| **Capability Consultant For Software.** | | |
|---|---|---|
| **Sector: ICT** | **Project Value:** JD1-3M | **Location:** Amman, Irbid |

**Potential Opportunity**

The ICT industry currently represents 10% of Jordan's GDP, and has ambition to promote itself as an excellent location for: software development, Captives, R&D opportunities, Call Centers and Arab/English product developers. So far, some excellent success stories but arguably not reached its full potential. A potential barrier to further development maybe a lack of perceived credibility of the sector. The introduction of an accreditation process for skill development such as the Capability Maturity Model (CMM) could be very useful in attracting larger contracts.

In fact CMM has been upgraded to the next generation called CMMI - bypassing Jordan. The Software Engineering Institutions (like: Garnegie Mellon) in conjunction with institutional developers, are keen to pursue 'The Capability Maturity Model Integration' (CMMI) system as an industry standard. CMMI accreditation increasingly features in international tenders and is considered essential for future business development. Therefore, to attract international interest, Jordan's ICT community may need to embrace this model increasing their level of attractiveness.

**I. Description of the Business**

International Consultant, with extensive CMM and CMMI experience, accredited for training, auditing and CMMI certification for the various levels. Typical ICT investment requirements.

| Software R&D and Product Test House. | | |
|---|---|---|
| **Sector:** ICT | **Project Value:** JD 2 -10M | **Location:** Amman, Irbid |

### Potential Opportunity

Increasingly computer software is being developed for major corporations in lower cost countries using international telecommunication facilities to manage and distribute the output.

Although, Jordan as a country can be considered relatively small in the Global Software Market (expected to reach 270 billion euros in 2008, ref: Deutsche Bank), its education and ICT sectors are strong. In addition, Arabization is unique to Jordan and the MENA region, supported by many ICT trained English speaking Jordanians.

It is not unprecedented to see the IBM's of this world locate software R&D facilities in a small talented country. Ireland is an example.

The key issues for locating ICT R&D offshore are; Lower cost, a continuous supply or English speaking software talent, a fast and reliable ICT infrastructure and intellectual property rights legislation to prevent software piracy.

Jordan can satisfy these issues and has the potential to attract significant software companies into the country. Possibly attracting companies that undertake contract software services but with existing products that can initially be converted to combined Arabic and English use or just Arabic thereby increasing the market potential of existing products.

### I. Description of the Business

The business will undertake contract software development and testing and will require suitable infrastructure, equipment and accommodation to house a number of analysts and programmers. The target market for the finished product will be the MENA region for existing English language software converted for Arabic Use.

| Picture Archiving and Communication (PAC) Integrator | | |
|---|---|---|
| **Sector:** ICT | **Project Value:** JD1-2M | **Location:** Amman |

**Potential Opportunity**

The ICT sector in Jordan recognises the opportunity for increased software and hardware utilisation within the medical and healthcare sectors; it is probably the most attractive local market.

Picture archiving systems are dedicated to the storage, retrieval, distribution of images, replacing all hard copy imagery. This in itself provides further opportunities for tele-diagnostics and accessing the same information simultaneously (teleradiology) by superimposing images to detect changes in patient conditions.

Typically a PACs network consists of a central server and database that stores the images. Web based PACs now use the Internet and VPNs (Virtual Private Networks).

There are various levels of integration within the Hospital Information Systems (HIS), individual Electronic Health Records (EHR) and equipment, which make an interesting opportunity for the local market. Different equipment applications operate on different platforms.

PACs itself or PAC's integration could provide an opportunity for software development.

**I. Description of the Business**

PACs software development or integration business.

| **Personal Computer Store** | | |
|---|---|---|
| **Sector:** ICT | **Project Value:** JD10M | **Location:** Amman, Aqaba and Irbid |

**Potential Opportunity**

Country infrastructure, availability of low cost hardware, broadband, computer literacy and available support in the high street are all factors that affect ICT penetration into the average household.

In Jordan, ICT support is currently provided online or by a number of specialist retail outlets which focus on one area only, for example hardware.

Many IT savvy countries have one stop high street stores that provide the complete package. This includes a large variety of hardware and software options, knowledgeable technical support, repair workshops, and computer services including children's games and other products. Hardware can be repaired and guaranteed, software loaded and the appropriate operating advice given by trained personnel.

Jordan's domestic ICT market is bordering on the edge of commercialization and within the near future is likely to support a more professional retail outlet chain on the high street.

