

ICT in Hungary – mission possible



ITD
HUNGARY
INVESTMENT AND TRADE
DEVELOPMENT AGENCY

H-1061 Budapest, Andrásy út 12
Phone: (+36 1) 472 8100
Fax: (+36 1) 472 8101

For more information please contact
General information: info@itd.hu
Support for investment projects: investment@itd.hu



Hungary – an outstanding business location for ICT companies

Achievements in the Hungarian ICT sector:

- CAD/CAM design
- Character recognition
- Language technology
- IT security, data protection
- Anti-virus protection
- Software development for mobile communications
- Embedded mobile applications
- E-identification and secure collaboration platforms
- Digital filmmaking and colouring

Market outlook and business potential

Characteristics of the Hungarian ICT sector

IT exports

Some excellent Hungarian IT companies

Institutional background

Education

Cooperation between industry and academia

Outstanding business infrastructure

Hungary as an investment venue – testimonials, a favourable policy environment for the ICT industry, information society programmes

ITD Hungary

Useful links



Hungary an outstanding business location for ICT companies

Did you know?

- Hungary has the highest productivity in Central and Eastern Europe?

With its location in the heart of Europe, Hungary is the ideal country for investors seeking to expand their operations in the Central and Eastern European region. The population of Hungary is 10,066,158.

In Hungary, your company will find a highly skilled, creative, motivated, flexible and hardworking workforce with the highest productivity rate in the region. Long-term political and economic stability reflects the country's successful transition to a modern market economy. Following EU accession, investors settling Hungary have access to a market of 493 million people. Scores of multinational companies have located their manufacturing and service operations, and, in some cases, European headquarters and R&D centres in Hungary, bringing some 65 billion EUR in foreign direct investment.

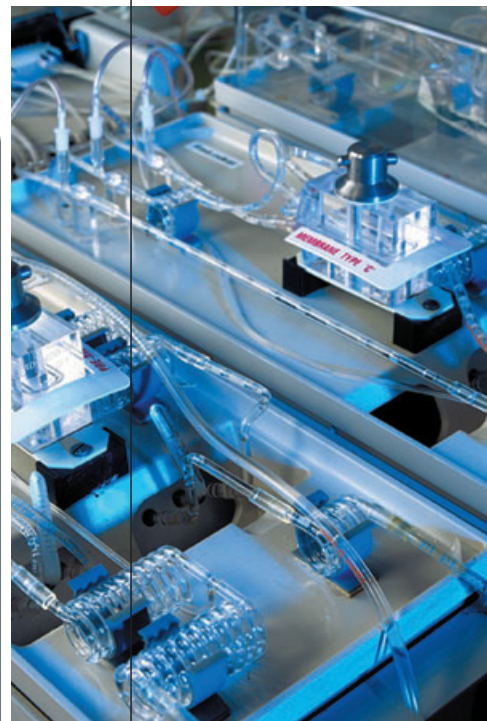
Hungary is a land of creativity and information and communications technology is undoubtedly one of the main areas of innovation and economic growth. Many IT companies with long track records in Hungary have also begun relocating research and development activities here, including HP-Compaq, Nokia, Siemens, Ericsson and SAP.



Achievements of the Hungarian ICT sector

ICT enjoys a remarkable tradition in Hungary – many Hungarian scientists and engineers have made their mark on information technology and computer programming. **János Neumann** (later known outside Hungary as John von Neumann) began his career in Budapest before working on the Neumann architecture used in virtually all computer systems. The operational principles of the IAS Computer he created in 1951 still determine the way a PC works today. Another Hungarian-born scientist, **John G. Kemeny**, was the man behind the user-friendly BASIC programming language. The predecessor of the 3.5" floppy disk was invented and developed in the Radio Technology Factory in Budapest by general manufacturer of tape recorders **Marcell Jánosi**. In terms of technology, that 3" cartridge-type disk barely differed from the ubiquitous 3.5" disk that emerged later. Following in the footsteps of these pioneers, today, Hungarian companies are successfully blazing new trails in different ICT niches.

CAD/CAM design – Graphisoft is the leading developer of Virtual Building™ solutions. It is widely acknowledged as the world's number one supplier of model-based software and services for the construction industry. Graphisoft® is currently ranked among the world's largest Architecture/Engineering/Construction CAD software companies for PC and Macintosh. In its 24-year history, Graphisoft has revolutionized architectural design and communications with its Virtual Building™ concept – introducing many innovations that are now considered essential to Computer Aided Design (CAD), including object-based three-dimensional modelling, building simulation and collaborative architecture. Graphisoft's flagship product ArchiCAD® is an object-oriented and fully integrated 2D/3D CAD solution for architects and the construction industry. Supported by current Windows and Macintosh operating systems, it is sold in 80 countries in 22 language versions through independent distributors and five wholly-owned subsidiaries. Graphisoft products are used by over 100,000 design professionals and builders worldwide and have played a key



Did you know?

- Hungary has corporate income tax of 16%, one of the lowest rates in the OECD?
- Hungary has probably the most developed motorway network of all the new EU member states?

