Based on case studies on IT Parks in various countries, it is recommended that private sector developers be involved in promoting the IT Parks in the country.

The policies listed below have been identified as being key to promote investment/involvement in development of IT Parks in Russia.

Currently, a number of Fiscal Incentives are available to residents of Special Economic Zones, including a five-year exemption on the assets of organizations and land tax and decreased rates of Unified Social Tax. Extending similar benefits to occupants of IT Parks will be a key consideration for IT Companies on deciding to relocate/locate to IT Parks. Further incentives concerning subsidized land rates and rentals have been highlighted in Figure 46. However, it is important to note that all such incentives should be applicable for a specific time-frame and should possibly be linked to minimum employment generation & investment stipulations.

Successful Innovation Policies for IT Parks include providing business incubation services to start-up companies, including initiating contact with venture capitalists similar to those offered by Singapore Science Park. Similar policies in the Russian context have been highlighted in Figure 46.

Permitting mixed land use like commercial and residential in addition to core IT office space/facilities in IT Parks is one of the investment climate policies which would stimulate IT Park development given that return on investments from ancillary facilities like residences, retail & entertainment are usually higher than returns on core IT Park facilities. Developers of Hitec City, Hyderabad and CFZ, Malaysia, are in fact mandated to develop such parks having designated zones for housing and commercial end use which have increased the returns on investments in developing the IT park as compared to the returns from a standalone IT Park. Similar mixed land use policies may be adopted while developing Russian IT Parks as an incentive for private sector participation in development of IT Parks in the country.

Other stimulators for providing investment climate for development of IT Parks include special financial concessions for Russian IT Park residents, which have been highlighted in Figure 46, along with the concept of Single window mechanisms applicable for both real estate players and IT companies & other occupants. It is felt that such a nodal agency would simplify investment and rental/leasing procedures in IT Parks thus improving the investment climate.

As mentioned under the strategy for IT sector development, all of the above concessions should be extended to local companies as well, subject to completion of listing on RTS within a specified timeframe. Additional fiscal benefits can be offered on successful listing in international stock exchanges. This provides an effective system of corporate governance and management, essential to a well performing economy as it provides an assurance for potential investors and ensures sustainability of the sector.

5.3 Country Case Study: Jordan

5.3.1 IT Sector: Contribution to GDP

The Jordanian economy is estimated to have grown at an average rate of 6.1% during the period from 1996 to 2003 (Source: Department of Statistics, Jordan). The growth in the economy has been fuelled primarily by sectors like finance and banking (around 18% of GDP in 2003) manufacturing (15%) and trading (9%).

The services sectors accounted for around 49% of GDP in 2003, with the IT sector contributing USD$295 million, or 2.9% of GDP. While this is significantly lower than countries like China and India where the sector contributes 4%-5% of GDP, the IT sector in Jordan has shown significant growth during the period from 2001 to 2004, with a CAGR of 37% during this period (please refer Figure 47 below).

5.3.2 IT Sector: Growth, Composition and Trends

Compared to other developing countries Jordan has been a late starter in developing its IT sector. The IT industry in Jordan, though active since early 1990s, came into the fore only after the Regulatory Framework, Estate, Advancement Programs, Capital, Human Resource Development (REACH) Initiative was launched by the government in 1999. However, the country is considered to be one of the
pioneers in the Middle East Region as far as development of IT sector is considered.

The REACH Initiative was started with the mandate of transforming Jordan into a regional leader and a global exporter of IT products and services. It was a 5 year iterative plan which set targets of creating 30,000 IT-related jobs, generating annual export revenues of USD$550 million and attracting USD$150 million of Foreign Direct Investments by 2004 in the IT sector.

While none of the targets set under REACH could be met, the industry generated total revenues of USD$440 million in 2004 as compared to USD$170 million in 2001 and recorded a Compounded Annual Growth Rate (CAGR) of 37% in revenues during this period. Key constituents of Jordan’s IT sector have been discussed below (please refer Figure 48 below for details).

- IT services with a turnover of USD$204 million during 2004 accounted for nearly 46% of the sector revenues. IT consulting, training, application support services and network solutions are the major revenue earners for the industry with as much as 72% of the IT services turnover contributed by these services. However, none of the large global IT companies are currently present in Jordan. Domestic majors like the Ideal Group, Integrated Technology Group and Estarta solutions earn a significant proportion of their revenues from implementing packaged applications solutions offered by Microsoft and Oracle and system integration. Almost 15% of IT services revenues are generated from service delivery centers like technical assistance centers and call centers.
- Software solutions like packaged software development, system development and web design account for nearly 37% of the sector revenues. However nearly 15% of software solutions revenues are generated from resale of off the shelf packaged application solutions offered by global companies like Microsoft and Oracle.
- IT hardware which contributed USD$71 million to the overall sector revenues, accounted for around 16%. However, the entire hardware
revenues is from trading or reselling as the country does not have any manufacturing or assembly operations.

