

IT/ITES

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Prepared by



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EXECUTIVE SUMMARY

The Information Technology (IT) industry in Sri Lanka includes the hardware manufacturing and software development sectors and the Information Technology Enabled Services (ITES), includes the Business Process Outsourcing (BPO) industry. The total size of the Sri Lanka's IT market is estimated at US\$386 million in 2011¹, and is expected to grow to US\$742 million in next five years. The market for software services has been growing at a double-digit compound annual growth rate (CAGR) for the past several years. However, the penetration rate remains below 1 percent. Computerisation has only just started in the government. Sri Lanka is not a significant exporter of IT services. The total exports of IT services in 2010 amounted to a little over US\$300 million.

Worldwide IT spending is generally positively related to growth in Gross Domestic Product (GDP). World IT spending is expected to benefit from the accelerated recovery in emerging markets, which are expected to generate more than half of all new IT spending worldwide in 2011. The worldwide packaged software revenue is estimated to reach US\$297 billion in 2011, representing a year-on-year (y-o-y) growth of over 5 percent. This forecast growth is expected to be led by emerging regions, such as Asia-Pacific (APAC), and Latin America (LATAM). These regions are expected to invest heavily in enterprise software initiatives. BPO spending is expected to be driven by analytical services and industry-specific BPO solutions.

The IT and ITES industry of Sri Lanka, comprising computer hardware, software, and services has shown an upward trend in growth during the past few years. Sri Lanka's addressable computer hardware market is estimated at US\$265 million in 2011, and is projected to reach around US\$489 million in 2015. With a lot of emphasis on development of basic infrastructure, there is potential for further growth in the northern and eastern regions. Sri Lanka's IT market is hardware dominated, with spending on hardware accounting for an estimated 70 percent (US\$227 million) of Sri Lanka's IT spending in 2010. There is considerable growth potential given the current low level of computerisation, with Personal Computer (PC) penetration estimated at below 5 percent.

Sri Lankan spending on software remains low, with the estimated addressable market of US\$47 million in 2011. The estimated 12 percent share of the total IT spending accounted for by software reflects the relative immaturity of Sri Lanka's IT market. However, the domestic software market is expected to grow at a CAGR of around 20 percent over the five year period to 2015. The core business software demand is for applications such as enterprise resource planning (ERP), as well as basic applications like email. Industry experts have estimated that there are currently around 400 ERP installations in the country.

IT services spending is estimated to be around US\$74 million in 2011 accounting for about 19 percent of Sri Lanka's total spending on IT. The market is dominated by demand from

¹ In this document, FY means Fiscal year denoting April-March. Thus, FY2011 or 2010-11 means the period April 2010-March 2011. Statement of year, e.g. 2010 and so on, without a prefix FY means calendar year from January-December. Thus, 2010 or CY2010 means period January-December 2010, and so on. Q1FY (year) means quarter April-June; and so on and 1Q (year) means quarter January-March. Thus, Q1FY2011 means April-June 2010, and so on. 1Q2010 means January-March 2010, and so on. H1FY (year) means period April-September, e.g. H1FY2011 means April-September 2010, and so on. 1H (year) means January-June, e.g. 1H2010 means January-June 2010, and so on.

government, finance, and telecoms sectors, which account for at least half of total spending. The provision of IT services is still typically built around hardware sales. With the growing base of installed hardware, and software systems provide the foundation for an expansion of services. The consulting element is expected to become more significant in the next five years.

Sri Lanka has a very low level of internet penetration, estimated at just 11.1 percent at the end of 2010, while Broadband penetration was at 2.9 percent. The low penetration levels are a reflection on the state of Sri Lanka's telecoms infrastructure. One the reasons or the poor infrastructure is the years of civil war. This situation has been identified by the government as a major barrier to social and economic development. However, progress is expected over the next five years, when internet penetration is expected to reach about 20 percent. In recent years, the government has announced broadband infrastructure rollout plans, and also encouraged the deployment of technologies such as Worldwide Interoperability for Microwave Access (WiMAX), and Wireless Fidelity (Wi-Fi). However, adoption remains limited. The Sri Lankan government's 'e-Sri Lanka' strategy outlines the country's vision for information society development, and forms the basis for initiatives related to Information Communication & Technology (ICT) development. A key measure has been the establishment of the Sri Lanka's Information and Communications Technology Association (ICTA), which has led ICT projects on various fronts.

Over the past few years Sri Lanka has witnessed periods of economic instability largely due to the long-running civil war. The restoration of peace and improvements in the security situation have helped to release enterprise demand for IT solutions as companies look to increase efficiency. In 2011, Sri Lankan IT spending is expected to benefit from local and regional economic recovery.

In June 2010, Sri Lankan government reduced import duties on electronic goods. The reduction in duties is expected to further reduce the prices of personal computers, and drive growth in the consumer PC segment over the course of 2011. The projected 2011-15 CAGR of 18 percent could make Sri Lanka one of the fastest-growing markets in the region, albeit from a low base.

In August 2010, Sri Lankan government felt that IT would play an important role in helping the government to achieve its targets for growth; as a result, foreign IT companies were invited to invest in Sri Lanka, and partner with the government to apply IT to assist development. The Sri Lankan government's e-Sri Lanka strategy outlines the country's vision for information society development and forms the basis for initiatives related to ICT development.

In 2010, the government had planned to roll out another 1,500 computer labs for Sri Lankan schools. This is in addition to the 3,500 that had already been constructed in both rural and urban areas, with around 6,000 planned in total. The government designated 2009 as the year of IT (and English) in Sri Lanka.

Greater economic stability in Sri Lanka is expected to enable an expansion of domestic computer and IT hardware production. A number of Sri Lankan PC brands, including Panora, Maya, and Kobian, have established a niche in the domestic market. Microsoft Sri Lanka has started

promoting its cloud-computing solutions, which it believes could be a transformative software delivery model for Sri Lankan enterprises. The nascent IT services market is dominated by local IT distributors that have built IT services offerings around portfolios of brands such as HP, SAP, and IBM. International vendors operate mainly through partners rather than having a direct presence.

However, the thrust for a quantum jump in growth for the Sri Lankan IT and ITES industry can only come from export of IT services. Given the high rate of completion of secondary education (82 percent), knowledge of English and a young population, export of IT services and ITES offer a potential opportunity for Sri Lanka. However, the overall enrolment in higher education in Sri Lanka is low at about 11 percent of the eligible population (World Bank HDU- 2005) out of which university enrolment is still lower at 3 percent². The undergraduate engineering enrolments in the year 2009 was about 5,405 and a further 1,779 students enrolled in Computer Science, IT and ICT courses. Growth in the IT/ITES industry will be primarily driven by quality manpower and Sri Lanka needs to make significant improvements in this area to harness the growth potential of these industries.

SRI LANKA IT/ITES—SWOT ANALYSIS

Strengths

- Latent potential in domestic market with a population of 19.5 million
- Low computer, and ICT penetration
- Rapidly increasing niche workforce which is low cost, highly adaptable, and English speaking
- Government plans to leverage proximity to India to develop local ICT and BPO-IT industry and attract Indian knowledge and capital
- Availability of broadband, leased-line, and satellite connectivity
- English speaking population

Weaknesses

- Low computer literacy, low market penetration, and high costs
- Legacy of 30 years of civil war including economic under-development, and poor logistics
- Low level of telecom infrastructure, and high bandwidth costs
- Weak government finances are a barrier to spending
- Lack of access to finance has proved to be a key stumbling block to greater market development, as well as development of local industry

² Study on access to higher education in Sri Lanka, by Marga Institute

Opportunities

- Government programmes to roll out broadband infrastructure, and reduce digital divide, led by ICTA
- Computer penetration expected to rise to around 5 percent driven by price declines
- A base of around 400 ERP installations could provide a platform for upgrades and upsells.
- Government drive to make Sri Lanka an outsourcing centre could boost the development of IT services

Threats

- Current global economic crisis impacting on consumption
- High level of software piracy at around 90 percent
- Adverse international publicity if the rehabilitation of the population in the North is delayed

STRUCTURE OF THE INDUSTRY

The IT industry in Sri Lanka was established about two decades ago, and is relatively small and unsophisticated by international standards. With a large number of small and medium enterprises, the IT/ITES industry in Sri Lanka consists of players offering a wide range of services from software development, IT consultancy services and IT support services to IT Enabled Services for both voice and data processing. Current estimates place the total number of entities offering services in the IT/ITES industries in Sri Lanka at over 1,000. This estimate is based on the consolidated databases of the Export Development Board (EDB), Board of Investment of Sri Lanka (BOI), ICT Agency of Sri Lanka (ICTA), and IT/ITES Industry Associations.

There are several industry associations representing specific verticals or business interests in the IT/ITES industry. The industry associations are now targeting at consolidating the associations under one association for a synergistic approach to the strategic development of the IT/ITES industry. Supported by the Government of Sri Lanka through the ICT Agency of Sri Lanka, several initiatives have already been taken in this regard. In November 2008, the industry launched Sri Lanka Association for Software and Services Companies (SLASSCOM). SLASSCOM, modelled after the Indian NASSCOM, is the representative body for the IT/ITES industry. It plays the role of strategic advisor to the government on public policy, and promotes international trade development for its member companies.

Despite the moves by the industry to consolidate, a considerable number of business entities are not registered with the Government, industry-related bodies or with industry associations. Some of these business entities, catering to the export market, are not known outside their immediate business circles.

Over the past three to four years, Sri Lanka has been increasingly recognised as an emerging outsourcing destination for key functions and specialised services. Despite the limited size of the workforce in relation to other large outsourcing players such as India, Sri Lanka possesses highly skilled professionals for niche services in IT testing, finance and accounting, with the highest number of Chartered Institute of Management Accountants (CIMA) graduates in the world outside of the UK. Further, the location of Sri Lanka in terms of time-differences (five and half hours ahead of Greenwich Mean Time) allows it to cater to the European, Australian, and the American

markets. All these factors place Sri Lanka in a prime position in establishing itself as one of the sought after outsourcing destinations.

Given the potential for growth, it is critical that the industry designated associations have a good understanding of the current industry, its contribution to the national economy, and its strengths and weaknesses. Based on this, the industry will be able to develop its strategy in relation to global demand, and to assess the 'as is' position of the Sri Lankan IT/ITES industry in the global markets. From a national planning perspective, this would assist decision makers to devise and focus on key interventions that will enable the industry to achieve its long term goals, and monitor the effectiveness of these interventions. According to Information and Communication Technology Agency (ICTA), over 45,000 new jobs have been created in Sri Lanka's IT and BPO sector since 2005. IT-enabled service exports were the fifth largest foreign-exchange earner in 2008, bringing in US\$250 million. By 2015, it is expected that the IT and BPO industry will be the country's primary source of export revenue with sales of US\$2 billion, and the provider of over 100,000 jobs.

Development of the ICT sector is one of the government's key priorities. It has launched an ICT strategy, 'e-Sri Lanka' for the enhancement of the sector, and the promotion of ICT usage. Key elements of the strategy include programmes to increase IT literacy, distribute low-cost computers, and spread awareness of the advantages of computing, and the Internet. Rural areas are being particularly targeted. The ICTA has coordinated the strategy, which has achieved tangible results, notably in the fields of legislation, IT training, and the raising of the PC penetration rate. The ICTA has worked with foreign firms and donor governments to achieve these goals. Nevertheless, the results seem modest compared with similar government ICT drives in other parts of Asia, partly because official attention was, at least until mid-2009, focused on other areas, such as the civil war. The government's e-government policies had also made unimpressive progress. However, these were re-launched at the end of 2009 with a welcome emphasis on improving the co-ordination and penetration of ICT policy across government departments.

Exhibit 1: Income and Demographics

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Nominal GDP (US\$ billion)	24.4	28.3	32.4	40.7	42.2	47.8	53.2	57.5	62.2	68.1
Population (million)	19.5	19.7	19.9	20.1	20.2	20.4	20.6	20.8	21	21.2
GDP per head (US\$ at PPP)	3,571	3,936	4,284	4,595	4,772	5,057	5,422	5,787	6,243	6,731
Private consumption per head (US\$)	862	971	1,093	1,420	1,294	1,464	1,614	1,721	1,840	2,000
No. of households ('000)	3,591	3,706	3,744	3,781	3,820	3,858	3,897	3,937	4,194	4,231

Source: Central Bank of Sri Lanka; Compiled by iMaCS

The GDP growth rate for Sri Lankan economy is expected to be 8 percent for FY2012, compared with the growth of 11.3 percent for FY2011. Further GDP is expected to grow by 28 percent by FY2014 over FY2011 levels. Per capita GDP increased 7 percent during FY2011, with forecast growth of 6.7 percent during FY2012. By FY2014, per capita is expected to be 24 percent over

FY2011 levels. Greater security is vital for the development of technology infrastructure, opening up of new markets in the north and east, and acceleration of national GDP and income growth. The IT and telecom industry may be vulnerable to additional ad hoc taxes, as the government seeks to improve its fiscal position. The risk of currency instability, reduced at present under the IMF's stand-by arrangement, could also re-emerge as a problem during the next five years, given the industry's dependence on imports.