**I. Description of the Business**

Focused retail outlet chain specializing in computer products and services. The one stop retail outlets will provide a great range of innovative products, hardware and software, communications, technical support, electronics, trained personnel and bespoke services to the domestic computer market - and all under one roof. The business will need to have the necessary purchasing power to drive down hardware and software prices on behalf of the consumer. Local warehouse facilities and transportation network will be needed.

| **MENA Property Portal** | | |
|---|---|---|
| **Sector:** ICT | **Project Value:** JD5M | **Location:** Amman, Irbid. |

### Potential Opportunity

Properties for sale advertised through the internet is nothing new but some companies make a lot money out of monopolizing the market through maximizing the use of technology and exploiting their search engine knowledge, their sites always feature in the top two or three listed as a result of an enquiry.

These are not necessarily estate agents but search engine specialists/marketing companies. Their customers, real-estate agents pay fees to promote their properties through their specialist portals.

There appears to be an opportunity for such an organization within the MENA region. This has been relatively new business development activity in the UK and RightMove.co.uk, one of a select number of portals in operation (began Y2001), recorded JoD24.3M T/O and JoD11.3M profits in Y2005. Following their IPO, they now intend entering into the international real-estate markets, rentals, holiday lets, and anticipate further growth.

### I. Description of the Business

ICT software company with marketing flare and search engine expertise, with the entrepreneur skills to network across the MENA region and look for a monopoly position.

The business investment will not just be in setting up or developing an existing infrastructure to operate the portal, but also the necessary business development skills and resources to convert the MENA real-estate agents to pay the initial fees.

This is a successful model and therefore the level of investment will determine the speed at which the real-estate sector can be converted

| Internet Service Provider (ISP) – Advanced Services | | |
|---|---|---|
| **Sector:** ICT | **Project Value:** JD12M | **Location:** Amman, Irbid and Zarqa |

## Potential Opportunity

The ISP industry in Jordan is considered to be moving to a more competitive market, although from the 9-12 ISP providers Wanadoo and Batelco still account for > 80% of the market. This number of providers is relatively small in comparative terms. The telecoms infrastructure is fast approaching global standards is still monopolized by Jordan Telecom, this is likely to change as policy recommendations and objectives of the Telecom Regulatory Commission (TRC) will spur additional competition. The immediate opportunity is for additional investment in ISP's to provide value added services at competitive rates. . At least 1 individual and 22 class license applications have been approved as of Feb 2006, this suggests a healthy and continued interest in the Jordan Market and the prospect for investment.

## I. Description of the Business

Existing or new ISPs to offer: 1) digital TV; 2) digital audio and video; 3) VoIP, and conference call using secure networks and potentially virtual private networks (VPN) for business use. These ISP's already take advantage of the broadband infrastructure but additional investment in dedicated hardware and service is required. Specifically the investment is for ATM 155 mps lines and switches on the existing "backbone." Such ISP may focus on building a 100,000 to 150,000 consumer base and a parallel focus on business clients for data storage, services support, domain, database and website hosting, and internet access provision.

| **Interactive Entertainment Developer** | | |
|---|---|---|
| **Sector:** ICT | **Project Value:** JoD10M | **Location:** Amman, Irbid |

**Potential Opportunity**

Price Waterhouse Coopers' 2006 outlook for the Global Video Game Market (referred to as Interactive Entertainment) forecasts major growth. By 2010 the market value will reach US$46.5 billion at an average compound annual rate of 11.4%.

Arguably the MENA region is a fledgling market compared to Europe, Asia, USA and even Latin America at $531M total value. However, Sony perhaps the largest player has recognized the Middle East and Africa and located a Sony Division in the region, but so far has produced little in the way of alternative Arabic Games.

The industry consists of Designers, Developers and Publishers, which in turn consist of programmers, producers, artists, sound engineers, testers, etc.

The key issue for any publisher in the MENA region is the Arabization. This provides an interesting investment opportunity to attract a developer into Jordan. The opportunity could attract one of three types; Third Party, Independent (mostly internet exposure) or In–house organization.

**I. Description of the Business**

Interactive Entertainment Developer, with the latest graphics and production technology. The key aspect of this business will be recruitment of; producers, designers, artists, sound professionals and testers. Most of the investment will be in working capital and the infrastructure.