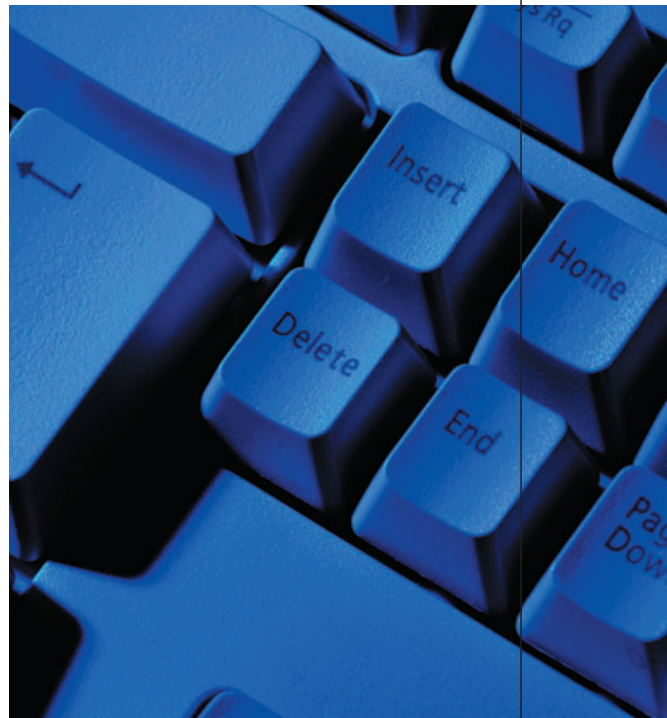
role in the construction of over a million buildings. The company also launched the world's first 5D virtual construction solution for the multi-billion dollar construction industry.

Character Recognition – Recognita creates applications able to recognise special characters, such as accents specific to different languages, and is among the worldwide market leaders in optical character recognition (OCR) software. The firm built its professional reputation and business success on the Recognita Plus product family, a suite of multi-language OCR programs capable of recognising over one hundred different languages. In March 2000, the firm was acquired by ScanSoft, Inc. (now Nuance Communications, Inc.).

Language Technology – MorphoLogic was founded in 1991 by a number of committed researchers. The company's first significant success was the creation of the Hungarian spell-checking module. The theory applied to this module enabled the company to create further linguistic tools and MorphoLogic soon found itself at the heart of the Central European language technology industry. The company gained a strong foothold as a vendor for multinational companies, such as Microsoft, IBM/Lotus, Xerox, Franklin and Adobe/WinSoft. Today, MorphoLogic's product range includes proofing tools, search and recognition support tools as well as electronic dictionaries, machine translation programs and a wide range of linguistic analysis tools. Various international players in electronic and dictionary publishing use MorphoLogic XML and localization services. MorphoLogic's highly successful pop-up dictionary won the IST Prize in 1999.

IT security, data protection – “From the beginning, KÜRT has earned its money by developing and selling state-of-the-art technologies and methodologies. This has created high expectations for the company among its employees, and vice versa. It follows that KÜRT's most valuable asset and the key to its success is its highly educated, committed team of experts.” The Hungarian firm Kürt Rt. has achieved considerable international success with its unique, top-level security technology and is recognized the world over for its data recovery and restoration solutions: Kürt can recover information from heavily damaged magnetic disks, even those burnt or partially incinerated. The firm was involved in the recovery of information from digital media virtually destroyed in the September 11 attack on the World Trade Center.

Anti-virus protection – **VirusBuster's** mission is to provide customized, multi-level virus protection solutions tailored to individual customer needs and backed by high-quality technical support. VirusBuster has been developing and distributing anti-virus and other IT security solutions for more than 15 years – including workstation, server and mail server protection, as well as anti-virus management systems for the most commonly used platforms. Many firms use its internationally recognised



Did you know?

- The Hungarian government provides EU-compliant financial incentives for new investors! Over the next seven years, EUR 32 billion in EU funds will be spent on new development projects.
- Hungary is a major ICT solutions provider in the OECD?

virus-detection engine in their security technologies. VirusBuster products have won the Virus Bulletin 100% Award and the Checkmark Anti-Virus Level One certification several times, as well as the ICSA Desktop/Server Anti-Virus Detection certification – all clear indications of their quality and effectiveness. VirusBuster products are available in Hungary and through the company's partners in Europe, South and North America and other countries around the world.

Software development for mobile communications – Several Hungarian firms are important vendors of GSM and 3G-based mobile communications technology. Founded in 2001 as a spin-off from Hungary's first mobile telecom operator Westel 0660 Kft., ITware is one of the most remarkable. Over the past decade, its specialists have gained extensive experience and expertise developing and operating Westel 0660's IT infrastructure. SMSware is an original SMS application platform providing flexible bulk SMS or premium SMS services via a fully functional Web interface. Using SMSware's built-in rule wizard and pre-configured user functions, the user can tailor the application to meet a wide range of highly specific needs without the help of a programmer. ITware's other ASP-enabled solution is FLEETware, a fleet management system that gives logistics and transportation companies full control over their vehicles on the road. ITware also recently took part in a huge R&D project known as LOGOS, which developed a portable e-learning solution to allow students to watch content streamed via digital TV (DVB-H) on their mobile handsets.