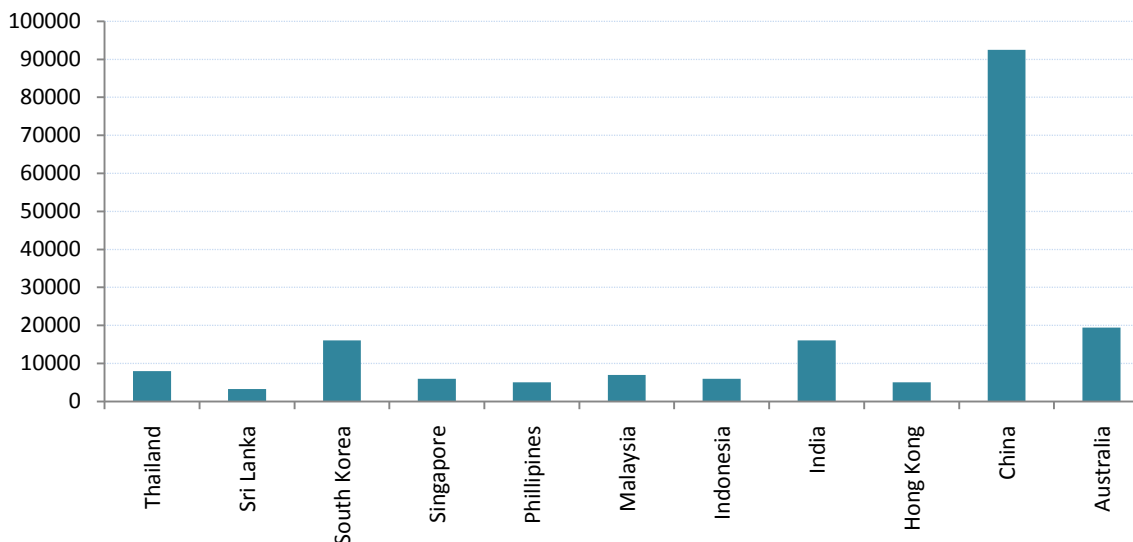
Asian Markets

Most Asian IT markets are expected to report stronger growth in 2011. Across the region, 2010 saw IT spending boosting from systems upgrades deferred from the previous year, although much depended on business confidence. In some cases, companies had IT budgets that were not spent due to economic uncertainty, and as a result, vendors reported a pick-up in project flows during H1FY2010. Strong fundamental demand drivers of IT spending meant that there will be continued opportunities for growth. Key factors common to most markets include cheaper PCs and reform in sectors such as telecommunications and finance, as well as government initiatives. The largest IT market in the region is China, estimated at US\$92.5 billion in 2010; followed by Australia (US\$19.4 billion), India (US\$16.1 billion), and South Korea (US\$16.1 billion).

China was estimated to be the largest IT market in Asia in 2010. Due an expansion in consumer credit, as well as a commitment to modernisation in sectors such as education, healthcare, and manufacturing helped China to sustain market growth. China's IT market growth is expected to be maintained by an expansion into the western region, rural areas, and lower-tier cities, as well as growing demand from small and medium-sized enterprises (SMEs). The long-term potential of India's IT market is evident from the fact that less than 3 percent of people in India own a computer (about one-fifth of the level in China), implying particular potential in the lower-end product range. India's IT market appears to be positioned for a strong recovery in 2011 due to an improving economy and stronger consumer sentiment as well as government support for modernisation in lagging sectors. It is estimated that around 5 percent of India's 7.5 million SMEs could implement a technology solution in the next few years. Also, India's ITES/BPO industry is growing at around 40 percent per annum and could continue to generate opportunities for vendors of IT products and services.

Exhibit 2: Asia's IT Markets

FY2010, US\$ Million



The Philippines is one of the countries currently benefiting from low-priced PC programmes which provide opportunities for vendors to penetrate the low-income segments. In more developed markets such as Hong Kong and Singapore, robust retail sales led the way in early 2010 as spending recorded positive growth following a contraction in 2009. The fastest-growing IT markets during next 5 years are expected to be Sri Lanka and India, driven by increasing PC penetration. China is forecast to be the third fastest growing market, with the IT market forecast to grow by an estimated 64 percent over the five-year period.

Sri Lankan Market

Overall, the total size of Sri Lanka's IT market is estimated at US\$386 million in 2011, just 2 percent of the size of India's, however, it is expected to grow to US\$742 million. The IT market is estimated at 0.7 percent of the country's GDP. Hardware is the dominant segment, and is expected to grow at 17 percent in FY2011, and at 84.5 percent in FY2015 over FY2011 levels. The Sri Lankan IT market has considerable growth potential with strong growth prospects in North & East regions. Although the computer market has been growing at a double-digit CAGR for the past several years, penetration rate remains below 1 percent. Computerisation has only just got commenced in government services. The government is putting increasing effort in improving computerisation in the public sector, which generally accounts for 20 percent to 25 percent of the computer hardware market. Total IT spending is expected to increase to US\$742 million by 2015, with considerable upside. The projected CAGR of 18 percent would make Sri Lanka one of the fastest-growing markets in the region, particularly at a time when growth prospects have deteriorated in more established markets.

Exhibit 3: Sri Lanka's IT Sector

US\$ Millions

	2007	2008	2009	2010	2011	2012	2013	2014	2015
IT Market	212	254	277	327	386	456	538	629	742
IT Market as % GDP	0.7	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Hardware (Computer market sales)	151	180	194	227	265	310	362	419	489
Services	37	45	50	61	74	89	107	128	155
Software	24	29	32	39	47	57	68	82	98
PCs (including notebooks)	120	144	157	184	216	254	300	347	405
Servers	14	16	17	20	24	28	33	38	44

Source: International Telecommunication Union (ITU); iMaCS Analysis

Compared with 400,000 units sold in 2010, sales of computers are expected to rise to at least 700,000 over the next 5-year period. Over the same period, penetration rates could increase from below 1 percent to around 3 percent. Sri Lanka is currently estimated to have around 400 organisations with enterprise resource planning (ERP) installations, and this is likely to expand going forward. The provision of IT services is typically built around hardware sales. However, as more hardware and software is deployed, the consulting element will become more significant over the years. Also, vendors see cloud computing as having the potential to transform the way that Sri Lankan enterprises operate, due to its greater cost-efficiency. However, further ICT environment improvements are required before this vision could be realised on a large scale.

IT-Hardware

Sri Lanka's addressable computer hardware market is estimated at US\$265 million in 2011 and is projected to reach around US\$489 million in 2015. At least 400,000 computers were sold in Sri Lanka in 2010, as the market recovered from the impact of the economic slowdown. This annual total could increase to more than 700,000 during next 5-year with growing demand for affordable notebooks. IT market will stay hardware dominated, with spending on hardware accounting for an estimated 70 percent of Sri Lanka's IT spending in 2010. There is considerable growth potential as the current level of computerisation is low, with PC penetration estimated at around 5 percent. Computer awareness has been estimated at around 9 percent, but is growing.

Exhibit 4: Hardware Penetration

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Stock of personal computers ('000)	734	970	1,262	1,618	2,026	2,559	3,195	3,953	4,858	5,916
Stock of PCs (per 100 people)	3.8	4.9	6.3	8.1	10.0	12.5	15.5	19.0	23.2	28.0
Stock of PCs (% growth)	37.4	31.0	29.0	27.0	24.1	25.2	23.7	22.6	21.8	20.7

Source: Information Communication and Technology Agency, Sri Lanka; iMaCS Analysis

The economic slowdown and credit tightening had an impact on retail sales of computers in 2009. However, demand has subsequently revived in both the business and consumer segments. During 2011, business demand received a lift from tenders previously deferred as a result of the economic situation. Migrations to Microsoft's Windows 7 operating system could also help to trigger a new cycle of hardware upgrades. More and more Sri Lankans are migrating from

desktops to notebooks and lower-cost netbooks. Till 2006, desktops accounted for around 80 percent of unit sales, a higher ratio than for many countries in the region. However, notebooks are making a steady advance. In 2008, estimated notebook sales were of 140,000 units, accounting for 40 percent of volume sales. A key driver of notebook demand in addition to falling prices, is wireless connectivity, with notebooks being used to facilitate collaboration, and keep up with email. In the higher-end segments, demand for entertainment features such as the ability to view and edit home movies is a purchase decision factor. Newer generation of netbooks with lower price points and higher computing capabilities are also likely to drive growth.

The government is increasing its efforts in improving computerisation in the public sector, which generally accounts for 20 percent to 25 percent of the computer hardware market. A number of initiatives have been taken by the Department of Education to provide computers to schools. Meanwhile, demand for PCs is growing among large enterprises in sectors like banking, telecoms, education, health, and defence. The improvement in the security situation following the return of peace has led to an upturn in business IT investments, which represents a particular opportunity for vendors, due to years of pent-up demand. Since the Sri Lankan economy is on growth path, companies have to face the challenge of enhancing efficiency and managing large amounts of data.

SMEs are less hesitant about spending on IT, as it has the potential to increase efficiency in an increasingly competitive business environment. As a result, sales cycles have now become shorter as SMEs better understand the value proposition of hardware as well as software investments. Another significant area of public sector opportunity is computers for education, which is currently receiving considerable government investment. More than 3,500 computer labs have already been constructed in both rural and urban schools, and in 2010-11 another 1,500 are planned.

IT-Software

With estimated addressable market at US\$47 million in 2011 Sri Lankan spending on software remains rather low. Software accounts for estimated 11 percent of the total IT spend reflecting the relative immaturity of Sri Lanka's IT market. However, the domestic software market is expected to grow at a CAGR of around 20 percent till 2015.

IT-software demand largely depends on the extent of consumer and business confidence in the economic upturn. For example, migrations to Microsoft's latest Windows 7 operating system have the potential to drive growth in 2011. There could also be benefits from systems upgrades previously deferred as a result of the economic and political situation. Meanwhile, government affordable computer programmes have potential to increase the installed base and drive software sales.

Software piracy is another area where Sri Lankan IT market lags. The high level of software piracy poses growth restraint, with 90 percent of software packages in use believed to be unlicensed. Business Software Association, an international lobby group, ranks Sri Lanka as the sixth worst nation for software piracy in the world. The problem is largely one of enforcement. In order to overcome the challenge, several laws have been introduced in the recent years, including the

Intellectual Property Act of 2003, the Computer Crimes Act of 2007 and the Companies Act of 2007, providing a strong legal basis to combat software piracy.

The bulk of business software demand is for applications such as ERP as well as for basic applications like email. However, the market remains very small. Local channels have estimated around 400 ERP installations in the country currently. There exists an opportunity to sell upgrades or more specialised applications such as human resources (HR) and customer relationship management (CRM) to the current client base. Vendors look to pitch the efficiency gains potentially offered by these and other applications as IT demands on enterprises grow.

With the introduction of software-as-a-service (SaaS) business model which is considered to be more cost-efficient, SMEs represent a potentially important segment for demand, and some vendors believe that the model has the potential to change the way the Sri Lankan businesses operate. New cloud-computing offerings from vendors such as Microsoft are expected to fuel further demand from local end-users to utilise this technology. However, the low level of broadband penetration and incomplete infrastructure remains a barrier to the widespread promotion of software-on-demand solutions. With most of the business community comprising of SMEs, this sector has the potential to drive enterprise application spending over the next few years. Also, many Sri Lankan companies suffer from inconsistent and inaccurate data, and data duplication, with consequent inefficiencies in resource planning, inventory management, and financial reporting. This has led to the increased average lead time for a Sri Lankan manufacturer to around 90 days, which is high compared with competitors in the region. In the face of competition, enterprises are beginning to see IT investments as necessary if they are to avoid being overtaken by more tech-savvy competitors. However, high prices remain a barrier, with ERP installations costing as much as US\$4.5 million.