There is unlikely to any significant supply chain needs.

| **ICT Technical Solutions Provider** | | |
|---|---|---|
| **Sector:** ICT | **Project Value:** JD10M | **Location:** Amman |
| **Potential Opportunity** | | |
| Technical solutions and hardware equipment activities in Jordan are dominated by Cisco. They offer a partnership program, including training and accreditation for loyalty purposes and provide generous support to Government Initiatives here in Jordan e.g. e-Learning Program. <br><br> However, there is little competition and therefore an opportunity for an additional entrant into Jordan's growing ICT market, providing further access to the MENA region. <br><br> The objective will be to attract a rival competitor to Cisco. | | |
| **I. Description of the Business** | | |
| Hardware solutions and technical services provider. Similar international scale as Cisco with a full range of hardware options, training and technical support services to back up their hardware equipment. | | |

| Fixed Wireless WiMAX  Provider | | |
|---|---|---|
| **Sector:** ICT | **Project Value:** JD12 M | **Location:** Amman |

**Potential Opportunity**

National operator, JT is moving slowly towards next generation technologies, hence many businesses would like to see a second network, maybe fiber or Wimax.  Jordan TRC has supervised issue of a WiMax licensee to an operator,  this is a standards-based technology enabling the delivery of last mile wireless broadband access as an alternative to cable and DSL. WiMAX will provide **fixed**, **nomadic**, **portable** and **mobile** wireless broadband connectivity without the need for direct line-of-sight with a base station. In a typical cell radius deployment of three to 10 kilometers, WiMAX Forum Certified™ systems can be expected to deliver capacity of up to 40 Mbps per channel, for fixed and portable access applications. With the recent ratification of the Mobile WiMAX IEEE 802.16e-2005 standard in December 2005, many fixed, mobile and wireless operators around the world are looking seriously to Mobile WiMAX as a key element of their future network plans. System and certification profiles, test specifications and test equipment all under development are among the certification activities also encouraging operators to migrate to Mobile WiMAX. In addition,

a number of official Mobile WiMAX certification laboratories have also been chosen to undertake future product certification, giving a clear indication that Mobile WiMAX equipment and service is on the road to widespread commercial rollout worldwide. The progress on the standards and certification side is also complemented by successful small and large scale Mobile WiMAX field trials being undertaken around the world by operators. As a result of this significant progress, Mobile WiMAX is poised to take off, and is attracting a significant level of attention from operators as a real choice for their future network plans.

**I. Description of the Business**

Set up a service provider business dedicated to certain region and  (similar to MenaTelecom project for Bahrain).  Business model is a service integrator organization providing turnkey WiMax package to Operators in Jordan.

| Digital Billboard Media | | |
|---|---|---|
| **Sector:** ICT | **Project Value:** JD3M | **Location:** Amman |

## Potential Opportunity

A billboard is a large outdoor structure, found in high traffic areas and downtown surface streets. Billboards present large advertisements to passing pedestrians and drivers. Bulletins are the largest, most impactful standard-size billboards. Located primarily on major highways, expressways or principal arterials, they command high-density consumer exposure (mostly to vehicular traffic).

Some billboards utilize tri-action movement (also known as tri-visions, or multi-message billboards). These billboards show three separate advertisements in rotation using a mechanical system. Another popular form of mechanical sign is the scrolling billboard. Neither of these types of boards feature strongly in Jordan. However, new billboards are being produced that are entirely digital (using light emmiting diode (LED) and similar techniques), allowing static advertisements to rotate in succession. Even holographic billboards are in use. These devices will be linked to the Local Area or Wireless Network. The promotional material can be changed from a laptop (with purpose developed software) and no need for paste board crews any longer. The USP being increased advertising revenues can be obtained from the existing advertising space.

With Jordan's relatively dense population of bulletin and billboards, and the huge investment in advertisng within the MENA region, there's an opportunity to introduce a digital advertising company to Jordan. Either, by developing a new business opportunity or by diverisfication.

## I. Description of the Business

Outdoor billboard equipment company with experience of LED constructed (weatherproof) screens, a thorough understanding of wireless communication technology and its installation, together with the ability to produce bespoke software for operational control and promotion purposes. It's possible with digital technology; markets may also exist for mobile devices for events and billboards on haulage trucks could be next?

Investment will be needed in a manufacturing/ fabrication facility, construction equipment, and media software studio.

| Customized Arabic Search Engine | | |
|---|---|---|
| **Sector:** ICT | **Project Value:** JD5M | **Location:** Amman, Irbid, Zarqa |

## Potential Opportunity

There are recorded some 50 Arabic search engines listed in the MENA region, many of which are inoperable with several hosted in countries outside of the region. Two engines are listed for Jordan, one of which is written in German. Many of the search engines are really just B2B directories.  You can search Google in Arabic but there doesn't appear to be a customized search engine other than business or job directories with very limited search capacity beyond their own database.

There are many search engine opportunities for Arabic customization, Regional, Metasearch (send enquires to other search engines), Blog based, Desk top, Children's, Comparative Shopping (e-commerce), Multi-media, Journals, Job, Research and Education intensive, and others.