Embedded mobile applications – Cellum Zrt. (formerly Enigma) is a pioneering Hungarian technology company and a leading developer of intelligent systems for secure mobile commerce. Its unique, cutting-edge architecture enables secure transactions to be made over the GSM network. Cellum offers a variety of services including support for mobile banking, mobile signature/authentication and payment of tolls, parking and utility bills. It boasts working references with Pannon, T-Mobile and Budapest Bank (GE Capital) in Hungary and has also delivered a number of solutions outside the country. Cellum is working on a joint R&D strategy with the biggest European MVNO to harness the latest mobile technologies, such as 3G and UMTS, with an emphasis on user-friendliness and security.

E-identification and secure collaboration platforms – Since 9/11, creating reliable (electronic) identities for persons and objects is increasingly important. In our digitally connected ecosystem, secure electronic transactions rule our everyday lives, virtual identities must always match their physical counterparts. One of the key Hungarian players in this area is E-GROUP, with a product portfolio that includes e-identification and authentication (mobile as well as non-mobile), strong e-identities (PKI- and non-PKI-based, wireless-PKI and digital signatures), NFC (Near Field



Did you know?

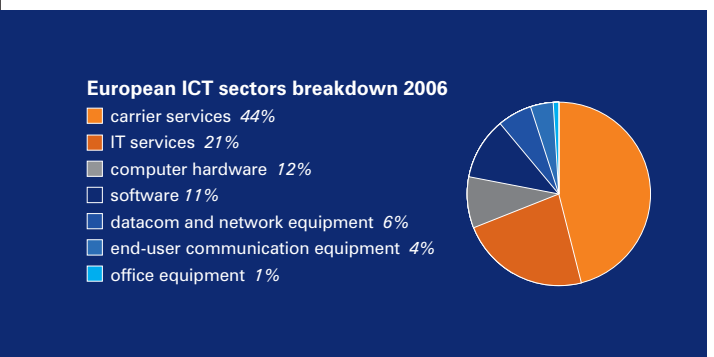
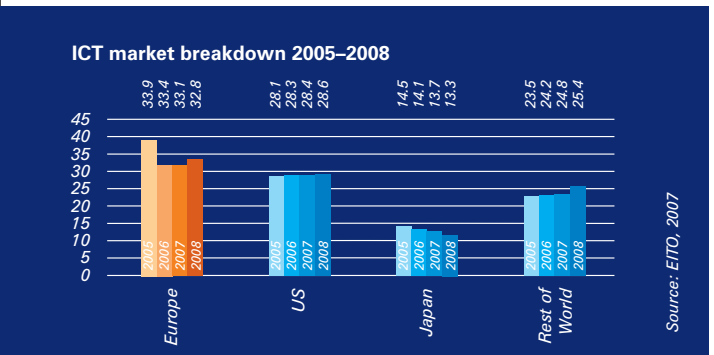
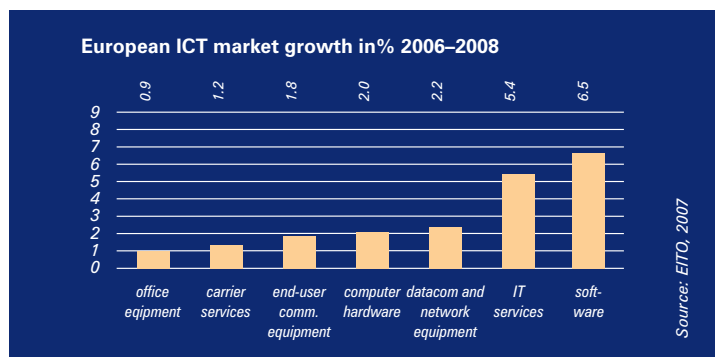
- That ICT products make up the second highest proportion of exports of all countries in the OECD?
- Hungary has the second highest per capita ICT expenditure in the CEE region?

Communication), RFID, smartcards, and industry-specific transaction and document workflow/DRM solutions, including payment systems. Its partner network extends from North America to South-East Asia (Shenzhen and Hong Kong, Vietnam and Indonesia), and the business is becoming increasingly international. E-GROUP has a stable and strong R&D strategy and IPR base, and is traditionally strong in the financial and government sectors.

Digital filmmaking and colouring – Hungarian software specialists began writing code for computer games two decades ago. Today, they are also renowned for developing animation programs, including the animation software for world-famous movies like Harry Potter and The Lord of the Rings. Colorfront Kft., the market leader in colour correction software, is now wholly owned by California-headquartered Autodesk Inc.

Market outlook and business potential

"The total value of the ICT market in Europe was EUR 680 billion in 2006, representing 5.7% of total GDP. The IT market (office equipment, electronic data processing and data communication equipment, software and services) amounted to EUR 310 billion, while the telecommunications market represented a total value of EUR 327 billion. The total ICT market in the US continued to show robust growth of 4.5% reaching total value of EUR 574 billion." (EITO 2007)



Did you know?