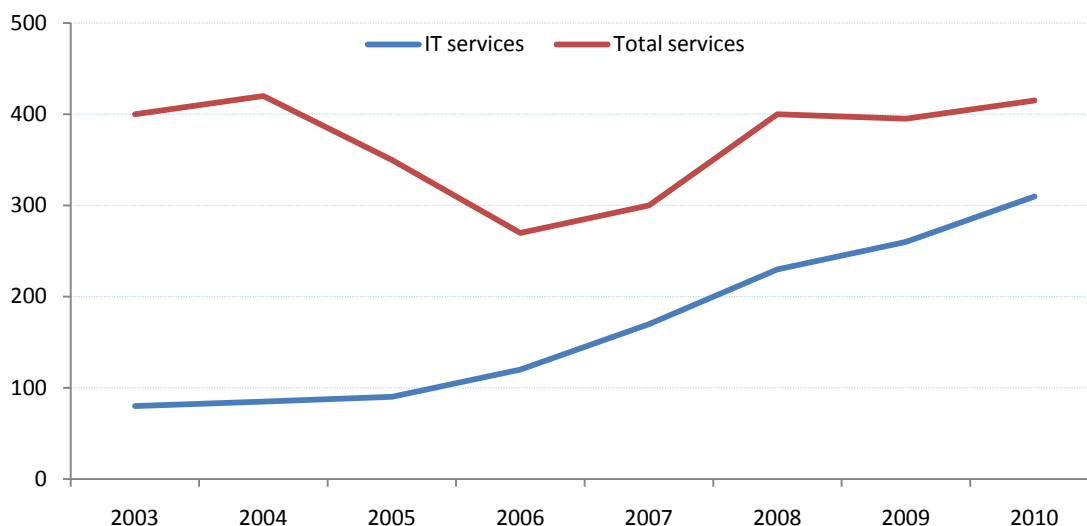
For the Sri Lankan IT software segment, the Government sector represents an attractive segment for software procurement over the next few years. Increasing computerisation in the public sector has driven spending. For example, the Sri Lankan Port Authority recently embarked on atomisation of its HR function. The e-government programme is also a driver, with the Board of Investment of Sri Lanka being one organisation to recently commission a new platform for client interactions. Among other important verticals, banking and telecoms are likely to provide the most opportunities. Currently, security solutions are a growing priority for many organisations.

IT-Services

Sri Lanka's IT services spending is estimated at around US\$74 million in 2011 accounting for about 19 percent of Sri Lanka's total spending on IT. A market CAGR of 20 percent is projected for the next period through 2015. The market is dominated by demand from government, finance, and telecoms sectors, which account for at least half of total spending.

Exhibit 5: Services Exports

US\$ Million



Source: Export Development Board; iMaCS Analysis

IT services exports constitute around 4.8 percent of total Sri Lankan exports and about 75 percent of Sri Lanka's total services exports during FY2010. Total IT services exports have been growing at a CAGR of 31 percent during the past 5 years and currently comprise a significant proportion of the country's service exports. In 2006 and 2007, outsourcing services comprised approximately 27-29 percent of total IT services exports. Based on this, it is estimated that outsourcing service exports currently account for over US\$65 million.

In 2010, Government announced its plan to make Sri Lanka an outsourcing and call centre hub, which gives this sector a huge opportunity to become one of the fastest growing over the next 5 years. The government itself will be a major source of IT projects as it moves to re-engineer government processes. Also, Sri Lanka anticipates an opportunity to provide outsourcing services to India's large IT-BPO market, which is expected to reach US\$200 billion within the next couple of years.

The provision of IT services is still typically built around hardware sales, with the growing base of installed hardware and software systems providing the foundation for an expansion of services provision. However, the consulting element is expected to become more significant in the coming years. Enterprises are increasingly looking for external advice in prescribing an IT strategy, and identifying vendors. Although ERP systems are still a key focus, outsourcing is taking root among some large companies. The global economic slowdown and credit tightening had an impact on projects in some key verticals. Vulnerable sectors included export-focused manufacturing industries, construction, and real estate. However, this impact was less than that experienced in some other countries around the region, and Sri Lanka's fast-growing IT sector is now starting to

create demand for more substantial projects. However, much depends on maintenance of a stable domestic security and economic situation.

Growing use of ICT is gradually driving the expansion of the IT services opportunity. Managed services are currently largely based around infrastructure management. The global economic crisis is likely to reduce local IT outsourcing demand. However, basic hardware support and maintenance services represent more than half of IT services spending.

In October 2008, various leaders of the software and ITES-BPO industries came together to form a unified national IT/BPO industry association, the Sri Lanka Association for Software and Services Companies (SLASSCOM), as a leadership body for the IT/BPO industry in Sri Lanka. Sri Lanka has a number of advantages as an outsourcing destination including good English communications skills. However, the country's reputation for instability, and its small size relative to India, is a problem. In 2008, it was estimated that more than 50,000 potential vacancies in the IT-BPO sector remained unfilled due to a lack of appropriate IT skills. Sri Lanka also needs better telecoms infrastructure and greater bandwidth before the government's targets can be fulfilled. As part of policy initiatives, government has formed a high level task force to address these supply-side bottlenecks.

Internet Services

Sri Lanka had 1.77 million internet users in 2009, representing a 52.7 percent (y-o-y). Subsequent growth is expected to slow significantly, averaging an annual growth rate of 15.5 percent between 2010 and 2015.

Exhibit 6: Industry Trends - Internet Sector

	2008	2009	2010	2011	2012	2013	2014	2015
No. of Internet Users ('000)	1,164	1,776	2,267	2,915	3,440	3,847	4,045	4,106
No. of Internet Users/100 Inhabitants	5.8	8.7	11.1	14.1	16.6	18.4	19.2	19.4
No. of Broadband Internet Subscribers ('000)	234	240	598	1,175	2,263	3,592	4,247	4,880
No. of Broadband Internet Subscribers/100 Inhabitants	0.7	1.2	2.9	5.7	10.9	17.2	20.2	23

Source: International Telecommunication Union, iMaCS Analysis

As a part of its electoral promises, the government has embarked on an ICT programme to facilitate economic growth. With its mission to drive ICT growth, the Telecommunications Regulatory Commission (TRC) launched a tender for the deployment and operation of a national fibre-optic backbone across the country. Similar to Malaysia's programme in terms of deploying a national high-speed broadband network and with the aim of increasing GDP growth, the project initially commenced with partnerships formed around utility companies (Sri Lanka Railways and Ceylon Electricity Board) before being extended. Applications from pre-qualified bidders were submitted by the end of 2009, and the bidder was chosen on the basis of lowest subsidy. The project has received the backing of the World Bank, which is providing a subsidy of US\$12.5 million.

Sri Lanka's internet services are largely carried out and controlled by the state-owned Sri Lanka Telecom (SLT)'s network. The operator is responsible for providing broadband connectivity to all sectors, in particular the finance industry. SLT claims to have an 80 percent share of the broadband sector in 2009. However, the company is keen to become involved in aiding broadband development and agreed with the Ministry of Science and Technology in July 2009 to provide free broadband connectivity to 300 Vidatha Resource Centres, with the aim of improving ICT literacy in the country. The deployment of a secure and reliable international broadband network has been equally important. Lanka Bell has invested US\$27 million to link Sri Lanka to the undersea fibre-optic cable Fiber-Optic Link Around the Globe (FLAG), which is capable of offering services at high speeds and with large capacity for both voice and data services.

Based on data from the World Bank/ITU and operators, there were 170,000 fixed broadband subscribers at the end of 2009. However, this does not include mobile broadband subscribers served by the country's WiMAX and 3G/3.5G networks, which would add at least 70,000 more subscribers. Thus, there were around 240,000 fixed and mobile broadband subscribers in Sri Lanka at the end of 2009, giving a penetration rate of 1.2 percent.

Buoyed by government support for broadband, and the rise in ICT literacy rates, demand for services is expected to grow at a high rate. This will also be supported by WiMAX, helping to bring broadband to remote areas of the country, including that of the recently liberated Northern Province. This will also allow for the provision of e-government, e-education, and e-health initiatives. Internet costs are thought to be around four times higher in Sri Lanka than in Malaysia, a factor that is slowing growth. Thus, the growth of broadband usage will only be possible if subscription rates come down.

Broadband subscriber growth is expected to be high, with an increase of 97 percent to 1.17 million by the end of 2011. The ICT government plan, WiMAX deployments and individual operator investment plans should help increase broadband demand. Further, it is expected that the broadband market will grow to serve 4.88 million subscribers by 2015, resulting in a penetration rate of 23 percent.

IT-Outsourcing

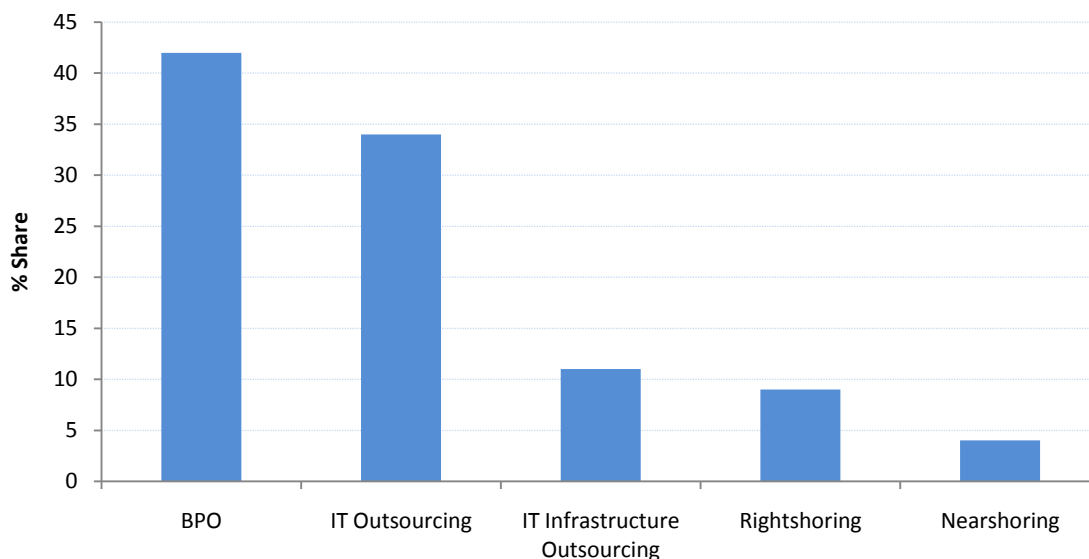
The global outsourcing market has witnessed an increase in activity as the global economy recovers from the recession of 2009. Due to the cost reduction, post recession period customers in US and European markets are off shoring more of the work that was earlier being outsourced to suppliers in their own countries. Bulk of IT services and BPO work is outsourced to India, Mexico, China, and the Philippines. India continues to be the dominant offshore location, Philippines riding mainly on its strong presence in the BPO business, and China is another key country where companies plan to outsource tremendously in coming years. About 60 percent of India's outsourcing business comes from the US, followed by the U.K. accounting for 15 percent.

A company's decision to outsource IT work to a particular country depends on risk diversification and business continuity, need for specific skills and support in specific languages, regulatory requirements, and time zone coverage requirements. Although the concept of near shoring is also growing fast; it is still a smaller market than offshore outsourcing. The drivers for near-shore

outsourcing, such as the need to keep sensitive work closer to home, are different than for off-shore outsourcing which is mainly driven by cost and the ability to scale. A number of Indian companies have set up operations in Europe, US, and Latin America to target the near-shore and on-shore requirements of their customers.

Exhibit 7: Type of Outsourcing - World

FY2010



Source: Outsourcing Yearbook 2010; iMaCS Analysis

Sri Lanka is emerging as a global IT-BPO destination in a number of key focus domain areas. The growing IT-BPO industry in Colombo offers a unique advantage for Small and Medium Enterprises (SME) by providing access to a high quality talent pool. The environment is also conducive for establishing high-in-demand niche competency centres out of competition for even larger global services companies. Software services sector focuses on Telecommunication, Banking Financial Services and Insurance (BFSI), and Software Testing. The BPO sector focuses on financial & accounting services, investment research, engineering services, and UK-based legal services. Recognising the potential of the IT-BPO industry, the government has taken number of steps by providing fiscal and other incentives and concessions to fast track the development of the sector.

The Sri Lankan government is one of the biggest catalysts for driving outsourcing growth and has publicly shown its commitment by setting the target for IT Outsourcing (ITO) and BPO becoming the country's largest revenue earner by 2012. The government declared 2009 the year of English and Information Technology, with the goal of improving the knowledge of English and IT in young adults and school children to ensure they have the necessary skills to meet future outsourcing industry demands. This focus continued throughout 2010. The government also provides substantial cash grants for companies in the ITO-BPO space to support business development such as training, consulting expertise, marketing, quality enhancements. The country currently has around 300 western companies at present within the IT-BPO market. Some of these include HSBC,

Aviva, Microsoft, Motorola, Industrial & Financial Systems (IFS), Amba Research, RR Donnelley, Quattro, Virtusa, eCollege, Valista, and Innodata Isogen.