With some 350 consumers, purchasing power of US$350 billion combined with a growing ICT infrastructure and potential future PC user demographics, an ideal opportunity could be a Comparative Shopping Search Engine.

These e-commerce sites have become very active during the last 5 years, and the subject of lucrative acquisitions.

## I. Description of the Business

A leading Shopping Search Engine business with the infrastructure and marketing and purchasing power to attract the international and MENA high street brands. This business will provide comparative information, it does not sell products.

| **Customer Call Centers** | | |
|---|---|---|
| **Sector:** ICT | **Project Value:** JD 6M | **Location:** Amman, Irbid |

| **Potential Opportunity** |
|---|
| Jordan's ICT industry has attracted both foreign and local investment, generated valued skills and produced substantial levels of export. ICT domestic revenues reached $361 million in 2004, and export revenues reached $79 million.  Regionally and internationally recognized, the Jordanian software industry provides IT solutions in web-based applications; Arabization; banking and financial solutions; system integration, healthcare and insurance solutions; and software conversion from third to fourth generation. Clients include banks and financial service institutions, hospitals, insurance companies, universities, telecommunications, hotels, and government. |
| Jordan is unique and the perfect location for Call Centers requiring Arabization, and now has a proven track record of successful investments. This record presents a convincing argument as to why Jordan is capable of being the 'Call Centre Capital' of the MENA region, and substantiates a significant investment. |

| **I. Description of the Business** |
|---|
| Customer Call Center with the most advanced facilities and training resources. Capital costs are likely to be recruitment, training, technology and infrastructure driven. |

| **Centralised Utility Billing** | | |
|---|---|---|
| **Sector:** ICT | **Project Value:** JD2-5M | **Location:** Amman |

**Potential Opportunity**

As Jordan's and other MENA countries take steps to commercialize their utilities there will be growing recognition that electronic or intelligent meters to measure electricity consumption can help improve the effectiveness and efficiency of electricity use. There may also be an opportunity to centralise the billing and collection function, particularly for commercial consumers.

The regulator will also require that distributors provide monthly or quarterly information to enable verification that distributors are acting in accordance with the electricity regulations and that they are supplying an adequate level of customer service.

Some commercial users may install intelligent meters using SIM cards and a mobile digital network to record data automatically and be billed on a time of day usage basis.

These developments provides an opportunity for distributors to outsource ownership, installation, and reading of electronic meters and either provide this information to distributors for billing purposes or undertake a centralised billing and collection function on behalf of distributors.

**I. Description of the Business**

A business that owns installs and reads electronic meters and either provides this information to distributors for billing purposes or undertakes a centralised billing and collection function on behalf of distributors. The business would have an excellent understanding of the utilities market and with investment in meters, accommodation, infrastructure, telecommunication and computer hardware, ITC systems and personnel.

| **Captives** | | |
|---|---|---|
| **Sector:** ICT | **Project Value:** JD15-20M | **Location:** Amman, Zarqa, Irbid |

**Potential Opportunity**

Captive operations are those where the Parent company (investor) conducts core activities offshore, providing advantages such as: reduced fees, tax benefits, lower operating costs, maintaining control and reduced risk. Captive business process outsourcing (BPO) operations constitute the majority of operations in the shared services space (65% of all BPO assets in Asia are captive operations). This trend will continue and deepen in niche areas for reasons of skill availability, intellectual property and information security issues. For many years offshore captives have traditionally been led by the financial and insurance sector and these still dominate the captives market. However, 'Parent Captives' now span a wide range of sectors; retail, telecommunications, oil, automobiles, travel**,** financial services**,** Hi-Tech manufacturing and IT software. The later three being the most active.

The logistics, sales and marketing functions, which are the most mature BPO segments among the seven, are also the biggest in size and market share. However, the five-year CAGRs for these functions are on the low side relative to the others. Mature BPO segments are expected to continue dominating in market share over the forecast period. The new and emerging BPO segments, such as HR, procurement and training, are likely to experience strong growth.

Jordan has the opportunity to attract international captives to invest here. Previously, only companies with T/O in access of US$1B have been able to justify setting up a captive. Protected Cell Companies (PCC) have operated for the last nine years, these allow a number of smaller organizations <US$250M T/O to be included within one captive. The main opportunity is to attract small and medium sized operations of OECD corporations to locate in Jordan.

**I. Description of the Business**

Parent wholly owned or majority owned subsidiary, with the ability to control and manage assets effectively. Likely to specialize in software or business processing and communication activities. Investment will be needed for premises, staffing, training and equipment. ICT hardware, software and communications infrastructure will be at the core of the facility.