In the domestic market, the government acts as the largest client for the industry accounting for nearly 20% of overall domestic revenues. Government spending on education, healthcare and the e-Governance program offer a large market for the local players. Other industry sectors which act as major markets for the industry include financial services and telecom.

As on 2006, all IT companies present in Jordan were located in and around the capital city of Amman.

5.3.3 IT Exports

Although export revenues have increased at a CAGR of 26% from USD$40 million in 2001 to USD$80 million in 2004, exports accounted for only 20% of the overall sector revenues (please refer Figure 51 for details). Some key trends in the exports market have been highlighted below.

- Key export destinations include other Gulf countries, which account for nearly 70% of total exports with Saudi Arabia being the largest market followed by UAE and Iraq. Other export destinations include USA, UK, Germany and North African countries like Egypt, Morocco and Yemen.
- In terms of industry verticals, Banking & Financial Services (32% of total export revenues) Telecommunications (15%) and Public Sector/Government (13%) accounted for around 60% of total exports in 2004.
- Out of the total export revenues of USD$80 million in 2004, nearly 49% is accounted by IT services and 42% by software solutions.

5.3.4 Past Government Initiatives for Development of the IT Sector

As has been indicated earlier, the IT sector in Jordan gained momentum during the late nineties after the
The REACH initiative was launched by the government. Consequently, Jordan’s key ICT indicators are not comparable with countries like Singapore, India & China (please refer Figure 53 below for details). Even though the voice based communication infrastructure has improved significantly with liberalization of the telecommunication sector in 2000, the infrastructure for data communication has not developed in a uniform manner throughout the country. As a result the government had, in the past attempted to develop IT parks in Jordan to provide an impetus to the IT industry in the country.

Under the REACH initiative, it was resolved that three IT parks would be developed in different parts of Jordan to improve the infrastructure available to the IT industry. These IT parks were to be developed within 2003 following different public private partnership models with the private sector bringing in investments and the government providing the necessary policy support. However despite attempts, Jordan currently does not have any operational IT parks.

Some past initiatives include CyberCity in Irbid and the Hashemite University Technology Park in Zarqa. Even though CyberCity was commissioned by end 2001, till date it does not house any IT companies.

The Hashemite University Technology Park was planned to be developed as a joint venture between the Hashemite University and Hillwood, a USA-based real estate company. However, as on date, the park is yet to commence operations.


The Jordan Education Initiative (JEI) was launched by the government in June 2003 to support educational reforms in Jordan bridging the gap between the curriculum in local universities and the requirements of the IT industry. Under this program the government is building a nationwide high speed broadband network connecting schools, colleges and universities.

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Saudi Arabia</th>
<th>UAE</th>
<th>China</th>
<th>India</th>
<th>Turkey</th>
<th>Kuwait</th>
<th>Jordan</th>
<th>Singapore</th>
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<td></td>
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<td></td>
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<td>Total Population (millions)</td>
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<td>4</td>
<td>1296</td>
<td>1080</td>
<td>72</td>
<td>2</td>
<td>15</td>
<td>4</td>
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<tr>
<td>Urban Population (% of total population)</td>
<td>88</td>
<td>85</td>
<td>40</td>
<td>29</td>
<td>67</td>
<td>96</td>
<td>79</td>
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<td>Telephone lines (per 1000)</td>
<td>159</td>
<td>277</td>
<td>241</td>
<td>43</td>
<td>267</td>
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<td>Internet users (per 1000)</td>
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<td>78</td>
<td>237</td>
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<td>Personal computers (per 1000)</td>
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<td>40</td>
<td>11</td>
<td>45</td>
<td>122</td>
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<td>565</td>
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<td>Mobile Subscriber (per 1000)</td>
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<td>494</td>
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<td>Population covered by mobile</td>
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<td><strong>Quality:</strong></td>
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<td>Broadband subscribers (per 1000)</td>
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<td>15.5</td>
<td>0.6</td>
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<td>0.9</td>
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<td>56</td>
<td>543</td>
<td>57</td>
<td>4</td>
<td>40</td>
<td>120</td>
<td>29</td>
<td>5699</td>
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<td><strong>Affordability:</strong></td>
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<td>Price basket for fixed line (US$/month)</td>
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<td>5.0</td>
<td>3.6</td>
<td>3.2</td>
<td>10.3</td>
<td>10.3</td>
<td>10</td>
<td>6.7</td>
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<td>6.4</td>
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<tr>
<td>Price basket for internet (US$/month)</td>
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<td>13.1</td>
<td>10.1</td>
<td>8.7</td>
<td>19.8</td>
<td>24.7</td>
<td>26.3</td>
<td>11</td>
</tr>
<tr>
<td>ICT Expenditure (% of GDP)</td>
<td>2.5</td>
<td>—</td>
<td>5.3</td>
<td>3.7</td>
<td>7.3</td>
<td>1.7</td>
<td>8.7</td>
<td>10.4</td>
</tr>
</tbody>
</table>