Although the global recession brought about a temporary slowdown in the demand for BPO services from all sectors, the use of technology and outsourcing as a means to reduce costs is expected to continue driving growth of IT/BPO sector in Sri Lanka. Further, with the end of the civil war, the possibilities for IT and ITES investment has grown, strengthened by partnerships emerging between the public and private sectors. Sri Lanka is recognised as a niche centre of excellence for Finance and Accounting Outsourcing with the world's second largest pool of UK qualified accounting professionals (second only to the UK). Joint initiatives supported by both Chartered Institute for Securities & Investment (CISI) and SLASSCOM in Sri Lanka includes promoting Sri Lanka as an outsourcing destination for finance business process outsourcing. SLASSCOM has rolled out many activities which have helped elevate Sri Lanka as a destination of choice for niche outsourcing with key focus areas.

The growing IT-BPO industry in Colombo offers SMEs to have premium access to Sri Lanka's tier-one talent pool. Sri Lanka has a number of joint ventures with companies in Ireland, Europe and Scandinavia, with the typical company size of 50-150 employees. Around 75 percent of the ITO - BPO companies in Sri Lanka are SMEs, and 65 percent of them have been set up with foreign direct investments. Several European SMEs have started R&D centres in the country.

The advantages of offshore outsourcing to Sri Lanka include the following:

- ❑ **Cheap Labour**—compared to US and European countries, the cost of labour in Sri Lanka is very low. Sri Lankan companies also specialise in skill based outsourcing activities making them more attractive than competitive nations/companies for specialised work.
- ❑ **Work Ethic and Quality**—Sri Lankans are generally known for good work ethics and for producing quality work. This is one of the main reasons some European companies have started their R&D centres in Sri Lanka. Sri Lanka has also carved its own niche in financial accounting and is making huge strides in search engine optimisation and web design. The number of BPO certified professionals in Sri Lanka is also rising.
- ❑ **Time Difference**—there is a 12-hour time difference between Sri Lanka and US making it an attractive location for continued operations. Even for most European countries, there is a 6 hour time difference making it viable to a wide audience. Few large companies are opening call centres in Sri Lanka for continued 24 hour operations.

Although Sri Lanka is an attractive offshore outsourcing locations there are some drawbacks to be considered:

- ❑ **Low Resource Pool**—although there are plenty of qualified people, the resource pool is limited and smaller compared with India. It is difficult for a company to start a call centre with 1,000 people in Sri Lanka in six months due to long procedures involved in setting up of a company. Sri Lanka has a literacy rate of 93 percent which is the highest in Asia and one of the best in the world as well. However, this is suppressed by the shortage of English literate people, and people who are capable with computers.
- ❑ **Lack of Infrastructure**—Internet facilities are not up to the mark and are usually limited to city areas. High speed Internet connections involve a high cost and are mostly used by

companies. It is also difficult to find a large space accommodating 500-1,000 people, especially near the city areas.

- ❑ **Lack of Experience**—compared with Sri Lanka, countries like India have many years of offshore outsourcing experience. For some specific tasks like medical transcription or legal transcriptions it is hard to find suitable workers in Sri Lanka. However, companies that are providing outsourcing are also opening training centres in Sri Lanka in order to make Sri Lankans equipped with necessary qualifications in the future.

KEY ISSUES FACING THE PLAYERS

Competitive Landscape

Greater economic stability in Sri Lanka will enable the expansion of domestic computer production. The nascent IT services market is dominated by local IT distributors that have built IT services offerings around portfolios of brands such as HP, SAP, and IBM. International vendors such as HP and IBM operate mainly through partners rather than having a direct presence. In 2009, IBM appointed a new country manager for Sri Lanka and described Sri Lanka as a significant growth market within its South Asia unit. Since 2010, Microsoft Sri Lanka is promoting its cloud-computing solutions, which is believed to be a transformative software delivery model for Sri Lankan enterprises. Hidramani Group, one of Sri Lanka's largest apparel manufacturing companies, recently announced that it was running a cloud computing pilot on Windows Live Initiative.

IT- Hardware

The two main trends of Sri Lankan IT-Hardware segment are as follows:

- ❑ Multinational vendors target the business notebook segment.
- ❑ Sri Lankan computer brands such as Panora are strong in desktops.

Although international vendors have strengthened their position in the price-sensitive Sri Lankan PC market, local assemblers are estimated to have a 25 percent market share. HP is the market leader for PCs and notebooks sold in Sri Lanka, having an 18 percent share of total computer sales. It has attributed its recent success to strong marketing and branding initiatives. In July 2009, HP Personal Systems Group (HP PSG) appointed Tech Pacific Lanka as its distributor. Tech Pacific distributes all HP PSG products, including desktop and notebook PCs to the Sri Lankan region. The company has more than 100 affiliated dealers. Consumer demand for brand name computers is on the rise, prompting vendors to pay more attention to this segment.

Other leading multinational brands in the market include Dell, which has achieved widespread brand recognition in Sri Lanka. Toshiba and Acer also have strong presence in notebook segment. Dell's success is partly down to its 15-year partnership with SoftLogic Trading, its authorised distributor in Sri Lanka. In 2010, Dell was targeting the business segment with its Efficient Data Centre (EDC) solutions which offered companies the potential to reduce storage costs by 50 percent. In October 2010, Japanese IT giant Fujitsu appointed Sala Enterprises as a new distributor for Sri Lanka, after the launch of new notebook models on the local market.

Sri Lanka's vast notebook market growth potential has attracted growing vendor attention. HP has released a number of models for the high-end segment, including its HP EliteBook 6930p model,

as well as a number of new business PCs. Toshiba also launched business models including its Satellite L300 and M300 notebooks with features like built-in FM stereos, business card readers and face recognition. Sri Lanka was the second country in South Asia where the products were launched, after India. Meanwhile, Lenovo has enjoyed success with its Lenovo 3000 N series of notebooks in the country, and sees further opportunities for its products in the Sri Lankan market.

In May 2010, Sri Lankan PC brand Singer launched its new Singer X series of notebooks and netbooks for the domestic market, again targeting rural areas with specially developed low-cost notebook models. As with the previous Singer models, the new models are also primarily targeted at rural markets. Greater economic stability will enable an expansion of domestic production. A number of other Sri Lankan PC brands, including Panorama, Maya, and Kobian have established a niche in domestic market. These companies have been competitive in the desktop segment, but are now seeking a share of the growing notebook opportunity.

The major domestic IT brand, and the only one with an international profile, is Panorama. It is one of the best-known brands for computers and servers in Sri Lanka. The company is currently focused on meeting the demand in the lower-end notebook segment. In April 2007, Panorama opened its own manufacturing unit in Colombo with an investment of US\$13.7 million. The project aims to produce 12,000 PC units a month and will employ more than 100 skilled workers in its first phase. Panorama is the top Sri Lankan manufactured brand computers in terms of market share. In the domestic PC market, its share is estimated at around 10 percent. The company has a strong distribution structure covering all 25 districts of the island (besides 11 retail showrooms in Colombo), with full-fledged after-sales service in countrywide branches.

Most international vendors work with local distributors rather than focusing on direct sales. The partners focus on the business market and build value-added services on top of the hardware offering. One of the leading distributors is PC Partner which is a service provider for brands like HP, Samsung, Lenovo, Acer, Toshiba, and IBM.

IT- Software

The two main trends of Sri Lankan IT-Software segment are as follows:

- ❑ Microsoft and other multinationals are affected by 90 percent piracy rate.
- ❑ Oracle, SAP, and Microsoft have a number of local clients in business software segment.

Since the demand for packaged software is likely to grow significantly, the main global vendors such as Microsoft, Oracle, and SAP are increasingly active in the Sri Lankan market. Competition is intense as they compete with a number of more specialised local companies. Popular business applications include ERP, as well as HR. In 2011, migrations to Microsoft's Windows 7 operating system have the potential to increase software and PC spending. In August 2010, Microsoft hosted an annual partners' conference, with the participation of a wide range of resellers from Sri Lanka. At the event, it was emphasised that the contribution of cloud computing could potentially bring about the IT development of Sri Lankan companies.

Following the worldwide launch of its Windows 7 operating system in late-2009, Microsoft worked with its network of resellers in order to make the new operating system available as quickly as possible. A number of special promotions were rolled out during the introductory period for

Windows 7 along with investment in training channel partners on the new software. However, Microsoft suffers in a market where 90 percent of software is believed to be pirated. The company announced provision of free of charge software to Sri Lankan universities as part of its 'Software for the Twenty First Century' programme. Microsoft has also sought to engage with the professional community in Sri Lanka by signing a memorandum of understanding (MoU) with the accountancy association, CIMA Sri Lanka.

In the enterprise application space, Microsoft competes with global leaders Oracle and SAP, which both have a number of local clients. Oracle has its presence in Sri Lanka since 1991, and now has 24 channel partners in the country. In August 2008, an Oracle Partner Network Day was hosted in Colombo that brought together Oracle partners from Sri Lanka and the Maldives. On the other hand, SAP has built a local client base, working with partners such as John Keells Holdings (JKH), the largest implementer of SAP in Sri Lanka. MAS Holdings was exploring the possibility of implementing a SAP system across its entire group by 2010.

Other significant players include Senid Business Solutions, one of the leading human resource information systems (HRIS) providers in Sri Lanka, which also has active presence in the US, Singapore, Malaysia, India, and East Africa. The company has its main R&D centres in Colombo and local clients include the Sri Lanka Ports Authority signed to automate its HR operations. Also, IFS Sri Lanka is another major player with an R&D centre in Sri Lanka. In 2008, the company employed around 500 local professionals and invested about US\$5 million in Sri Lanka. The company offers specific ERP systems for industries such as aerospace and defence, auto, high-tech, industrial manufacturing, utilities, and telecoms. Another IFS system implementation in Sri Lanka was made by retailer Singer in over 360 retail outlets across the island and is one of the largest web-based ERP implementation in Sri Lanka.

Microsoft entered the Sri Lankan business application software market in 2007, with its Microsoft Dynamics ERP solutions. Its local clients include the Jinasena Group, one of the largest industrial and trading conglomerates in Sri Lanka, with 15 group companies. The Sri Lankan unit of Toroid, a Scandinavian transformer maker, has also licensed Microsoft software for its factories in the island's exports processing zone. In 2010, Microsoft Sri Lanka started promoting its cloud-computing solutions, which was believed to be a transformative software delivery model for Sri Lankan enterprises.

The financial services vertical remains a key target for vendors as Sri Lankan institutions modernise to improve efficiency and support new services. In 2010, IronOne Technologies, a local provider of stock market software solutions won a contract from an Indian brokerage firm—India Infoline Securities—to support their operations in Sri Lanka. Similar to hardware, software vendors typically work with a number of local partners. As for the local companies, Zillione Systems recently launched Sage AccPac 5.5 for local customers and Exilesoft Limited signed an agreement with The Board of Investment of Sri Lanka to develop Microsoft based software for financial services and HR functions, as well as software solutions for mobile devices and handhelds.

IT- Services

The two main trends of the Sri Lankan IT-Services segment are as follows:

- ❑ IT services segment is dominated by local distributors for multinational brands.
- ❑ Sri Lanka has thrown up some original business models.

The nascent IT-services market is dominated by local IT distributors, which have built IT services offerings around portfolios of brands such as HP, SAP, and IBM. Sri Lanka's foremost IT solutions provider, PC House, is a subsidiary of PCH Holdings. The company has partnerships with many prestigious international brands. Another PCH subsidiary, Partner Limited, is a service provider for high-profile brands like HP, Panora, Samsung, Lenovo, Acer, Toshiba, and IBM.

Services are often basic and largely comprise of provisioning of hardware and software implementation, maintenance, and support. Sri Lanka has thrown up some original business models to fit local conditions. 'Rent a Comp Services' is a pioneering IT infrastructure facilitator in Sri Lanka that offers services such as the hiring of computers, notebooks and other IT equipment. However, in 2008, Rent a Comp started to diversify from this basic 'outsourcing' service into more advanced BPO services. One future area of opportunity for IT vendors is likely to be demand from Sri Lankan enterprises to utilise utility computing services such as software-as-a-service (SaaS). In April 2010, global IT services company Virtusa Corporation unveiled a new package combining consulting, implementation services, and management helping customers interested in developing, testing, and running business process management cloud initiatives.

International vendors like HP and IBM operate mainly through partners rather than having a direct presence. This partly limits opportunities for service provision in the country because such a move could be seen as threatening to partners. However, as market sophistication grows, vendors will increase their active involvement. In 2008, HP started to offer server and storage consolidation offerings in Sri Lanka to allow businesses to transition to reduce costs. Alongside, IBM described Sri Lanka as a significant growth market within its South Asia unit, and aims to further develop opportunities in the country.

In April 2009, the Sri Lanka Ports Authority signed a contract with Senid Business Solutions to automate its HR operations. The contract included a 24/7/365 support agreement with Senid, which has more than 500 clients globally. JKH, the largest implementer of SAP in Sri Lanka, is preparing for more large-scale deployments in coming years. Repair and maintenance remains the largest portion of local services. In 2008, Partner Limited, launched a notebook repair and service centre in Colombo, and has subsequently benefitted from the growing notebook market in Sri Lanka. In October 2007, EPSI Computers, the sole authorised distributor for ASUS in Sri Lanka, started to offer a three-year warranty on all ASUS notebooks. Dell trains IT professionals from partner SoftLogic to offer engineering and consultancy services to customers and assist them to select hardware.

