliverables.
Kinan Jaradat	Sector Lead, overall responsibility for the successful completion of projects within the ICT sector.
Laith Al-Quasam	Chief of Party, overall responsibility for the SABEQ project.

1.8 Governance Model

Group	Responsibilities
Sanctioning Body	• Appoints or selects the Project Sponsor. • Provides the funding and ultimate authority for the project. • Provides input to the Executive Steering Committee selection.
ICT Classification Project Sponsor	• Oversees the accomplishment of the ICT Classification Project project. • Justifies, campaigns and negotiates for the MOICT & int@j resources necessary to successfully implement the Project Plan. • Oversees the Project Plan and budget to ensure the project milestones are met and are within budget. • Articulates project objectives to Project Management. • Provides input to the Executive Steering Committee selection. • Assembles and maintains a Project Management Team, ensuring all members have the competency to plan, operate, maintain, and implement the effort. • Schedules and facilitates status meetings with the Steering Committee • Ensures sufficient communication and reporting within MOICT & int@j (Steering Committee and other key stakeholders) • Presents recommendations to the Steering Committee regarding proposed deviations from requirements, plans and for resolving Department-wide issues. • Assures proper internal controls and security requirements are followed and quality assurance standards and procedures are established. • Interprets Departmental policy and determines its application to the ICT Classification Project. • Provides overall coordination for schedule, and tasks with the ICT Classification Project's Project Management Team.
Executive Steering Committee (ESC)	• Sets the overall course for the project and assists in mitigating strategic project risks and issues to include resource conflicts. • Provides critical input to review and approval of engagement deliverables. • Meets regarding key project decisions and milestones. Assesses the status of project milestones and tasks, and advises Project Management on matters of potential conflicts or problems with the project. • Provides direction and alignment with overall strategic goals. • Identifies and assists in obtaining necessary funding and personnel resources (functional and technical) to support the ICT Classification Project project. • Reviews and confirms plans and budgets. • Provides direction on and support for business process redesign activities. • Solicits support for the ICT Classification Project throughout MOICT & int@j.
BearingPoint Engagement Manager / Managing Director	• Oversees the accomplishment of the ICT Classification Project project. • Attends Executive Steering Committee meetings. • Assists with effective planning and status reporting process.

	• Assists with the identification of critical success factors for MOICT & int@j. • Assists with the identification of risks to the ICT Classification Project project and recommends specific actions for mitigating such risks • Provides recommendations as to adequate staffing levels to ensure a successful implementation • Justifies, campaigns and negotiates for the BearingPoint resources necessary to successfully implement the Project Plan. • Articulates project objectives to Project Management. • Assembles and maintains a Project Management Team, ensuring all members have the competency to plan, operate, maintain, and implement the ICT Classification Project project. • Schedules and facilitates status meetings with the Steering Committee, as necessary. Primary responsibility lies with the MOICT & int@j Project Sponsor or MOICT & int@j Project Manager. • Presents recommendations to the Steering Committee regarding proposed deviations from requirements or plans.
Project Teams	• Manage day-to-day functional operations and requirements for specific area. • Develop the project deliverables according to plans and requirements. • Coordinate with other sub-teams as needed. • Report to Project Management regarding task status and project issues. • Work with MOICT & int@j counterparts for project tasking and activities.