Source: World Bank, UNDP, ITU and others.
In the course of our interactions with policymakers and industry associations it has emerged that the government is planning to develop another IT park in Jordan. This park would be located in the outskirts of Amman and would be developed under a public private partnership model with the government providing land at subsidized rates while a private sector real estate company would develop the facilities and market the space. The government is considering offering fiscal incentives like tax breaks to IT companies locating in the park. However, no additional details are available at this point of time.

5.3.4.1 IT Parks in Jordan

One of the key action points identified under the REACH Initiative for improving the infrastructure available to the industry was developing IT parks in Jordan. As per the initiative it was suggested that these IT parks were to be developed within the next 3 years following different public private partnership models with the private sector chipping in investments and the government providing the necessary policy support. However in spite of a few initiatives in the past, Jordan currently does not have any operational IT parks. Some of these initiatives include CyberCity in Irbid and the Hashemite University Technology Park in Zarqa. The Hashemite University Technology Park was planned to be developed as a joint venture between the Hashemite University and Hillwood, a USA based real estate company. As on date the park is yet to commence operations.

CyberCity, Irbid

CyberCity is located near Irbid in north Jordan, 85 kms from the capital city of Amman. The project was initially conceived in 1999 as a self sustained township which will provide state of the art infrastructural facilities to IT companies complete with residential, commercial and recreational facilities. However sustained efforts by the developer to attract IT companies have proved unsuccessful. Even though the park was commissioned in 2001, till date it does not have any IT companies as occupants.

Applying the CLiP framework to CyberCity, Irbid

Capital: CyberCity is owned and managed by CyberCity Industrial and Information Technology Parks Development Company. The company is a joint venture between the Jordan University of Science and Technology (JUST), a Abu Dhabi based investment company named Al Bountain Investment Group, Arab Land Investment Ltd, Prosper World Group Ltd and two individual investors. JUST holds 33% shares of the company with the balance being equally shared amongst the other investors. In this project, JUST was responsible for providing the land with the private sector investors responsible for the construction of the park and marketing the facilities.

- The park is spread over an area of 4 sq kms. The park is now in its first phase utilizing only one fourth of the total area. Around 36,000 sq meters of space is built up as industrial, residential and commercial facilities.
- Currently the industrial area of the park is occupied by manufacturing companies only. The occupants include 8 garments manufacturing companies and 1 printing press. Out of the 9 occupants, 7 are foreign companies which run their manufacturing facilities mainly using foreign labor.
- CyberCity Industrial and Information Technology Parks Development Company is responsible for managing the entire park and provides services including peripheral security, backup electric supply, municipal services, maintenance, and transportation services.
- In addition to construction of the industrial and residential space, the promoter has also developed the internal roads and other necessary infrastructure (e.g., electricity, water connections) inside the park. To date the developer has invested around USD$20 million in developing the park.

The principal revenues streams for the developer are:

- **Sale/Lease of land:** The developer sells plots of land at the rate of around USD$4/sq ft. The lease rentals, however, vary depending on the area of land leased, period of lease, etc. In case of lease, the developer enters into agreements with the lessee usually for a period of 3 years after which the lessee has the option of buying the land.
- **Sale/Lease of built up space:** The developer sells built up space in the park at a rate of around USD $11/sq ft. However, in case of built to suit facilities the rates depend on the requirements of the customer. For leasing built up space the developer enters into lease agreements with the occupants and usually charges a rental of USD$2.5/sq ft.
Facilities Management Fees: The developer is responsible for internal security and providing all municipal services in the park. However, it has outsourced most of these services. The developer charges management fees of USD $0.02/sq ft/month. However electricity cost is charged to the customer on actual consumption.

Linkages: Given that CyberCity was envisaged as an IT park focusing mostly on IT products and software development, linkages with universities, research & development institutes and centers of excellence is critical. The park is located adjacent to the campus of Jordan University of Science and Technology and is very close to the Yarmouk University and Irbid University. However the park does not seem to have any apparent linkages with these universities, given the nature of operations of the current occupants.