Growth of BPO/outsourcing managed services market is hampered due to the inappropriate telecommunications infrastructure. Indian companies are likely to take a leading role, with the Sri Lankan government actively targeting Indian IT firms, including SMEs. India's Reliance Communications recently joined up with PCH to develop off-shore internet data centres (IDCs). In December 2009, Mphasis, an Indian outsourcing firm, announced opening of a centre in Colombo

employing 600 people in the first phase. The company is working with local educational institutions including the University of Moratuwa to develop its talent pool.

Internet/Broadband

There were 234,000 internet and e-mail subscribers in the country at the end of 2008, up from 215,000 and 202,300 subscribers in June 2008 and December 2007 respectively. Further, the number of internet and broadband users has increased to 1.77 million and 0.24 million by end-2009, and to about 2.26 million and 0.59 million by end-2010 respectively. This suggests that demand for internet services (relating to dial-up) remains minimal but is growing at a high rate. Operators are instead focusing their efforts on broadband.

Government Policies

Sri Lanka's Information and Communication Technology Association (ICTA) has an extensive brief covering information society development and ICT industry development and promotion. Key areas of activity include:

- ❑ Information Infrastructure/Digital Divide—connecting Sri Lanka's villages and towns to the world.
- ❑ E-Laws—guiding necessary regulatory reform to enable e-commerce and e-government.
- ❑ ICT Skills—developing necessary IT skills to support ICT industry development.
- ❑ E-Government—under the re-engineering Government initiative, applying ICT to modernise the public sector and deliver e-services.
- ❑ ICT Industry promotion—promoting Sri Lanka as an ICT destination.

The ICT policy of Sri Lanka has been largely contributed by both local and international institutions with the holistic purpose of enhancing quality of mass and providing sustainable outlet for a knowledge society. The Government of Sri Lanka first recognised the need for development of ICT through the National Computer Policy of 1983 (COMPOL). This first attempt was taken by the Natural Resources, Energy and Science Authority of Sri Lanka (NARESA). Government established CINTEC by Act of 1984 as the 'Computer and Information Technology Council of Sri Lanka.' The 'e-Sri Lanka' project launched in November 2002 was tasked with the development of an ICT Roadmap for Sri Lanka. The e-Sri Lanka roadmap resulted in the implementation of the Information and Communication Technology Act of 2003 which resulted in the establishment of the Information and Communication Technology Agency of Sri Lanka, (ICTA). The objective of e-Sri Lanka policy is to build a national information infrastructure, create a framework for the promotion of software and ICT enabled industries, re-engineering government, and developing ICT human resources.

The concept of e-Sri Lanka originally came from private sector, initially among leaders from the local software industry and associations which were working closely with the US Agency for International Development (USAID) on an ICT Cluster Initiative. Significantly, the emphasis has not been on ICT alone but on using ICT as a development tool to help improve the lives of citizens, including the rural communities.

There are currently six core programs being implemented under the supervision and coordination of ICTA, under the e-Sri Lanka program. Key policy components of the e-Sri Lanka program are as follows:

- ❑ **Re-engineering Government**—The objective of this component is to use ICT to automate and re-engineer government administration and service delivery mechanisms; to enable implementation of a common infrastructure across government facilitating the merging of functions between agencies; to achieve greater efficiency and better delivery of services to citizens; and to outsource automated government services and functions to the private sector. The E-government strategy in Sri Lanka is one of the most comprehensive in the South Asian region and possibly among Asian countries as a whole.
- ❑ **Building the National Information Infrastructure**—The main objective of this component is to provide a modern telecommunications infrastructure throughout Sri Lanka that provides access to all citizens to electronic services irrespective of location, and at charges that are affordable to all sectors of society; to establish a legal infrastructure that is aligned internationally and enables the reengineering of government and e-Commerce to be implemented.
- ❑ **Developing ICT Human Resources**—The objective of this component is to develop ICT, ICT enabled industries and general education services at the school and tertiary level, in order to enhance the delivery of general education. This is expected to increase the number and quality of higher level ICT professionals. It is also likely to develop a computer literate society in Sri Lanka that can take advantage of the benefits of e-Sri Lanka, reduce poverty, and bridge the digital divide.
- ❑ **ICT Investment and Private Sector Development** - The objective of this component is to achieve major economic and employment growth in Sri Lanka by using ICT to develop the local industry. It also aims to improve Sri Lanka's efficiency, to better compete in the global marketplace and to provide a user friendly business environment, ICT infrastructure, and legal environment promotes growth in the local industry as well as encourage multinationals to invest in Sri Lanka.
- ❑ **E-Society** - The e-Society programme aims to use knowledge and information to move the 'centre of gravity' of power and influence back to the rural masses, while increasing awareness among rural communities on the benefits of ICT.

The first BPO set up in Sri Lanka was an off-shore US operation that was set up as early as 1983. The number of BPOs set up in Sri Lanka increased rapidly after 2002, after a change in government policy and there are 25 BPOs at present. An estimated 86 percent of these BPO's have been established under the Board of Investment. These 25 BPOs have a cumulative investment of US\$13.2 million, and the most popular type of work undertaken is accounting services (43 percent of the BPOs in Sri Lanka) followed by call centre services (19 percent of the BPOs). Low labour costs and operational costs are cited to be the most favourable reasons for locating in Sri Lanka. Tax incentives offered by the government, and the time/distance advantages are also contributory factors in selecting the destination. The leading consumer of Sri Lankan BPO services are USA, UK,

and Australia. Nevertheless, it is worth mentioning that in 25 years, Sri Lanka has only been able to attract a grand total of 25 BPOs to Sri Lanka.

The software industry is predominantly export oriented, where clients from all over the world source their software requirements from countries like Sri Lanka. The value addition in the software industry is significantly higher than most other industries. However, the contribution made by ICT to Sri Lanka's economy is still negligible compared with the potential that it offers.

In Q1FY2011, the government launched a web portal and services platform, a key step in the implementation of its e-Sri Lanka agenda. The new portal was designed to reduce costs and provide traditionally underserved population groups with access to ICT tools. Government agencies previously ran on different platforms with little integration.

However, the government is not in a position to substantially increase IT spending, at least not on the scale required. After years of civil war, government finances are in inferior state, and large deficits are likely to force a slowdown in government spending on IT. However, much needed reforms to tax collection and other systems are examples of areas where IT investments could help to improve efficiency. As an upcoming country in Asia, Sri Lanka could be benefited by ICT in terms of industry development.

Exhibit 8: Highlights of Budget 2011 for IT/BPO Sector

Proposal	Impact on Exports
1) Establishment of a knowledge city in each province linked to university township	Increase ICT literacy required by the sector to be a niche global destination attracting outsourcing of IT & BPO services
2) VAT & NBT exemption for supply of locally developed software	The Government has already offered incentives to this industry. Intensifying these incentives by granting duty and tax exemptions will attract more investment and thereby contribute to exceed US\$1 Billion export turnover by 2015
3) Duty exemption for goods relating to ICT and BPO sector	

Source: Policy & Planning Division, Sri Lanka Export Development Board; iMaCS Analysis

ECONOMIC OUTLOOK

Sri Lanka's recent economic growth and long-term growth prospects have been boosted substantially by the ending of the civil war, and real GDP growth accelerated from 3.5 percent in 2009 to 8 percent in 2010 driven by higher growth in all the three sub segments—agriculture, industry, and services. Continued benefits from the end of the long-running civil conflict in 2009, such as improved business and tourist confidence plus more land available to agriculture, as well as the global return to growth, have underpinned the strong performance.

Exhibit 9: Summary Economic Data - Sri Lanka Economy

	Values			Growth (percent)		
	2008	2009	2010	2008	2009	2010
Aggregates at Current Prices (LKR Billion)						
GNP	4,305.7	4,779.5	5,530.5	21.6	11.0	15.7
GDP	4,410.7	4,835.3	5,602.3	23.2	9.6	15.9
Agriculture	590.1	613.7	716.9	41.1	4.0	16.8
Industry	1,295.5	1,434.7	1,649.1	21.0	10.7	14.9
Services	2,525.1	2,786.9	3,236.3	20.8	10.4	16.1
Aggregates at Constant (2002) Prices (LKR Billion)						
GNP	2,309.2	2,420.9	2,611.5	4.6	4.8	7.9
GDP	2,365.5	2,449.2	2,645.4	6.0	3.5	8.0
Agriculture	285.9	295.1	315.6	7.5	3.2	7.0
Industry	672.8	701.1	760.2	5.9	4.2	8.4
Services	1,406.8	1,452.9	1,569.6	5.6	3.3	8.0
Per Capita GDP						
Current Prices (LKR)	218,167	236,445	271,259	22.0	8.4	14.7
Current Prices (US\$)	2,014	2,057	2,399	23.3	2.1	16.6
Constant (2002) Prices (LKR)	117,006	119,766	128,089	4.9	2.4	6.9
Per Capita GNP						
Current Prices (LKR)	212,972	233,716	267,780	20.4	9.7	14.6
Current Prices (US\$)	1,966	2,033	2,368	21.7	3.4	16.5
Constant (2002) Prices (LKR)	114,219	118,384	126,447	3.5	3.6	6.8
Selected Components in Current Prices (LKR Billion)						
Private final consumption expenditure	3,085.3	3,116.2	3,684.7	28.4	1.0	18.2
General government consumption expenditure	713.8	851.6	872.6	30.6	19.3	2.5
Gross domestic fixed capital formation	1,115.3	1,147.4	1,452.0	26.1	2.9	26.5
Exports of goods and non-factor services	1,095.7	813.9	937.7	5.2	-25.7	15.2
Imports of goods and non-factor services	1,699.3	1,172.6	1,528.2	20.2	-31.0	30.3
Annual average price change (percent)	16.3	5.9	7.3			
Exchange Rate (US\$)	108	115	113	-1.1	6.1	-1.6
Population (million)	20.2	20.5	20.7	1.0	1.2	1.0

Recent estimates by the International Monetary Fund (IMF) forecast real GDP to grow at 6.5 percent in 2011, followed by annual average growth of 6.5 percent from 2012 to 2015. The agricultural sector will be supported by increased cultivation in the formerly war-torn northern and eastern provinces, although floods could impact output in 2011. The recovery in consumer and business confidence will also spur economic activity. Continued and planned infrastructure- and tourism-related building will support construction growth, while services, especially hotels and restaurants, will perform well, catering to the likely prolongation of the tourist boom. Rising global food and oil prices and a shortfall in domestic supply of agricultural produce due to the flooding could result in higher inflation. Private consumption growth will be the main driver of economic expansion, fuelled by rising incomes and remittances from expatriate Sri Lankans. Investment will be supported by reconstruction efforts in the north and east; public spending on

infrastructure (long neglected during the civil war); business investment, as companies seek to capture market share amid rapid economic growth; and rising property investment.

Exhibit 10: Estimates for Sri Lanka

Subject	Units	Scale	2009	2010	2011	2012
Current account balance	US\$	Billions	-0.2	-1.8	-2.4	-2.9
Current account balance	Percent of GDP		-0.5	-3.5	-4.1	-4.5
General government revenue	National currency	Billions	701	812	964	1,165
General government revenue	Percent of GDP		14.5	14.5	14.9	15.9
General government total expenditure	National currency	Billions	1,202	1,275	1,420	1,557
General government total expenditure	Percent of GDP		24.9	22.7	21.9	21.2
Population	Persons	Millions	20.24	20.40	20.54	20.68
GDP, current prices	National currency	Billions	4,825	5,616	6,470	7,343
GDP, constant prices	National currency	Billions	2,455	2,680	2,866	3,052
GDP, constant prices	Percent change		3.8	9.1	7.0	6.5
GDP, current prices	US\$	Billions	41.98	49.68	58.00	64.05
GDP per capita, current prices	US\$	Units	2,074	2,435	2,824	3,097
GDP per capita, current prices	National currency	Units	238.4	275.3	315.0	355.1
GDP per capita, constant prices	National currency	Units	121.3	131.4	139.5	147.6
Gross national savings	Percent of GDP		24.8	22.3	23.3	23.9
Investment	Percent of GDP		25.3	26.6	27.2	28.0
Inflation, average consumer prices	Percent change		3.4	5.9	7.9	6.2
Import volume of goods and services	Percent change		-7.0	24.0	7.7	10.1
Import volume of goods	Percent change		-7.0	24.0	7.7	10.1
Export volume of goods and services	Percent change		-18.3	17.5	8.6	7.5
Export volume of goods	Percent change		-18.3	17.5	8.6	7.5

Several negative scenarios exist for the economy, including renewed conflict arising from ethnic tensions. On the investment front, several areas need to improve to secure an investment climate conducive to large-scale private investments. The 10-year development plan, the Mahinda Chintana, emphasises the need to improve the business environment more widely. The World Bank's Doing Business 2011 report ranks Sri Lanka at 102 out of 183 economies, suggesting the need to eliminate red tape. It also includes recommendations for strengthening institutions, building human resources capacity, and simplifying procedures. However, it ranks 3rd in South Asia, behind Pakistan and Maldives. Overall, while Sri Lanka ranks 34th in 'ease of doing business' and 43rd in closing a business; it places amongst the bottom in 'dealing with construction permits', 'registering property', and 'paying taxes'. Sri Lanka also ranks at 137th in 'enforcing contracts'.