- The Hungarian ICT market grew by 50% between 2002–2007?

Did you know?

- That the Land Registry system in Shanghai uses programmes developed in Hungary? (L&Mark Ltd.)

Did you know?

- that following the attacks against the World Trade Center, a Hungarian company recovered data necessary for the world's continuing financial development?

Kürt – World Trade Center. The role of data recovery and protection on computer systems increased in significance following the 2001 terrorist attacks on New York. Destruction of the World Trade Center resulted in the loss of key information significant for the world's financial development. The city of New York accepted Kürt's offer to help.

Did you know?

- that a unique invention from a Hungarian company makes it possible to see 3D images without 3D glasses?

Holografika Kft, owned by electrical engineer Tibor Balogh, has developed a screen that does not require positioning or head tracking and allows an unlimited number of viewers to see the same natural 3D scene simultaneously. Holografika has been working on developing a solution for generating a perfect and real 3D view for several years. Thanks to the company's newly developed technology, objects can appear either in front of or behind the screen. This invention is expected to be applied to simulators and in the field of virtual reality and CAD systems.

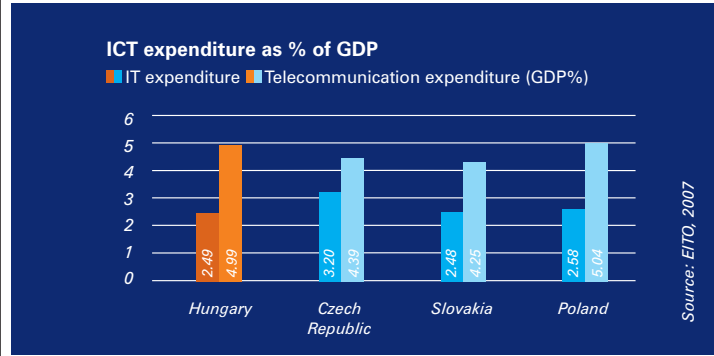
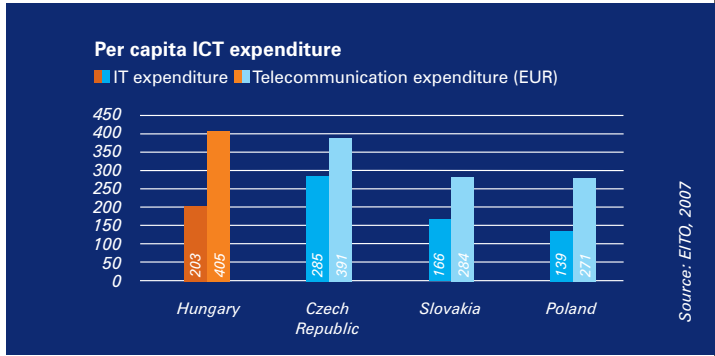
Characteristics of the Hungarian ICT sector

The Hungarian ICT market has shown strong growth in the past couple of years. Between 2003 and 2007 the average annual growth rate was 6.5%, well above the average growth rate in the EU (2.6%). Today, the Hungarian ICT market represents 15% of the CEE total and total sales are expected to reach EUR 6.4 billion in 2007 – 36% higher more than in 2002.

Hungary ranks top for per capita ICT expenditure and ICT expenditure as a percentage of GDP in the region.

The OECD Information Technology Outlook 2006 highlights Hungary, the Czech Republic, Slovakia and Poland as countries where ICT expenditures grew at an average of 12% between 2000 and 2005. In the same period, the OECD average reached only 5.6%.

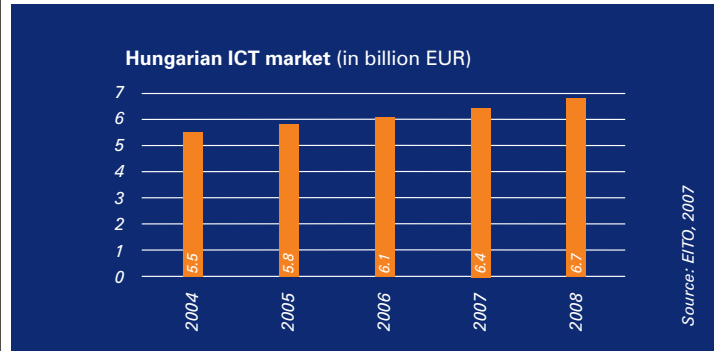
According to a survey of CISCO (2006), the Hungarian SME sector represents a large potential for future IT investments. The largest obstacle of IT development in



The growth of the ICT market in Hungary, 2002–2007

	Total sales (in billion EUR)						% growth				
	2002	2003	2004	2005	2006	2007	2003	2004	2005	2006	2007
Total IT	1.5	1.6	1.8	1.9	2.1	2.2	13.1	16.8	7.4	5.6	7.2
Total telecoms	3.2	3.5	3.7	3.9	4.1	4.2	10.0	5.7	5.0	5.2	3.9
Total ICT	4.7	5.2	5.5	5.8	6.1	6.4	10.5	6.0	5.8	5.4	5.0

Source: EITO, 2007



SME-s is the lack of financing. With the help of new financing structures the SME market will be one of the major driving forces behind ICT development in the near future.

