

ICT SECTOR in ARMENIA

Information and Communication Technologies sector is one of the largest and rapidly growing segments of the Armenian economy.

Since 2000, ICT industry has been recognized by the Government of Armenia as one of the primary sectors for the overall economic development of our nation. A new comprehensive ICT industry strategy adopted by the Government of Armenia in 2008 focuses on developing telecommunications and business incubation infrastructure, improving the quality and increasing the number of technical graduates, expanding support and financing mechanisms for technology start-ups, and developing other areas important for the growth of the Armenian ICT industry.

Armenia is one of the leading information technology nations among the neighboring CIS and Middle East countries.

Historically was on the forefront of high-tech research, development and manufacturing. Since early 1950s, Soviet Armenia has been a main hub of USSR's critical scientific and R&D activities in a number of technology industry segments such as mainframe and industrial computing, electronics, semiconductors, software development and others.

In recent years, the sector has witnessed major inflow of foreign investors who have located in Armenia to capitalize on the young and highly qualified workforce. The major specializations include embedded software and semiconductor design, custom software development and outsourcing, financial applications, multimedia design, internet applications, web development, MIS and system integration. In particular, Armenia has outstanding achievements in semiconductor design software and IP solutions. Foreign companies specialized in chip design place the R&D facilities in Armenia to benefit from the talented and creative work force pool and highly competitive wage rates.

Growing importance of IT industry led the Government of Armenia to declare ICT as one of the priority sectors of Armenian economy in 2000.

Recently, the Government approved a road map for the next few years on forming an e-society in Armenia. The World Bank will help Armenia in implementing this road map through a major project "Armenia E-Society and Innovation for Competitiveness Program."

In 2009, Ministry of Economy and EIF started Computer for All program with the aim to increase population's computer usage in Armenia by offering modern computer at affordable prices. The project's pilot stage began in September 2009 in partnership with Hewlett-Packard, local companies and commercial banks in several major cities of Armenia. During the next several years, the project aims to bring additional vendors and partners and expand its presence to the entire territory of Armenia.

Armenian IT Sector has two distinct segments of companies: firms with local ownership and branches of foreign companies. Characteristics of the business from each segment such as number of employees, salaries, revenues and others are noticeably different.

In 2010, the number of foreign companies in Armenia reached 72 entities or 37% from the industry total.

Armenia's software and services industry is young: the prevailing number of companies, nearly 80%, was founded during 2000-2010.

During the last 10 years, the industry saw sharp increase in the number of newly formed companies, both local start-ups and branches of foreign companies. More than 80% of the foreign companies were established in 2000-2010.



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The number of operating IT companies in 2010 reached around 200 representing nearly 15% growth from 1998 to 2010.

The most widely practiced specializations are now internet services, customized software, web development and IT consulting. In general, Armenian firms are now moving from outsourcing and web design to other products and services. More companies are now involved in engineering, systems development and R&D services.

Armenian companies have experience with stand-alone, as well as client-server and net-centric applications. Companies involved in embedded systems design and testing extensively employ C/C++ and assembly languages. JAVA and .NET technologies are more popular with companies focused on the creation of net-centric solutions. Internet technologies, such as AJAX, JSP, ASP, PHP, ColdFusion, HTML, DHTML, XML, and Flash are widely applied. Other languages and technologies include Visual Basic, Delphi, Perl, popular database systems such as Microsoft SQL Server, MySQL, Oracle, and Informix. Applications are developed for Windows, Solaris, Linux, and handheld platforms. Open source is becoming increasingly popular among young professionals and students, as well as IT businesses.

Revenues of IT companies from the domestic market reached \$91 million in 2010. Armenian IT industry export nearly \$58 million of products and services to many countries worldwide. Around 48% of firms are engaged in exports to a various degree: some receive only small portion of their revenues from exports, other are 100% export-oriented.

In 2010, total workforce employed by the IT sector reached around 5,000 specialists. On average, an IT company employs 25 people. Around 50% of the IT workforce has over 5 years of experience.

Armenia has been chosen as an offshore development destination by the foreign companies partly because of its inexpensive and highly productive labor. Nevertheless, economic forces behind the appreciation of Armenian Dram may have serious negative impact on the cost effectiveness of Armenian software firms.

Significant difference exists between locally owned companies and branches of foreign firms on how companies' management is carried out. The majority of branches do not engage in common management practices such as business development, marketing, and strategic management: these activities are accomplished by the head offices. In addition foreign companies, when compared to locally owned firms, employ more advanced project management practices and use better documented and designed methodologies.

However, as companies grow and develop, their management grows to be more and more sophisticated. Western practices are becoming part of the day-to-day management of local software firms.

Process improvement methodologies such as CMMI, ISO and IT Mark are becoming widely recognized in Armenia as more companies engage in streamlining their management and development processes.

According to various estimates, the number of internet users in Armenia in 2007-2008 was somewhere around 150,000-200,000 or 5-7% of the entire population. Fiber-optic infrastructure is available in Yerevan and other cities.

There are three mobile phone operators in Armenia: ArmenTel/Beeline (owned by one of the Russia's largest mobile operators VimpelCom), VivaCell/MTS (owned by Mobile TeleSystems, the largest mobile operator in Russia and CIS) and Orange Armenia (owned by France Telecom, one of the world's leading telecommunications operators). All three companies have nationwide GSM infrastructures including 3G. (Mobile GSM networks cover about 85 percent of the country's territory and 95 percent of the population.



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