5.0 PROJECT APPROACH

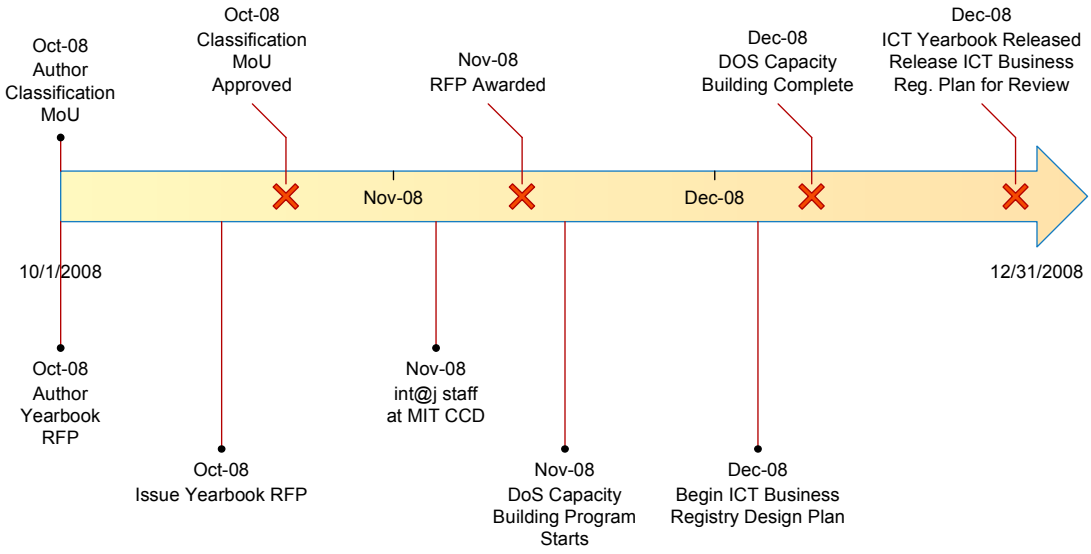
The ICT Classification Project will use will use the below structure as a high-level execution plan for the project. The Project Approach includes key activities, milestones, and deliverables, as well as related schedule, dependency, and resource information.

The ICT Classification Project's Project Plan, or Work Breakdown Structure (WBS), includes milestone, activity, schedule, and resource information. It defines the task dates, resources, interdependencies and deliverables needed to complete each WBS component. The WBS itself will be managed through Microsoft Project. It will be the responsibility of the SABEQ Sector Lead to monitor, maintain, and distribute the schedule to other project members.

The table below lists the major milestones of the ICT Classification project along with the specific responsibility for each.

1.9 Timeline

The following figure depicts the overall timeline for the ICT Classification project, including critical points of review and approval (sign-off), as appropriate.



1.10 Key Milestones and Deliverables

The following table highlights critical milestones and deliverables for the ICT Classification Project project, including BearingPoint and MOICT & int@j involvement.

Deliverable/Milestone	Deliverable/Milestone Description	BearingPoint, Inc.	Other	MOICT & int@j
Author Implementation MoU	Based on the findings in the Recommend Classification Approach, develop an MoU for stakeholder adoption of the approach.	BearingPoint will develop the Implementation MoU	BearingPoint will suggest an approach for implementing the MoU based on past experience. SABEQ Sector Leader will monitor and review this milestone.	Statement of responsibility for that deliverable or milestone (for example: Develop, Review, Approve)
Approve & Gain Stakeholder Acceptance of Implementation MoU	The Implementation MoU, once approved, will need to be circulated to the various stakeholders. A clear picture will also need to be gathered of the cost of implementing the MoU for each party, and efforts to negate this cost should be made.	Sponsor workshops to review and adtop the MoU	SABEQ Sector Leader will monitor and review this milestone.	MOICT and int@j will work to sponsor the MoU, and shepherd it through the government.
Author, Issue & Award ICT Yearbook RFP	The project will issue an RFP for an internationally-recognized research company to create a Jordanian ICT Yearbook. The Yearbook's goal will be to enable policymakers and industry to build the ICT Sector. The firm will work with the assistance of DOS Raw data will be publically released to encourage private sector faith and	BearingPoint will author the RFP and manage the procurement process	SABEQ Sector Leader will monitor and review this milestone.	MOICT and int@j will review and approve the RFP DOS will work to understand the approach taken, and build capacity to maintain

	confidence.			
Support CCD Classification Efforts	The project will work with int@j and MOICT to build capacity at the CCD to properly categories ICT firms.	BearingPoint will assist in reviewing the classification process at the CCD, and the CCD classification system in concert with MOICT and int@j		Provide staff and assistance to this component of the project.
DOS Capacity Building	In order to make the ICT Yearbook updateable, DOS should work to take ownership of the document	BearingPoint will author the RFP to reflect this effort by the contractor.	The research firm will work to build capacity at DOS, as defined in the RFP's SoW.	
Author ICT Business Registry Plan	BearingPoint will create a plan to build a dedicated ICT Business Registry at CCD. This plan should include a detailed approach to designing and implementing a company registry			int@j, MOICT and CCD will review and approve the plan.