The park does not have any dedicated incubators supported either by government or the developer and has not been able to attract local SMEs or start-up companies who do not find any incentives to relocate in CyberCity. Also the promoter of the park being real estate developers does not offer any value added services in areas such as marketing support, business development assistance, or technical assistance.

Infrastructure: Irbid is the 2nd largest city in Jordan after Amman with a population of around a million.

Cybercity is located on the outskirts of the city on the Amman-Irbid highway. It is 1 hour from Amman, the capital of Jordan. It is located 30 minutes from the international borders with Syria, 45 minutes from Israel and 2 hours from Iraq.

In the absence of any railway network the only mode of transportation between Amman and CyberCity is by road. The quality of road network in and around the park is good. Primary and subsidiary roads support medium and heavy car and truck movement. Public transport system in this area is not well developed and the developer has to operate its own bus service for the locals working in CyberCity.

The nearest international airport is the Queen Alia International Airport in Amman.

The park has a robust electricity supply with power being supplied by Irbid District Electricity Company Limited through 33 kva underground cable system from the nearest power station at Al Hassan Industrial Estate just 9 kms from CyberCity. The developer has installed back up generator sets to ensure uninterrupted power supply in the park.

Even though it was planned that the park will have three water wells within its boundaries, currently it depends entirely on supplies from local contractors.

### Box 18. CyberCity – Reasons for Failure

At the time of its inception, CyberCity was planned as a Qualified Industrial Zone dedicated to the IT industry. However, even 4 years since its inception the park does not have any IT companies among its occupants. Some of the main reasons for failing to attract IT companies to CyberCity are:

- **Locational Disadvantage:** The remote location of the park, 8.5 kgs from Amman has acted as a deterrent in attracting local companies to CyberCity. Amman is the largest city of Jordan, which has the highest concentration of IT companies and IT professionals.
- **Absence of specific incentives:** In the absence of any specific incentives linked to locating operations in the park other than those offered to the IT industry, local companies do not find it attractive to relocate to CyberCity.
- **Political instability in the region:** The political instability of the Levant region and the proximity of the park to war torn countries like Iraq and Syria has deterred multinational IT companies from considering CyberCity as a possible location for their Jordanian operations.
- **No anchor investor:** In spite of sustained efforts by the developer and its marketing offices in different countries, the park has failed to attract any large multinational IT companies.
- **Inadequate government investments:** Inadequate government investments in utility services like water, road and public transport system has affected the infrastructure of the park and has increased the project cost for the developer.
- **Lack of government support:** Even though the land was contributed by JUSt, a public university, the project did not receive any subsidy or grants from government to fund infrastructure development. Consequently, the company has made huge investments in infrastructure leading to internal cashflow problems for the developer.

(as discussed with Mr. Khaldoun Awanleh, CEO, CyberCity Industry and Information Technology Parks Development Company)
Initially it was envisaged that CyberCity will have its own underground communication network of optical fibre cables. While the basic infrastructure was to be provided by the developer, the cost for the last mile was to be borne by the occupants. However, currently the optical fibre network is not in place and the park is dependant on leased line connections for network facilities.

The initial land-use plan of the park allowed for construction of residential, commercial and recreational facilities to provide the necessary social infrastructure for the occupants of the park. Currently the park has around 12,000 sq meters of built up residential space which is primarily let out to the occupants to accommodate their foreign laborers. The park does not have any commercial facilities other than a small convenience store. The quality of life in and around the park is affected by the lack of any recreational facilities in the area and is highly inadequate to attract or retain young professionals who form the bulk of the work force for IT companies.

People: In the absence of any IT company, the park does not provide employment to any IT professionals. Currently around 6,000 people are employed in the park out of which about 3,500 are foreign laborers mostly from India, China and Bangladesh. The balance of the labor force are locals from the neighboring cities including Irbid, Ramthan, and Jarash, who mainly reside outside the park.

In the course of our interactions with policymakers and industry associations it has emerged that the government is planning to develop another IT park in Jordan. This park is proposed to be located in the outskirts of the capital and the park would be developed under a PPP model with government participation limited to contributing land at subsidized rates. It is envisaged that specific fiscal incentives like tax breaks for locating operations in the proposed IT park will be available to occupants in addition to those available to the IT sector.

5.3.5 Assessment of Critical Business and Policy Enablers
It has been observed that most countries which have emerged as global leaders in the IT sector have been able to leverage some key business enablers which have enabled their IT companies to thrive in the global marketplace. Additionally, the Governments of many of these countries have consistently supported the development of the sector through a set of fiscal, innovation, people and investment climate policies. The current section details our assessment of some of the critical business and policy enablers which are impacting/are likely to impact the development of the IT sector in Jordan.