Exhibit 11: World Bank 'Doing Business 2011' Country Table for Sri Lanka

SRI LANKA		South Asia	GNI per capita (US\$)	1,990	
Ease of doing business (rank)	102	Lower Middle Income	Population (m)	20.3	
Starting a business(rank)	34	Getting Credit (rank)	72	Trading across borders	72
Procedures (number)	4	Strength of legal rights index(0-10)	4	Documents to export (number)	8
Time (days)	35	Depth of credit information index(0-6)	5	Time to export (days)	21
Cost (% of income per Capita)	5.4	Public registry coverage (5 of adults)	0	Cost to export (US\$ per container)	715
Minimum capital (% of income per Capita)	0	Private bureau coverage (% of adults)	18.6	Documents to import (number)	6
				Time to import (days)	19
				Cost to import(US\$ per container)	745
Dealing with construction permits (rank)	169	Protecting investors (rank)	74		
Procedures (number)	22	Extent of disclosure index (0-10)	4	Enforcing contracts (rank)	137
Time (days)	214	Extent of director liability index (0-10)	5	Procedures (number)	40
Cost (% of income per capita)	1,335.2	Ease of Shareholder suits index(0-10)	7	Time (days)	1,318
		Strength of investor protection index (0-10)	5.3	Cost (% of Claim)	22.8
Registering property (rank)	155			Closing a business (rank)	43
Procedures (number)	8	Paying taxes	166	Time (years)	1.7
Time (days)	83	Payments (number per year)	62	Cost (% of estate)	5
Cost (% of property value)	5.1	Time (hours per year)	256	Recovery rate (cents on the dollar)	47
		Total Tax rate (% of profit)	64.7		

DEMAND AND SUPPLY SCENARIO

Hardware Demand and Supply

Demand

Sri Lanka's economy started from a position of relatively low penetration for IT products, and therefore represents an opportunity for growth rather than a large existing market for most products. PC penetration rates remain low at 10.6 PCs per 100 households in 2009, rising to 11.4 if laptops were included. Penetration rates increased to 12.5 in 2010. Strong economic growth, the rise of software and IT-related outsourcing, and demand from the public sector (as state agencies upgrade their inferior IT systems) is factors that are expected to ensure strong PC sales demand. Penetration rates are expected to increase to 28 per 100 people by 2014. Besides being the highest level of PC penetration in South Asia, this will also be comparable to middle-income countries in South-east Asia, such as Thailand (which will have 24.7 PCs per 100 people in 2014) and Vietnam (28.8 PCs).

Consumer demand for telecoms services and IT continues to expand, particularly outside of the capital, Colombo, and its metropolitan area. However, an acute rural-urban disparity regarding

access to IT persists. Ownership of PCs or laptops in urban households, at 26.3 per 100 in 2009, was almost three times the rate for rural households (9.8). Geographic concentration was also evident with PC or laptop penetration in Western province (at 20.7 percent) standing far above that in poorer provinces like Uva (4.9 percent) or Eastern (5.9 percent) in the same year. The average price of a PC has dropped over the past few years to less than US\$300, bringing computers within the reach of lower income consumers and enhancing overall demand.

Demand from business for IT products and services have risen rapidly in recent years, increased partly by the needs of the booming telecom industry. Additional support has come from other expanding sectors, such as financial services, textiles, and logistics (particularly marine shipping). Business demand could also be increased by the expansion of the BPO industry following the end of the civil war. A large number of BPO investments were announced in 2010. Many large and medium-sized companies, especially in the more technologically developed Western province, have invested in IT and related training for their staff. However, poor skills and connectivity and bandwidth problems have limited the speed of IT roll-out. The high frequency of power cuts has also hindered the spread of IT, and an improvement in power generation may remove this impediment in the coming years. Demand for more sophisticated IT hardware, such as laptops, is usually limited to senior executives.

The government is an important source of demand, and the current administration is expected to step up procurement of IT products in 2010-14, as it improves its focus on IT policies. ICTA has co-ordinated an 'e-citizen' plan to raise ICT literacy, although the goal of raising this to around 60 percent by 2009 has probably been missed. The government noted an ICT literacy rate of 22 percent in 2008. Therefore, educational programmes are an important revenue stream for many technology companies in Sri Lanka. Foreign donors have funded IT development programmes, often benefiting their domestic firms. For example, a South Korean conglomerate, Samsung, has led a South Korean-funded project to establish a government network. In addition, as part of the government's efforts to increase awareness of the advantages of the Internet and computers, Intel (a US-based chip manufacturer) and the Indian subsidiary of RedHat (a US company that specialises in open-source software) have led a project to distribute low-cost PCs.

Supply

Efforts to establish the electronics sector as a significant contributor to exports have yet to gain traction. Based on figures from the Board of Investment, there were 32 electronics companies, both local and foreign, engaged in manufacturing a wide range of products for the international and domestic markets by the end of 2006. The government provided funds for the establishment of a nanotechnology institution in 2008, but this is unlikely to have much impact in the short to medium term.

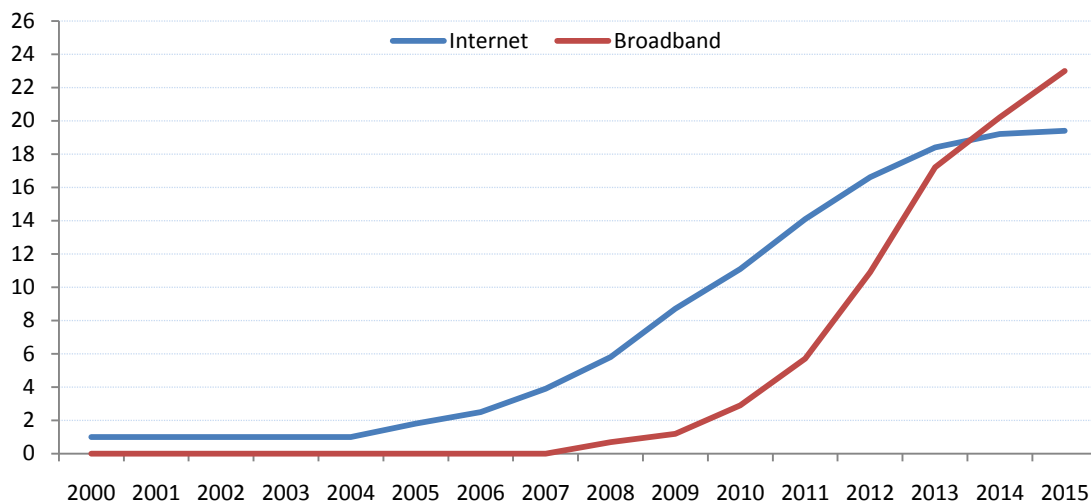
Sri Lanka's technology hardware is mostly imported. Many leading global technology brands—such as Lenovo, Cisco Systems, Hewlett-Packard (HP), Intel, Sony, and Philips—have a presence in the market through local distributors. HP claims to be the market leader in the computer sector, with 18.1 percent of total computer sales and 45.7 percent of notebook PC sales at the end of 2008. Around 200,000 computers were sold in Sri Lanka during 2010. Local IT hardware distributors include Abans, Neat Technology, Kobian Technologies, PC House, Softlogic, ABC Computers, and Memory Technologies. Chinese companies have made headway into the market

for providing IT hardware for the expansion of the telecom industry. For example, a Chinese firm, Huawei, supplied the equipment used by Airtel to launch its services in 2009.

Internet Demand & Supply

Exhibit 12: Internet and Broadband Penetration

(No. of subscribers per 100 people)



Source: International Telecommunications Union (ITU); iMaCS Analysis

Demand

PCs usage is still not widespread and Internet accounts remain relatively rare. According to the TRC Sri Lanka, there were just 240,000 Internet and e-mail subscribers at the end of 2009. Growth in subscriber numbers slowed sharply amid the economic downturn in 2008-09. However, the number of users increased to 598,000 during 2010, nearly 2.5 times of 2009. Online services are available from almost all banks, many firms in the travel sector, and a number of large retailers. However, high costs, low bandwidth, language barriers, and poor levels of computer literacy have held back demand in the online market, although The government's online service offerings are still underdeveloped, although several areas, such as passport processing, have been greatly sped up by the use of e-government techniques.

The government appears to be focusing on improving its e-government policies following the end of the civil war in 2009. This could improve the availability of online public services. Rapid growth of mobile ownership and the spread of third-generation (3G) technology have enabled users to connect to the Internet, watch television, and send and receive e-mail services. Thus, mobile Internet services may present opportunities for expansion. Operators have also reported rapid growth in demand for Internet broadband services, albeit from a low base. Supported by strong economic growth and improving PC penetration, this trend is likely to continue. However, the overall number of Internet users would remain modest, with forecast of 20 users per 100 people by 2014.

Supply

A number of private telecoms companies provide data communications, Internet services, and satellite link-ups. There were 22 licensed data communications companies and Internet service providers (ISPs) at end-2009. The state telecoms company (SLT) is the oldest ISP in Sri Lanka, having established rudimentary data communications and e-mail services for use by government, and selected multinational corporations in the early 1990s. An important rival ISP, Lanka Internet Services, went out of business in 2007. The company had been sued by SLT for providing international telecoms services. However, the dispute was resolved when the government opened the international calls market to other telecom providers.

Software Demand & Supply

Demand

Sri Lanka is facing a problem of software piracy. Sri Lanka was ranked second in terms of piracy in Asia in 2008, behind Bangladesh, with 90 percent of software believed to be unlicensed. This partly reflects the unaffordable prices for many legitimate software products. As with hardware, local demand for software services has been stimulated by the growth of outward-looking and internationally competitive sectors such as textiles, shipping, and financial services. Sri Lanka's BPO sector suffers in comparison to India's more developed equivalent, but has gained momentum in recent years. Most BPO work is data rather than voice-based. Sri Lanka has a particular advantage in financial and accounting outsourcing services, because of the large number of accountants trained to international standards, and working at lower salaries. Other areas of expertise include legal, engineering, and investment research services. The local BPO sector hopes to achieve sales of US\$2 billion a year by 2012. IT services exports reached around US\$300 million in 2010, with software exports dominating.

Supply

The government expects Sri Lankan companies to capture a larger share of the market for offshore software development, programming and maintenance, customer-service call centres, multimedia operations, and the processing of scanned documents. Among the companies that have set up offshore call centres or BPO units in Sri Lanka are Aviva, HSBC, and Astron (all of the UK), IFS (of Sweden), RR Donnelley, Virtusa, Microsoft, Motorola, and Innodata (all of the US), WNS Global Services (of India), and three local firms (Amba, HelloCorp, and eServices Lanka). Sri Lanka has a small but growing software development industry that comprises over 100 companies, the majority of which are emerging SMEs. Sri Lanka's main domestic IT companies include Millennium Information Technologies (MIT), John Keells Computer Services (JKCS), the Bartleet Group, Greenwich Lanka, OpenArc, hSenid, Kingslake Engineering Systems, Aklo Information Technology, Tech Distribution Lanka, eSenze, Informatics Group, Zeelabs, Zillione, and DMS Software. However, most of these firms are small in scale (MIT and JKCS are among the largest), particularly compared with most international IT enterprises.