According to the 2007 EITO survey, the size of the Hungarian ICT market was EUR 6.1 billion in 2006; this level is projected to grow to EUR 6.7 billion by 2008. The Hungarian market represents almost 20% of the CEE ICT market and 1% of the European ICT market. Total market growth will be around 4.5–5% in the coming years.

- Main drivers of market growth are:
- significant investment by SMEs,
 - a fast growing software market,
 - growing FDI,
 - regional demand for outsourcing services.

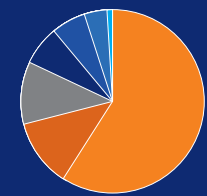
Hardware production

Hardware production – Hungary has become one of the major players in hardware manufacture in the region. It is the leader in the CEE region for computer assembly and communications equipment production. The significance of the sector in the Hungarian economy is represented by the fact that in 2005 communications equipment production amounted to 17% of manufacturing output, 25% of the total manufacturing exports and 30% of industrial employment (ICEG, 2005). By 2010, PC penetration is expected to double to 45% in Hungary (BMI, 2006).

After a year of expansion (8% in 2005), the PC market did not grow considerably in 2006 (with 1% growth in 2006, computer sales totalled 686 million). In 2004, the PC market grew 21.3% due to a number of large projects financed by state and local budgets and was also boosted by tax credits for consumer IT purchases (Sulinet Express Program). As government spending was cut, corporate demand could not compensate for

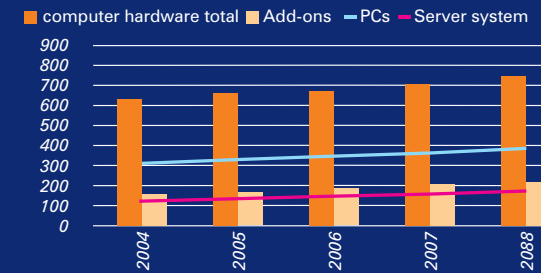
Hungarian ICT market by sub-sector

- carrier services 59%
- computer hardware 12%
- IT services 11%
- software 7%
- datacom and network equipment 6%
- end-user communication equipment 4%
- office equipment 1%



Source: EITO, 2007

The hardware market (EUR million)



Source: EITO, 2007

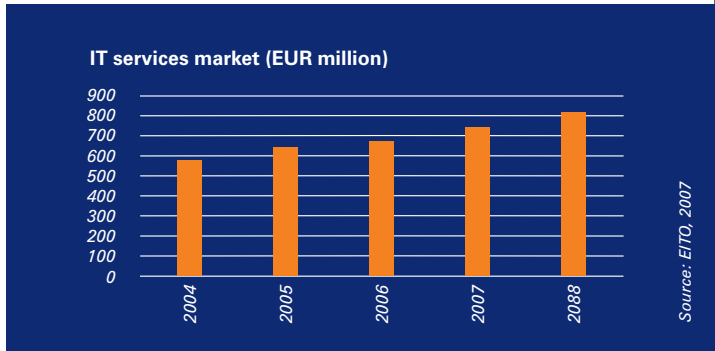
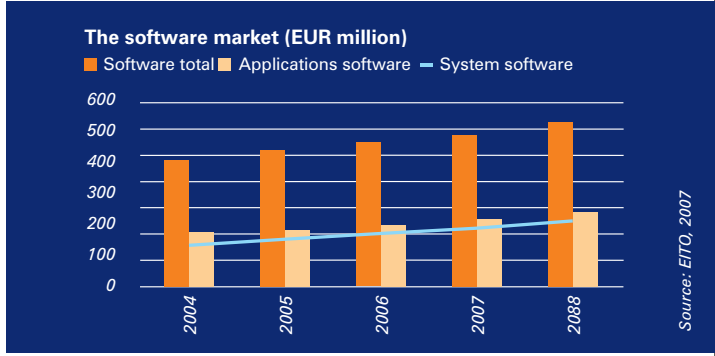


reduced IT spending on hardware (the Sulinet program also ceased to exist in 2006). In 2006, notebook shipments increased while desktop orders also decreased. Notebook sales have been boosted by the widespread availability of wireless networks, particularly in Budapest (with 469 hotspots). In 2006, demand for computer peripherals grew strongly while spending on mobile handsets increased in double digits due to strong replacement sales.