5.3.5.1 Sources of capital
The country has around 160 companies operating in the IT sector with none of the companies recording annual revenues in excess of USD$20 million. Almost all the IT companies in Jordan are concentrated in and around the capital city of Amman. Most of these companies are small and medium enterprises funded through promoters contribution. With bank finance in Jordan linked primarily to mortgages and collateral securities, it is difficult for IT companies to access debt. In the absence of any dedicated venture capital fund for the IT sector, the industry is facing challenges in providing the necessary risk capital for start-up ventures. However, there are plans to set up two venture capital funds under the Jordan Upgradation and Modernization Program, namely the Jordan Venture Fund and Jordan Seed Fund with an initial corpus of USD$20 million and USD$5.6 million respectively. The country has an active and liquid capital market in the form of Amman Stock Exchange which had a market capitalization of USD$38 bn in 2005, one of the highest in the region. However, out of the 224 companies currently listed in the exchange none are IT companies.

Even though the investment promotion laws of the country allow 100% FDI in the IT sector, the industry has managed to attract only USD$83 million FDI till the end of 2004 as compared to the initial target of USD$150 million set under the REACH initiative. However FDI inflows to the sector have increased from USD$60 million in 2001 to USD$83 million in 2004. Sustained efforts by the Jordan Investment Board (JIB) and other investment promotion agencies to attract large global IT companies to Jordan have not succeeded.

One of the key issues which emerged during our interactions with key stakeholders is the relative size of some of the major local players. The industry is largely a diffused and fragmented one even the larger companies generating revenues of less than USD$20 million and employing not more than 200 employ-
None of the local companies have attained the critical mass to compete on a global scale or bid for large projects internationally. This has adversely impacted the industry as the local market is small and growth opportunities lie only in exports.

5.3.5.2 Anchor investors
In most countries which have performed well in the IT sector, the growth has been contributed partly by domestic companies which have started small and large established anchor investors seeking to expand to newer geographies to increase their competitiveness. Microsoft and Cisco have taken up equity stakes in local companies like Estarta Solutions and Rubicon. However they do not have any product/software development centers or manufacturing facilities in Jordan. Large global IT hardware companies such as Intel and Apple only have limited trading operations in Jordan.

5.3.5.3 Infrastructure
Amman, the largest city in Jordan has the largest concentration of IT companies, followed by cities like Irbid, Zarga and Balqa.

Amman is the capital of Jordan with a population of around 2 million. The Greater Amman Municipality (GAM) is in charge of the city and provides all the municipal services in and around Amman. GAM is in the process of adopting the Amman Master Plan to address issues like land use and urban infrastructure in the wake of unplanned growth of the city and the sudden increase in the population of the city.

The nearest international airport is the Queen Alia International Airport which is around 35 kms from the city center. The airport is served by 24 international airlines in addition to Royal Jordanian Airlines and handles around 2.3 million passengers every year. Other international airports in the country include the King Hussain International Airport in Aqaba and the Marka International Airport.

Jordan has almost no indigenous energy resources and energy imports account for nearly 10% of the GDP. However, over the last decade, the sector has undergone significant transformation. Towards the end of the last century the country’s power sector was privatized and deregulated. Currently, the country has one transmission company and 3 distribution companies. The Central Electricity Generating Co., a state owned company is the main generation company with a total installed capacity of 1,636 MW. Jordan Electricity Company is responsible for electricity distribution in the city of Amman.

Since the telecommunication sector was liberalized in 2000, a number of private players have entered the market. Prior to the liberalization of the sector fixed line telecom services were provided by Jordan Telecom, a government company which has since been privatized. However in May 2005, the Telecom Regulation Commission granted the second fixed telecom license to Batelco, a privately owned company. In the mobile telecom sector, the country has 4 privately owned companies. Competition has driven down prices resulting in increased mobile penetration rates (nearly 270 out of every 1000 people).