1.11 Implementation MoU

- All stakeholders should agree, that embracing an international classification and definition approach is beneficial to building the Jordanian ICT Sector.
- It should be acknowledged that releasing reports or statistics that don't utilize these tools generates confusion and inconsistency, and decreases the private sector's confidence in their accuracy.
- A policy in each organization should be established to this effect.
- Author MoU and receive concurrence for the classification approach by:
    - DOS
    - MIT CCD
    - MOICT
    - Chambers of Commerce and Industry
    - GAM
    - int@j

1.12 Key Deliverables – Create ICT Yearbook RFP

- The project will issue an RFP for an internationally-recognized research company to create a Jordanian ICT Yearbook.
- The Yearbook's goal will be to enable policymakers and industry to build the ICT Sector.
- The firm will work with the assistance of DOS
- Raw data will be publically released to encourage private sector faith and confidence.

- Work with stakeholders to author contractor SoW for ICT Sector survey, yearbook creation, and DOS capacity building.
- Issue RFP.
- Evaluate responses, award RFP to vendor.
- The survey that provides the basis for the ICT Yearbook will have the following characteristics:
    - Specific and oriented in order to identify the activities.
    - Descriptive enough and provide sufficient level of details to describe company activities.
    - Dynamic in order to cover all subsectors for any future purposes and development issues.
    - Designed on electronic system in order to facilitate filling it out process, secure confidentiality for the companies, and to ease the analyses and archiving processes.
    - Distributed annually after specifying the regular frequency.
    - Enforced by the relevant authorities to ensure a reliable data

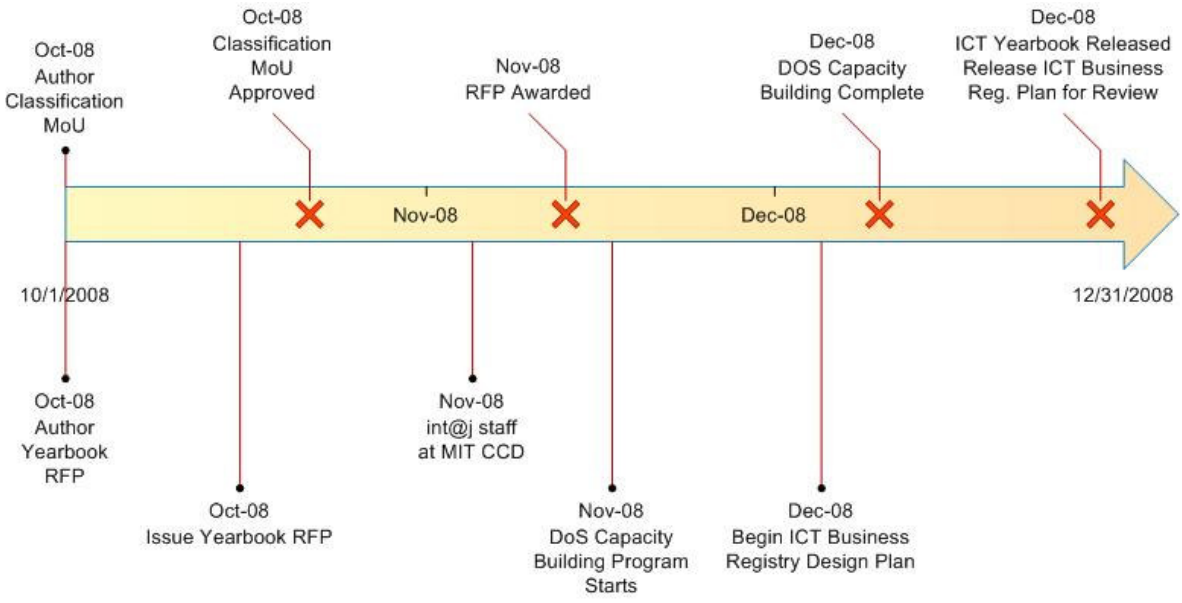
1.13 Key Deliverables – ICT Business Registry Plan

- The project will work with the various stakeholders to create an "ICT Business Registry"
- Registration will be offered on-line, at a reduced cost.
- Registration data will be classified according to a company's self-declared primary activity, and verified by DOS economists.
- The ICT Business Registry will reduce business constraints and provide a one-stop shop to ICT firms seeking to do business in Jordan.
- Data from the ICT Business Registry will be used to update the ICT Yearbook.
- The ICT Business Registry will be run from the MIT CCD with int@j participation (possibly co-staffed).

APPENDIX C – ICT CLASSIFICATION PRESENTATION

(Please see separate file of this PowerPoint presentation)

APPENDIX D - ICT CLASSIFICATION PROJECT PLAN DIAGRAM



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