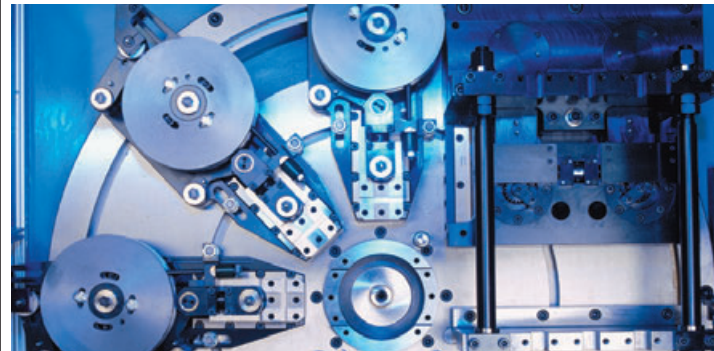
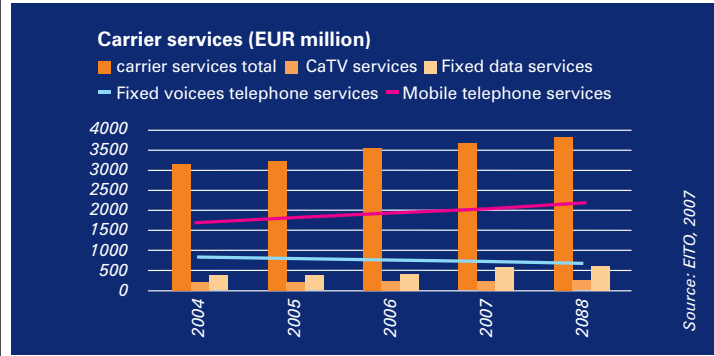
In 2007-2008, hardware sales are expected to increase again (by around 6%), boasting the growth of the entire IT sector. The most important market drivers will include FDI in IT related outsourcing, EU market regulations, and the increased demand from SMEs stimulated by EU structural funding.

Software production

The software market is the fastest growing IT segment in Hungary (the annual growth rate is between 8% and 9%). Last year, demand grew for security software, business intelligence and data management applications and ERP solutions for small and medium-sized companies. Packaged software sales have increased, while custom software solutions have lost from their significance. EU structural funds will further enhance demand for application software among SMEs. According to BMI (2007), the compound annual growth rate will reach 11% between 2003-2010.



IT services and outsourcing



Did you know?

- the program that enables the blind to use computers was developed by a Hungarian company? Recognita (Nuance Communications Inc).
- that Graphisoft's ArchiCAD 3D software, an early pioneer in the field of 3D visualization and modelling, is distributed in 80 countries and 25 languages and is used by more than 75,000 architecture designers?

IT services - The IT services market underwent major restructuring in 2005. Sales of the twenty largest service providers decreased significantly while the market share of small and medium sized providers increased. On the one hand, the number of large projects fell – the government sector cut spending considerably – and demand has become more cautious with companies ordering large projects in several steps. On the other hand, medium-sized companies expanded last year increasing the demand for system integration, infrastructure consolidation, data storage and storage server systems. In 2006, spending on IT services grew by 7.5% and will reach 8% to 9% in the coming years. Today, the banking and financial sectors, as well as SMEs, are a major driving force in the IT services market. Growth will be driven by restructuring of public administration, the rapid growth of global business process outsourcing and high demand for efficiency improvements to existing infrastructure.

IT Outsourcing – The outsourcing market showed robust growth of 15.6% last year. The IT outsourcing market reached 91 million EUR in 2006 driven by the demands of utilities and government sectors. (IDC, 2007).

Telecom market

Did you know?

- that Hungarian researchers perform significantly better in several fields of innovation than the EU-25 average? (TrendChart European Commission). Hungary achieved the best performance in the field of innovation cooperation between SMEs (157% of the EU-25 average) and outstanding results can also be witnessed in the field of ICT (150%), high-added value technology manufacturing (126%) and even in the number of people employed in manufacturing of this kind (125%).

Telecom market – The Hungarian telecoms market is one of the most competitive and well-regulated in the region. The presence of strategic investors, such as Deutsche Telekom, Telenor and Vodafone, shows the attractiveness of the sector. The sector posted 5% growth in 2006, but this is expected to decrease somewhat in 2007 and 2008 (to between 3% and 4%). In telecommunications, the fixed line market has been declining for several years (by 3.6% in 2006) as both connection numbers and traffic continue to fall. However, increased data communications and mobile telephone services may compensate in part for the fall in the fixed line market. The mobile market continues to show signs of growth despite moving closer to saturation point: The mobile services market grew 7% in 2005 and by 6% in 2006. In Q3 2007, mobile telephone penetration reached 100% with 10.5 million subscribers. Growth is expected to slow to around 4% in the coming years. The three service providers (T-Mobile, Pannon and Vodafone) are focusing on 3G services.

Dial-up Internet traffic is gradually being replaced by broadband (mainly DSL) serving around 1,2 million subscribers in Q3/2007. Internet subscriptions in September 2007 reached 1,678,000 (Hungarian Central Statistical Office, 2007) and Hungary ranks fifth of the 16 Eastern European countries for broadband penetration. BMI predicts that Internet penetration in Hungary will reach 40% in 2011 (from 30% in 2006) and broadband penetration will increase from 9% to 18%.