Currently there are 8 Internet Service Providers in Jordan which offer dial up internet, leased line, Asymmetric Digital Subscriber Line (ADSL) services up to 2mbps speed and Integrated Services Digital Network (ISDN) services. International connectivity is available through submarine optical fibre cables provided by FLAG Telecom with a landing station at Aqaba and 3 earth stations. In the year 2004 the country invested nearly USD$150 million in developing and upgrading communication infrastructure. The government in partnership with the private sector has embarked on building a nationwide high speed broadband network connecting all the public schools and universities in the country as

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**Box 19. Technology Incubators in Jordan**

The Higher Council of Science and Technology (HCST) had established the National Consortium for Technology and Incubation of Business in 2002 as a network of nation wide incubators to assist startups and small and medium IT companies by providing incubation services including equipment and logistical support, technical and managerial guidance, and financial aid. Park ICT Business Incubator, a member of this network of incubators is located in the premises of Royal Scientific Society in Amman and provides a variety of incubation services to startup IT ventures. In addition, the HCST runs funds like the Industrial Scientific Research and Development Fund and the National Fund for Enterprises Support to offer financial support to R&D projects in various fields including IT. During the period 1995 to 2004, HCST has provided funds of around USD$5.6 million to more than 160 R & D projects. Even though these funds are not directly linked to IT they provide the necessary capital for innovation based projects.
part of the Jordan Education Initiative. While the network infrastructure available in Jordan is not at par with best in class developing countries, the local industry is largely satisfied with the quality and cost of the services.

This is primarily because most of the companies are into software and product development or system integration and do not require telecommunication facilities for transmitting large volumes of data. However, greater investments need to be made in upgrading the network infrastructure if Jordan expects to be a major player in voice or data based outsourcing.

### 5.3.5.4 Human resources

Jordan has a total population of nearly 5.5 million and a literacy rate of around 90%, one of the highest in the region creating a large talent pool for the IT industry. Jordan has around 24 universities, 10 public, 14 private and 60 community colleges which offer different courses to nearly 150,000 students. More than 15 universities offer IT related courses in Jordan with more than 5,000 IT students graduating every year from these universities. Currently the industry employs more than 16,000 people.

The average annual salary offered to Jordanian IT professionals ranges between USD$5,700 to USD$13,900. This is among the lowest in the region due to which the local industry is facing problems of high attrition, losing resources to other gulf countries such as UAE and Saudi Arabia. IT salaries in Jordan are comparable to India and China, and much lower than countries like Ireland, Canada, Israel and East European countries like Czech Republic and Hungary, which have emerged as popular outsourcing hubs.

However, local IT companies are facing challenges in terms of the quality of talent available locally and are not satisfied with the quality of fresh graduates. The education curriculum of some of the privately owned universities are not contemporary and often do not meet the demands of the industry. Consequently most IT companies incur significant expenses on training initiatives and certification programs for their employees. The government has started a number of reforms program like the Jordan Education Initiative to bridge the gap between the education curriculum of the local universities and the requirements of the industry. Since its inception, JEI has supported the development of 5 e-curricula, trained teachers and introduced various new models of classroom teaching focusing on the softer skills.

With English being part of the curriculum in primary and secondary education levels, most of these students are proficient in both English and Arabic. According to reports published by Int@j as much as 90% of the IT professionals are proficient in English. 30% of the total population is within the age group of 15 to 30, providing a large pool of young human resource. This pool of young English speaking talent available at a comparative low cost is ideal for BPOs and call centers.
5.3.6 Government Policies and Implementation Mechanisms

The Ministry of Information and Communication Technology (MoICT) created in 2002 has the mandate of formulating policies governing the IT industry in the country. Since its inception, the ministry has issued a number of policy guidelines including the National ICT Policy (Statement of Government Policy on the Information & Communication Technology Sectors and Postal Sectors), the National Strategic Plan, 2004–2007 on the Information & Communication Technology Sectors and Postal Sectors and the e-Government Strategy. MoICT is also responsible for ensuring effective utilization of IT by government departments and ministries and is in charge of running different e-governance programs in Jordan.

The ICT Advocacy Council (ICTAC) created within the MoICT acts as an interface between the local industry players and the policymakers. It functions as an advisory body to the Minister and provides critical inputs on policymaking, e-governance programs and other key issues impacting the industry. The ICTAC includes among its members the Chairman and CEO of Int@j, the principal trade association for the IT sector in Jordan and acts as an important link between the industry and the government.

A high level assessment of the applicable policies has been presented in Figure 56.

In addition to policies for facilitating development of the IT sector, case studies of successful countries like Singapore, China and India have also demonstrated the importance of having efficient implementation mechanisms. There appears to be scope for improvement on this front as far as Jordan is concerned. For example, while the IPR laws in Jordan are in line with Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS), the enforcement mechanism is weak and awareness is low. Consequently, IPR infringements are quite common in the country.

5.3.7 Potential Growth Opportunities for the Jordan IT Sector

Before attempting to identify specific recommendations for development of the IT sector in Jordan, it is imperative that the current and potential market opportunities available to companies operating in this sector are identified. Based on our assessment of the sector, the following represent potential opportunities which can possibly be targeted.