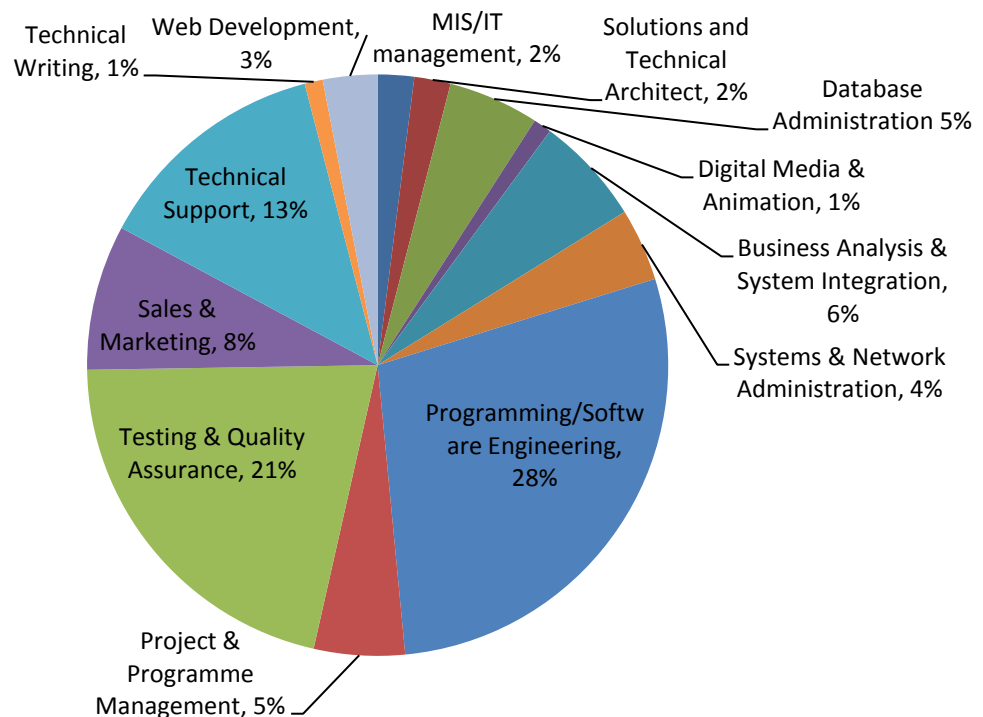
IT Professionals—Demand & Supply

Demand

IT professionals in Sri Lanka are generally well skilled with high project management capabilities making them competitive with the global IT giants. Sri Lanka could be a competitor to India because of the experience and quality of human resources, good project management capabilities, IT infrastructure, geographical location, and reasonable prices. There was not much affect from the global economic meltdown to the IT industry in Sri Lanka. However, there might be a shortage of IT professionals in the country with the high demand for IT professionals and many migrating to other countries. Therefore, Government universities and the industry need to ensure sufficient capacity to cater to the demand and build capacity within the country.

The demand for IT professionals is increasing at a rapid pace, and it is believed that going forward, more than 10,000 job opportunities would be created annually. Around 3,970 IT graduates (out of 4,473) have been successfully employed in 2010. However, more graduates are needed to be produced to supply the demand. An estimated 4 percent of the IT work force left the country in search of employment as compared to 1 percent for other sectors. The demand for IT personnel declined since 2006 but increased substantially in 2010.

Exhibit 13: Demand for IT Professionals by Job Category



Source: Sri Lanka Information Communication Technology Association (SLICTA), iMaCS Analysis

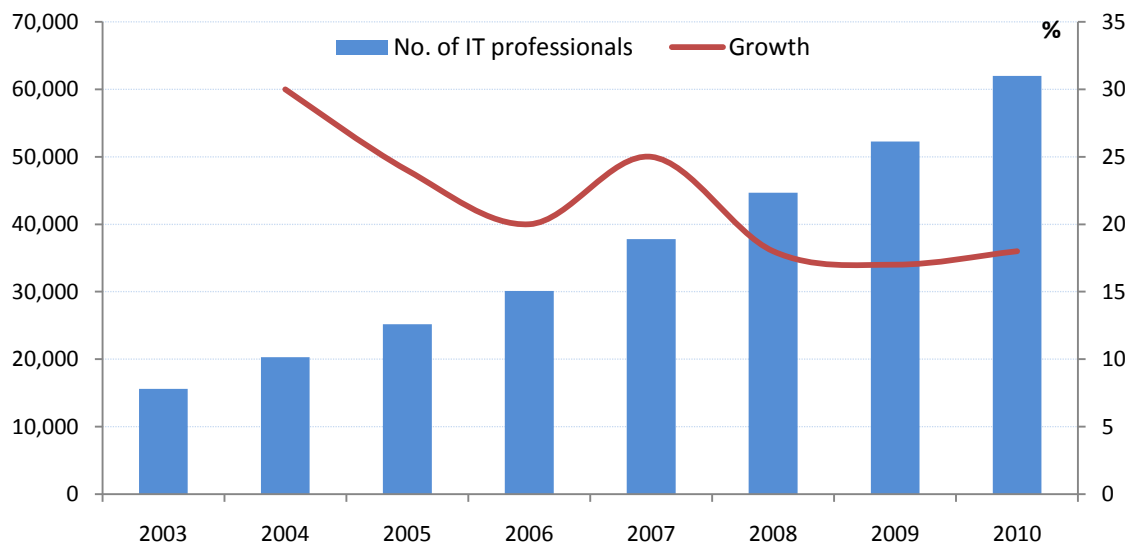
Programming/Software Engineering (29 percent), Testing & Quality Assurance (21 percent), and Technical Support (13 percent) are the job categories in high demand. Overall, Sri Lanka's ICT workforce has doubled in the past four years as the island ramped up training and investment to make the sector a key export industry.

Supply

Sri Lanka's IT workforce has more than doubled during the last four years, from 30,120 in 2006 to 62,000 during 2010. However, the increase in supply is less than what is required. As a result, shortages have widened over the years. It appears that the IT industry is resigned to the fact that the number of graduates required is not going to be fulfilled by the training institutions, and are therefore looking to bring in other graduates into the workforce. The industry expects to recruit non-IT graduates to fill IT vacancies. While this diversity in knowledge can help fill some specific job vacancies, these graduates need to go through a process of re-training. This adds to the overall recruitment cost for employers. In some cases, post-graduate qualifications are obtained by those who are already in the IT industry. Also, there are conversion courses taken by those not involved directly in IT jobs and who may never enter the IT workforce. In any case, the number of post-graduate qualifications is low.

The attrition rates, particularly in the IT sector, have increased amid difficult supply conditions. Across all sectors, the Solutions and Technical Architect position has the highest attrition rate. This is a critical role requiring experience. Other job categories that show high attrition rates are Programming/ Software Engineering, Testing & Quality Assurance, Technical Support, and Web Development.

Exhibit 14: Sri Lanka's IT Workforce



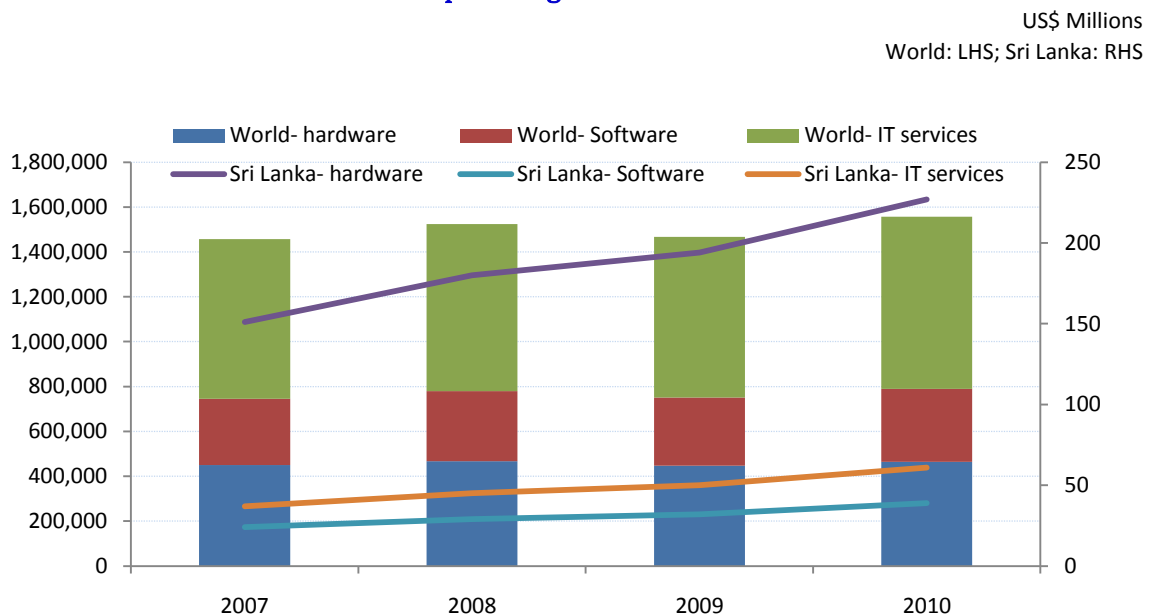
Source: Sri Lanka Information Communication Technology Association (SLICTA), iMaCS Analysis

The IT workforce (y-o-y) growth rate has declined over the years from 30 percent in 2004 to 18 percent in 2010. This shows a declining supply in comparison to the continuously increasing demand.

IT AND ITES OUTLOOK

Sri Lanka's IT market is expected to benefit in coming years from local and regional economic recovery. The restoration of peace and improvements in the security situation have helped to release restricted enterprise demand for IT solutions as companies look to increase efficiency. Market growth rate in the coming years would also be dependent on the development of better credit availability from banks and other financial institutions, as well as from vendors and retailers.

Exhibit 15: IT Spending - World and Sri Lanka



Source: OECD Information Technology Outlook, 2010; iMaCS Analysis

Globally, the highest growth during 2010 was registered in IT services at 7.3 percent, followed by software at 6.6 percent, and hardware spending at 4.1 percent. Overall IT spending grew by 6.2 percent during 2010, compared with a decline of 3.8 percent during 2009. Sri Lanka's IT market is dominated by hardware spending, which accounted for an estimated 70 percent of Sri Lanka's IT spending in 2010. There is considerable growth potential as the current level of computerisation is low, with PC penetration estimated at below 5 percent. Sri Lankan spending on software remains rather low, amounting to US\$39 million in 2010. The estimated 12 percent share of the total IT spend accounted for by software reflects the relative immaturity of Sri Lanka's IT market. However, the domestic software market is expected to grow at a CAGR of around 17 percent until 2013. IT services were worth around US\$61 million in 2010, accounting for about 18.6 percent of Sri Lanka's total spending on IT. A market CAGR of 18 percent is projected for period through 2013. The market is dominated by demand from government, finance, and telecoms sectors, which account for at least half of total spending.

In 2011, the consumer PC segment is expected to benefit from a further reduction in prices following the decision by the Sri Lankan government in June 2010 to reduce import duties on electronic goods. Another key driver of notebook demand, in addition to falling prices, is wireless connectivity, with notebooks being used to facilitate collaboration and keep up with email. Business IT demand could receive a boost from tenders deferred from 2009 and 2010. Migrations to Microsoft's Windows 7 operating system could also help to trigger a new cycle of consumer and business hardware upgrades. Further, the Computers for Education programme will continue to receive government investment in 2011-12.

The Sri Lankan IT market has considerable growth potential. Although the computer market has grown at double-digit CAGR for the past several years, penetration rates remain below 1 percent. Computerisation has just got started in government services. Similarly, major public and private sector organisations remain largely untapped in terms of ERP systems and other enterprise software. The Sri Lankan government has emphasised the importance of utilising IT to achieve its development goals. With the progress in 2009 towards an end to Sri Lanka's civil strife, the market could offer vendors with the best potential growth prospects in the region. Total IT spending is forecast to increase to US\$742 million by 2015. With a forecast CAGR of 18 percent, Sri Lanka could be one of the fastest-growing markets in the region taking an advantage over the others, particularly at a time when growth prospects have deteriorated in more established markets.

However, the government is not in a position to compensate for this with increased IT spending, at least not on the scale required. After years of civil war, government finances are not very robust, and large deficits are likely to force a slowdown in government spending on IT. Similarly, capital shortages in the enterprises sector and tough conditions for exports, would probably delay much-needed investment in new IT systems. The issue of high piracy rates is also a major barrier for the market to overcome. Patchy ICT infrastructure could act as a barrier to faster development of the IT market, and in particular to Sri Lanka's utilisation of IT services such as cloud computing. Despite these challenges, Sri Lanka could be one of the region's fastest emerging markets over the next few years, due to its relatively untapped potential. Sales of computers are expected to rise to at least 700,000 by the end of 2015. As more hardware and software is getting deployed, the consulting element will become more significant over the next few years. However, further improvement in the ICT environment is necessary before this can be realised on a large scale.

Two important areas that require the attention and action from the government are (i) development of telecom infrastructure and (ii) increasing the number of undergraduate and post graduate seats in the spheres of IT and Engineering. A steady flow of qualified manpower is essential to sustain growth in the IT and ITES sectors. These will help Sri Lanka in establishing itself as a player in the global IT/ITES industry.

ANNEXURE 1: MAHINA CHINTANA (IT/BPO SECTOR)

Sri Lanka Strategic Plan of Development for IT/BPO Industry

Sri Lanka is an emerging global IT/BPO (Information Technology/Business Process Outsourcing) destination in a number of key areas such as telecommunication, banking, financial services, insurance, and software testing. The BPO sector has developed a reputation in the fields of customer support, software development, and accounting services. Cheap labour, low operating costs, and the geographical situation in the advantageous time zone are the main attractions of Sri Lanka for the BPO business.