IT export

IT export by technology segments

	million EUR	share %	annual % growth			
Hardware				ERP (Enterprise Resource Planning)	33,216	1.1 44.4
Personal computers and thin clients	589	18.8	8.9	Vertical solutions, product management and operational solutions	50,689	1.6 35.8
Servers	11	0.4	-23.3	CRM (Customer Relationship Management)	3,124	0.1 83.6
External storage systems	1,364	43.6	61.0	GIS solutions	2,148	0.1 n/a
Peripherals	452,256	14.4	9.5	Document management, CMS, workflow systems	9,464	0.3 33.8
Network devices (business)	140,512	4.5	15.0	Other software	29,384	0.9 9.4
Network devices (telecoms)	78	2.5	19.6	Total software solutions	218,504	7.0 23.0
Other hardware solutions	247	7.9	14.8	Discreet IT services		
Total hardware solutions	2,883	92.1	29.9	Full IT outsourcing	19,104	0.6 25.2
Software				IT consulting (independent from products)	3,164	0.1 9.3
Operational systems and software	18,148	0.6	16.2	Organization development consulting	8,224	0.3 12.6
Systems, network control, storage software	44,4	1.4	-4.1	Total discreet IT services	30,488	9.7 19.8
IT security software	5,112	0.2	93.0	TOTAL	3,132,076	100.0 29.1
Development and integration tools	5,592	0.2	29.0			
Data management software	10,276	0.3	31.3			
Business intelligence	4,156	0.1	29.3			
Business applications	2,796	0.1	62.1			

Source: IVSZ IT market study

Export revenue of IT companies reached 8,756 million EUR in 2006, 25.3% higher than in 2005. Around 36.5% or 3,132 million EUR originated from IT activity, translating into 29,3% growth. The remaining 63.5% arose from other activities, such as manufacture of electronic components, mobile phones and telecommunications equipment (IDC 2007).

Hungarian-based companies manufacturing for global or European markets drive Hungarian IT exports. Hardware products produced and exported by multinational companies make up as much as 91.7% of Hungarian IT exports. Exports of IT services account for around 6.6% of total IT exports. (Source: IVSZ IT market study)

Small and medium-sized IT companies producing exports focus primarily on IT services and developing propriety software, rather than reselling activities. Fewer companies build their exports on the latter. (Source: ITD-IDC IT export study)

Did you know?

- that even the largest digital film laboratory in Hollywood has purchased a license to use the post-production software developed by Colorfront Kft.? The software was also used to produce some scenes in The Lord of the Rings and Harry Potter. More than a year ago, Colorfront Kft. was acquired by Autodesk, a company headquartered in California.

Did you know?

- that the German company Bosch, the second largest foreign employer in Hungary with a staff of 6,000 people, recently relocated its development activities? The Hungarian development centre specialises in automotive electronics.
- that in the world's largest open competition for Java-based applications Hungarian small enterprise (Solware Ltd.) won the Duke's Choice Award audience prize for its 3D pool game.

Portfolio structure of SMEs**Export portfolio – hardware products:**

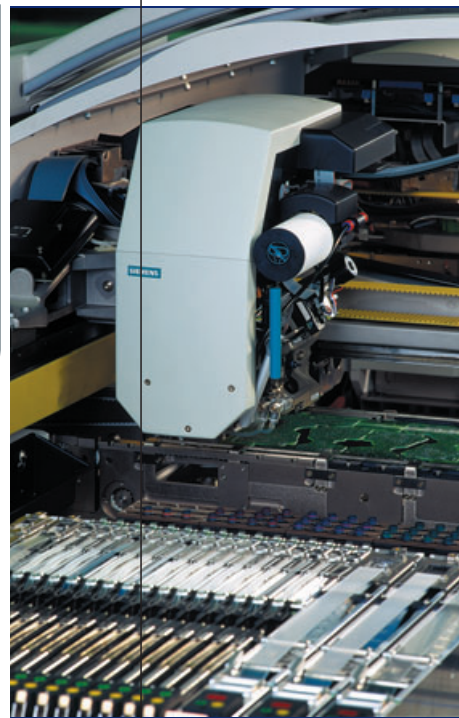
- Fully configured personal and handheld computers, servers and storage devices
- Components and sub-assemblies of personal and handheld computers, servers and storage devices
- Peripherals, office and reprographic technology
- Components for peripherals, office and reprographic hardware
- Supplies
- Network devices
- Network components

Export portfolio – software products:

- Gaming software
- Office software
- Collaboration and workflow software
- Multimedia applications
- Content and document management systems

- Workflow applications and ERP systems
- Production management, operations management and vertical applications
- CRM and call centre applications
- Engineering applications
- GIS systems
- Operating systems and system-level software
- System/network management and storage software
- IT security software
- Development and integration tools
- Data management software
- Business intelligence

The two most frequent service elements of an SMEs export portfolio are application customization and consulting services and development of propriety software. Hungarian companies are also successful in the fields of IT consulting, hardware and software installation, trouble-shooting, application integration and IT project management services.