Domestic market opportunities

At present the industry is mainly dependant on the domestic market with exports contributing only 20% of the revenues. However, the domestic market in Jordan is limited in size having grown by only USD$260 million during FY 2001–2004. According to reports published by Int@j, the domestic IT market in Jordan is expected to grow from USD$440 million in 2004 to USD$550 million by end of 2006. The inherent size of the local economy may not be adequate for sustaining growth of an IT sector comprising 160 companies. Despite the government, as the principal domestic client for the industry, is implementing a number of e-governance projects, growth opportunities for the industry appear to be limited.

Export market opportunities

IT export revenues have grown at a CAGR of 26% during FY 2001–FY 2004. Based on our assessment, significant opportunities are expected in the following market segments.

- Near shore BPO service provider for countries like the U.S. and UK, given Jordan’s geographic location and with salary costs of IT professionals in the country being comparable with China, India, Philippines and Thailand, and much lower than countries such as the Czech Republic, Hungary, and Ireland.
- Given that the salary cost of IT professionals in Jordan is lower than in other Middle East countries like Saudi Arabia (nearly USD$18,000 per annum), it can position itself as the outsourcing destination for the Middle East. Since Jordan shares a common language (Arabic) with other countries in the region, it enjoys an added advantage in providing voice based outsourcing services for the Middle East market. The outsourcing market in Saudi Arabia, which represents one of the largest countries in the region, is estimated at nearly USD$400 million and is expected to grow at 13% over 2006 to 2010. The existing competencies of the human resource pool in Jordan together with its geographical location are expected to serve as key competitive advantages viz. a viz. other countries.
- Representative outsourcing activities which can be targeted include the following:
Data-based outsourcing activities related to back office operations such as accounting, payroll processing, insurance payment/claim processing, and internal audit related services. Given that the accounting policies and practices followed in Jordan are aligned to international accounting standards and Jordan already has a mature financial services sector, it may have inherent advantages in the area of finance and accounting.

Voice-based outsourcing activities such as technical assistance centers and call centers.

### 5.3.8 Identification of Issues and Growth Strategies

Having identified the potential growth opportunities for the Jordan IT sector, it also becomes necessary to identify market participants who are well placed to drive growth in the respective areas, together with potential strategies for development, based on identified good practice in other countries assessed as part of the study.
5.3.9 Role of IT Parks and Proposed Business Models

It has been demonstrated by the case studies that the key requirement underlying setting up of sustainable IT parks is the ability to attract credible occupants to the park, with business models which demonstrate sustainable viability. Consequently, having credible anchor investors in the park has been identified as an essential prerequisite for success both in developed as well as developing countries. In the current section, we have attempted to present our assessment of the critical business enablers for IT Parks in Jordan, based on the case studies of parks in other countries as well as ground realities in Jordan.

The generic critical business enablers which are likely to feature in the expectations of any IT company have been highlighted below:

- Location of the park in an area which permits it to leverage the existing urban and social infrastructure of the capital city of Amman as availability of the right quality of human resources is expected to be a problem in any other region.
- Lease or sale of land for built-to-suit facilities at rates lower than those prevailing in the adjoining areas.
- High quality physical connectivity and infrastructure including air (both international & domestic), road and rail connectivity, a combination of multi-tenant buildings with contemporary facilities and build-to-suit options, adequate road & other surface transport connectivity with the adjoining city, intra-park roads, sewerage, and electricity.
- State-of-the-art virtual connectivity in terms of data and voice infrastructure including international connectivity.
- Simplified policy implementation mechanisms in terms of single window approval facilities in areas such as operating license, sanction of building plans, and tax and customs duty registrations so as to cut down significantly on the time for setting up new/expansion operations.

In addition, there are a number of potential value drivers which are expected to impact specific types of IT companies, with the level of interest also expected to vary across different categories of IT players (please refer Figure 58 below for details).

The IT Park case studies and primary interactions with various stakeholders clearly seem to demonstrate a case for management of the IT Parks to be vested with private sector players for ensuring adequate accountability and efficient service. Possibly, as has been the case in many other countries, existing facility management companies can be considered for this purpose. Good practice in other countries clearly indicate the need for management control of the park development company to vest with the private sector for higher efficiency & productivity. Consequently, a facilitation role is recommended for the government other than in situations where the land is owned by it. In such situations, the government can possibly pick up an equity stake in the development company, given that financial returns on IT parks have been fairly attractive.
5.3.10 Policy enablers

In almost all the countries assessed under this study, it has been observed that government policies have played a pivotal role in development of IT sector. The role of government in most countries has also been observed to evolve over time, with a more direct role during the initial stages of sector development gradually moving to a facilitative role with the picking up of private sector led growth.