The software industry has been identified as a key industry with a high potential. There are about 100 software development companies and the total workforce exceeded 44,000 by 2008. Multinational companies around the world have utilised locally developed software in their business processes due to superior quality. The industry is considered as the fifth largest foreign exchange earner at present with US\$275 million earnings, and it is expected to exceed US\$1 billion by 2016.

Lack of a talented work force is the main impediment faced by the industry. The country needs to employ at least 500,000 people to develop the industry in the medium term. Recognising the potential of this sector, steps will be taken to fast track the development through providing fiscal and other incentives and concessions. A new tax regime will be developed to generate a high growth and investment in the IT/BPO sector.

Investment Strategy for IT/ITES Sector

With the educated pool of talent available in the country and the expansion of IT education in all parts of the country, the IT/BPO sector which currently exports services to the value of US\$300 million is targeted to increase to a billion dollar industry in five years time. This sector will absorb a talent pool in excess of 25,000. High profile international BPO operators will be attracted in addition to the few that are already present in the country. IT training is recognised for skills developments and in education to support this thrust sector.

Malabe IT City

The Malabe Campus of the Sri Lanka Institute of Information technology (SLIIT) which was established in 1999 is a 25 acre campus built to educate and train IT professionals required by the fast growing IT industry in Sri Lanka. The university was set up with a vision “to be a Centre of Excellence to advance and disseminate knowledge, foster and promote innovation, and produce world-class intellectuals in the field of Information and Communication technologies to best serve the nation and beyond.” The Mission is “To ensure that Sri Lanka profit from Information Technology, by providing education and training, conducting and promoting research and development, provide consultancy and software services, nurturing IT ventures, thus ensuring the availability of a rich pool of experts in IT.”

SLIIT Malabe Campus has a set of aesthetically designed, modern buildings comprising a ten storeyed building, a six storied building, and a large auditorium. This building complex has a built-up area of over 135,000 square feet and comprises lecture-theatres, laboratories, auditorium, communication facilities, library and reading rooms, administration and service facilities, cafeteria, and other infrastructure requirements such as lifts and stand-by generators. It has a large playing field, tennis courts, and a jogging track. The expansion plans include a new four-storied building that will accommodate more class rooms and common rooms. The programmes available at campus include Degree courses with specialisation in Information technology, Computer Systems & Networking, and information Systems. Also, recently the university has tied up with various international universities in order to give students enhanced learning experiences. Few such programmes include: B.Sc. in Information Technology of Curtin University, Australia; B Eng in Electronic Engineering, Sheffield Hallam University, UK; and BBA in Business Management, Sheffield Hallam University, UK. The in-house facilities available at various centres like-- Software design and development Division; Research and development incubator; and SLIIT Research Centre.

Knowledge Economy

Sri Lanka aims to move towards a quality and student friendly education system which contributes to a knowledge economy and provides the required skills and virtues to face the emerging needs of a modern global knowledge economy. In order to improve the overall quality of basic and secondary education it is felt to diversify the curriculum and improve the achievement levels of the students in secondary schools in English, Science, Mathematics, ICT, and Management.

It is collectively viewed to integrate technology learning as a part of basic education. Schools will be encouraged to use foremost technology in class rooms to enhance the delivery of education. The computer will be an essential device for every class room in secondary schools (from grade 6 to 13). In addition, multimedia and computer aided learning materials, approved by the relevant authority, will extensively be used in class room education. Technology learning will gradually be introduced into every student's basic educational curriculum to provide them with required skills and virtues to face the emerging needs in the future economic milieu. Government, in partnership with private sector will develop necessary communication technology and multimedia resources to help students learning in the classroom and alternate programme delivery such as distance learning.

Policy objective	Strategy	Target / outcome 2020
Improve the quality of Basic and Secondary education	Review and diversify existing curriculum	Improved GCE O/L pass rate from 52 percent to 65 percent by 2020
	Further strengthen teaching and learning of English as a second language at school level	Improved GCE A/L pass rate from 60 percent to 75 percent by 2020
	Develop Science and Mathematics teaching methodologies	Improved Minimum laboratory facilities for all schools will be ensured
	Develop laboratory facilities of 1,000 schools and provide science mobile laboratories for 3140 schools	All schools comfortably adopt ICT for academic and administrative purposes
	Establish a "Model ICT learning environment" within the special programme of improving 1,000 schools through provision and replacement of ICT equipment	Extended ICT as a technical subject for GCE O/L
	Implement educational software development programme	Established proper science and mathematics education in all secondary schools
	Implement special programmes to improve soft skills - team work, communication, leadership and entrepreneurial ability of students	Improved soft skills of students
Improve University Education for knowledge	Establish a new modern Science and Technology/ ICT university as a partnership project. Period: 2012-14	Increased world class education opportunities within the broad sphere of telecommunications, multimedia, computers, digital art, animation, information technology, software development and science and technology

Science, Technology and Innovation Strategy for Sri Lanka

“I will restructure the education and knowledge systems suitably, so that Sri Lanka becomes a key hub for knowledge and learning in the world”: Mahinda Chintana - Vision for the Future

The scene is now set for an accelerated drive for economic development of our country. For Sri Lanka to improve its economy, it is imperative to appreciate the fierce competition that goods and services have to face in the global market. This demands the infusion of technology and innovation to make products and services capable of overcoming the competition from goods and services from abroad in the open market. The scientific capability within the country has to be of world standard in the areas that Sri Lanka has the competitive edge, for the goods produced and services provided by the economy to be able to outsell those from other countries.

Whilst the Science and Technology (S&T) policy adopted by the Government in June 2009 identifies the generic S&T capability necessary for Sri Lanka it is necessary to specifically focus on the priority needs for rapid economic development in the next five years so as to help double the per capita GDP by the year 2016. The vision of this strategy is to make Sri Lanka a leader in knowledge creation and innovation in Asia by establishing a world class national research and

innovation ecosystem which will generate the necessary strategies, sustainable innovations, and technologies to achieve economic progress by focusing on areas of co-competencies and resource linked opportunities, whilst upholding sustainable principles and preparing its people for a knowledge based society through improved scientific literacy in Science.

Strategic Direction—Science, Technology and Innovation Strategy

Goal –1: An efficient system to actively harness innovations and technologies to generate and improve products and services to contribute towards doubling the per capita GDP in an equitable manner by increasing the high tech value added exports and the production for the domestic market

- Increase the high tech value added exports from 1.5 percent to 10 percent of the GDP by year 2015 through the advanced technology initiative.
- Achieve a market increase of import replacement by strategic production and social activities in a competitive milieu through enhanced and focused research and development.
- Develop a dynamic technology transfer platform for wealth creation through the technoentrepreneurship initiatives.

Goal –2: Well established, dynamic and resourced world class National Research and Innovation Eco— system.

- Establish a system for efficient and coordinated S&T governance.
- Attract, build, and retain strategic human capital needed to make Sri Lanka a leading knowledge and innovation hub in Asia.
- Create a comprehensive, world class research and innovation system through a well planned S&T infrastructure and services modernisation initiatives.
- Ensure rationalised and increased investment in R&D supported by facilitated utilisation.
- Facilitate international partnership in promoting high technology and research.

Goal –3: An effective framework to prepare the people of Sri Lanka for a knowledge society

- Implementation of the ‘Science for All’ initiative.
- Attract students at all levels to science.
- Create awareness of the potential of technology, R&D, and innovation in industry and businesses.

Goal –4: Sustainability principles entrenched in all spheres of scientific activities

- Ensure strategic competitive advantage and differentiation to achieve economic sustain ability in all scientific activities.
- Ensure environmental sustainability in all areas of work.
- Ensure social sustainability in all activities.

The objective of next massive leap forward is to transform Sri Lanka into a strategically important economic centre of the world. The aim is to transform Sri Lanka to be the Pearl of the Asian Silk Route once again, in modern terms. Using its strategic geographical location effectively, the country will develop all the spheres as a Naval, Aviation, Commercial, Energy, and Knowledge hub, serving as a key link between the East and West

Major Issues, Long-term Policies and Strategies

Issue	Policy	Strategy
Lack of adequate human capital for research, development and innovation in high-tech areas	Development of human resources in high-tech areas	<ul style="list-style-type: none"> Meet the demand of research and innovation in private and state sectors Attract more young graduates to research careers Recognise difference between researchers and university academics. (Nearly 5-10 percent of university academics are engaged in research) Attract senior researchers and innovators through appropriate incentive schemes to reverse brain drain
Decreasing trend of science students in public schools	Attract students at all levels to science education	<ul style="list-style-type: none"> Upgrade the Planetarium, ICT platform for rapid dissemination of knowledge by granting free internet access Set up a Science Museum or an Exploratorium Science Centres to inculcate scientific awareness
Lack of entrepreneur supportive research institution network	Create entrepreneur friendly research institutes	<ul style="list-style-type: none"> Ensure the protection of patent rights of the entrepreneur Create a financial and technical supportive environment for new entrepreneurs
Inadequate level of high end technology exports in Sri Lanka (Present level is 1.5 percent)	Increase advanced technology initiatives; Electronics, IT, Telecom, Biotechnology and Nano-Technology	<ul style="list-style-type: none"> Establish e-life centres and IT centres in 10 Divisional Secretariats to link Sri Lankan youth to the world Establish a Centre for Technology and Chartered Institute for ICT Establish a National Space Research Centre Give the high priority to invite FDI with high-tech and exchange of personnel in hi-tech areas Technical collaboration with foreign hi-tech industries in transferring advanced technology

ANNEXURE 2: EXPORT DEVELOPMENT BOARD (ICT/IT SECTOR)

Trigger/Barrier Analysis for ICT/IT Sector

As per Sri Lanka Export Development Board (EDB)

ICT/IT Sector—Triggers

Triggers	EDB Role	Functions	Action
Availability of Sufficient infrastructure.	Promoter	Uplift the position of Sri Lanka as a provider of ICT services.	<ul style="list-style-type: none"> Promote the Sri Lankan ICT industry through the web portal. Participate in international forums and exhibitions.
High education level of the younger population	Facilitator Adviser	Provide advice on the Opportunities available in the ICT/BPO sector and encourage the student community to develop ICT skills.	Take across the message of ICT/BPO sector opportunities through the programmes with universities and the educational institutes.
South Asia is known globally for IT skills.	Promoter	Use this South Asian reputation to impress buyers.	Highlight this fact in promotions as and when relevant
ICT is one of the most sought after professions of the young generation.	Facilitator Adviser	Make use of this enthusiasm and direct them to IT skills, which are in demand.	Student community and IT exporters to be brought forward for continuous interaction.
Cultural adaptability to Western cultures	Promoter	Make use of this characteristic in Promotional efforts.	Promote the ICT sector in western business cultures.
British business practices are established in Sri Lanka	Promoter	Give priority to markets with British business practices.	Find markets with British business practices to promote the ICT sector.
English language proficiency.	Promoter	Make use of this characteristic to highlight the advantages to the customers.	Promote markets which use English as the business language.

ICT/IT Sector—Barriers

Barriers	EDB Role	Functions	Action
Lack of specific software skills.	Facilitator	Bring together universities and educational establishments with exporters in order to promote specific and most suitable software skills for exports, among the student community.	<ul style="list-style-type: none"> Organise seminars/awareness programmes to encourage exporters, to engage with education establishments. Organising continuous interaction between educational establishments and ICT exporters.
Lack of capital	Facilitator	Promote the Sri Lankan Software industry as a potential sector for investment.	Contribute of funds to Venture Capital project, especially for the service sector.
Lack of statistics	Facilitator	Develop a mechanism to get annual statistics for the sector.	<ul style="list-style-type: none"> Carry out an annual industry value survey. Develop a mechanism in collaboration with the Exchange Control Department and Central Bank.
Infrastructure is costly compared to competitors.	Facilitator	Get telecom Service providers to reduce costs and encourage more volume to be used.	Organise continuous interaction between exporters and telecom providers.
Not known as an IT service Provider internationally.	Promoter	Promote Sri Lanka globally as an IT service provider.	Get the services of a global PR company to do a country study.
Lack of comprehensive studies on strengths and weaknesses compared to Global demand.	Facilitator	Benchmark the Sri Lanka ICT industry vis-à-vis global ICT industry.	Get the services of a global research company to do a benchmarking exercise.
Lack of software staff.	Promoter	Encourage Sri Lanka ICT companies to find partners in specific market segments which they can cater to.	Select and promote programmes targeting specific market segments.
English Language proficiency	Promoter	Make use of this characteristic to highlight the advantages to potential markets.	Promote markets which use English as the business language.

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