The current section of the report highlights Policy Good Practice which can be leveraged given the existing scenario in Jordan, based on the countries analyzed as part of the study. For purposes of analysis, the good practice have been categorized into i) policies for developing the IT sector in the country and ii) Policy Good Practice for development of IT Parks. Figures 59 and 60 below outline relevant Policy Good Practice for facilitating development of the IT Sector and IT Parks respectively. As has been assessed during the study, IT Park occupants are offered a set of additional benefits over and above those available to IT companies not operating out of IT Parks. Consequently, the Policy Good Practice highlighted for IT sector development would also be applicable to IT Park occupants, other than in cases where additional concessions have been envisaged in a specific area.

The measures outlined below only represent good practice adopted by other countries covered as part of the study. Consequently, these can at best be treated as starting points and additional analysis would be required for assessing their budgetary & other impact for customizing these to meet the requirements of Jordan, should the government decide to consider any of these for implementation.
### Figure 59. Policy Good Practice for IT Sector Development

**Key Issues/Recommended Strategies**
- Encourage local IT companies to improve scale of operations through BPO Services exports, initially with a focus on the Middle East, followed by Europe and the United States.
- Encourage private telecom companies to invest in augmenting international data connectivity.
- Augment talent pool for finance & accounting and other BPO Services.
- Further development of the financial services sector for meeting funding requirements of local IT companies.
- Streamlining policy implementation mechanisms.

**Policy Good Practice which can be considered**

**Fiscal Incentives**
- Allowing local IT companies duty-free import of capital goods for use in IT & BPO Services exports.
- Providing fiscal incentives like import duty exemptions on capital equipments, investment subsidy to private telecom companies on investments made in augmenting international data connectivity, initially with a focus on the Middle East, followed by Europe and United States.

**Human Resource Policies**
- Establishing finishing schools through public-private partnership to train students in managerial and business aptitude, with the infrastructure being provided by government and curriculum & faculty being provided by IT companies.
- Constituting a committee comprising government officials and IT company representatives to assess the existing curriculum for specific courses, based on requirements of IT companies.
- Providing fiscal incentives to companies for training employees like tax breaks on training costs.
- Encouraging local universities to increase intake of students in finance & accounting and motivating students to pursue this area through targeted financial support.

**Investment Climate Policies**
- Implementing a single window mechanism for providing all benefits, concessions & permits to IT companies. This would require a single agency within government to be identified as the nodal agency, with a presence in all key cities, which would then process applications seamlessly in coordination with other Ministries.
- Extending all above concessions to local companies, subject to completion of listing on Amman Stock Exchange within a pre-defined period and extending additional fiscal benefits on successful listing on international stock exchanges.
- Supporting listing of IT companies on Amman Stock Exchange through measures such as lower threshold of paid up capital requirements and reimbursing initial listing fees.
- Formulating policies for attracting global venture capital and private equity funds like exemption of tax on income from investments and allowing losses to be deducted from other taxable income.

### Figure 60. Policy Good Practice for IT Park Development

**Key Issues/Recommended Strategies**
- Local companies involved in IT & BPO Services exports driven by growth pressures constitute the primary target segment, with potential motivators including incremental fiscal benefits, if available and lower rent/lease rentals.
- Given the existence of private real estate companies, it may be possible to attract private developers for IT Park development.

**Policy Good Practice which can be considered**

**Fiscal Incentives**
- Providing incremental fiscal incentives to potential IT Park occupants like corporate tax holidays for an initial period (say 5 years).
- Providing land owned by government for development and to IT Park occupants at subsidized rates, depending on level of employment generation.
- Supporting IT Park developers by subsidizing rentals for plug & play infrastructure and land lease rates for an initial period (say 3 years), so that a part of these subsidies can be passed on to potential occupants, thereby creating a differentiation v/s a v/z normal office/commercial infrastructure.

**Innovation Policies**
- Provide incubation facilities & space with world-class plug & play infrastructure within the IT parks to startups and small & mid-sized IT companies at subsidized rentals for the initial period.

**Investment Climate**
- Permitting mixed land use in IT Parks by earmarking a proportion of the total land for commercial (say 70 %) and residential (say 30 %), thereby improving project viability.
- Implementing a single window mechanism for fiscal concessions & benefits, as well as all required statutory approvals, with a physical presence in the Park.
- Extending all above concessions to local companies, subject to completion of listing on local stock exchange within a pre-defined period and extending additional fiscal benefits on successful listing on international stock exchanges.
- Extending special concessions to all financial entities like banks, financial institutions, venture capital & private equity funds located in the IT Park. Representative concessions/benefits include tax exemption on income of such units for an initial number of years (say 5 years).