**Export portfolio – services:**

- Hardware and software installation and troubleshooting
- Proactive support service for business critical processes
- Business continuity and back-up services
- Network development and integration
- Application customisation and consulting
- Custom software development
- Application integration
- System integration
- IT consulting
- IT project management
- Network and desktop outsourcing
- Application management outsourcing
- End-to-end IT outsourcing
- Utility software (ASP)
- Server hosting and collocation service
- Web hosting
- Website design and development
- IT training and education
- Digital signature authentication, certification
- Data recovery, data restoration
- Data capturing, processing and archiving
- Image processing, video processing, 3D animation production
- Call centre services
- Business process outsourcing
- Business consulting

Export markets – Germany is a key export market for Hungarian companies. Romania has second position in the rank, just ahead of the United Kingdom. These are followed by four or five Central-Eastern European countries located near Hungary (Czech Republic, Russia, Austria, Slovakia and Poland). Of non-European countries, the United States has the highest IT imports from Hungary.

Some excellent Hungarian IT companies

The major producers and service providers in the sector

The largest producers in the ICT sector include:

- IBM (US): SSC in Budapest employs more than 1,000 people, production in Vác (with around 1,500 employees), IT services in Székesfehérvár (more than 500 employees) and headquarters in Budapest (300 employees), making up a total of some 2,500 employees. In 2006, IBM won the Investor of the Year Prize for its new SSC centre, where the company created 700 new jobs and invested HUF 6.5 billion.
- Samsung (Korean): Printer and monitor production in Göd and Szigetszentmiklós.
- Albacomp (Hungarian): Produces PCs, laptops and servers.
- GE (US): Healthcare, consumer and industrial equipment development and production.
- Flextronics: Produces PCs, tape storage, servers and phone accessories in Zalaegerszeg and Sárvár.
- Nokia (Finland): Mobile handset production.
- Others: Solectron, Sanmina, Elcoteque, Videoton, Orion and Sanyo.

The major players in the ICT services market are:

- IBM: Regional Support Centre in Budapest and IT service provision in Székesfehérvár.
- HP: IT services; employs 500 people, 400 of which are highly skilled.
- Nokia: Telecommunications services and research, employs 560 skilled workers.
- Ericsson: Strong R&D in telecommunications software, 700 employees.
- Oracle: Database management, 150 employees.



Did you know?

- that Hungarian software supports IPTV services. IPTV technology makes it possible to deliver digital television services to households via broadband Internet connections. Xentaurix is a PC product enabling live TV, live radio and VoD (Video on Demand)? The Artec technology is also used by Deutsche Telekom to allow subscribers to search for and view stored programming within a given time period.

- SAP (Germany): Established its R&D Centre in Budapest in 2005, employs 150 IT experts.
- CISCO (USA): The Regional Technical Assistance Centre employs 70 people. The company plans to grow further in the near future.
- Siemens (Germany): Offers telecommunications systems and Next Generation Networking services. Employs more than 200 professionals in its communications division.
- Satyam (India): 20 employees, mostly specialist.
- Tata (India): Opened its European R&D Centre in Budapest in 2001. Employs 350 people in software development.
- Synergon (Hungary): Offers end-to-end IT services and employs around 400 people.
- T-Systems: (Germany): Telecoms software development, systems integration and outsourcing. Employs 260 professionals.
- EDS (USA): European Regional Centre, IT services in Budapest.
- FreeSoft (Hungary): Legacy systems, legacy transformation and modernisation. Employs more than 100 people.
- Getronics (Netherlands): Global system and network integrator. Employs 100 people in Hungary (Budapest, Győr, Szeged, Miskolc and Pécs).
- Dataplex (Hungary): Market leader in ICT outsourcing in the CEE region.
- BT (UK): CRM, IP services, outsourcing and security. Employs 130 people with 70 specialists.
- Sun Microsystems (USA): Software development and consulting.

Did you know?

- that the EagleEye data protection software developed by SaveAs Ltd. won a silver medal for the European Seal of Excellence in Multimedia. SaveAs is the first Hungarian company to win the prestigious prize in its three-year history?

Institutional background

Did you know?

- that the Jordan Investment and Finance Bank e-banking system was developed by the Hungarian company Eastron Kft.? The solution allows banking customers to manage their accounts in both English and Arabic.

- Microsoft (USA): The Hungarian representative office of the Microsoft Corp.
- SaveAs Kft.: EagleEyeOS software to prevent data leakage.
- 3D: Geographical positioning.
- Geometria Kft.: Creation of geographical databases.
- Balabit Kft.: IT security.
- Analogic Computers Kft.: Positioning camera.
- XAPT Hungary Kft.: ERP solutions.
- Magicom Kft.: Outsourcing of LAN/WAN, VoIP, network security and DNS/DHCP solutions.

Major companies involved in R&D in the sector:

- Siemens: Nearly 600 people employed in R&D. Siemens's Sysdata is Hungary's largest software house.
- Ericsson: Employs 350 in R&D related to telephone exchanges.
- Nokia: Three R&D divisions in Hungary.
- Tata: European R&D centre.
- SAP: established its R&D Centre in Budapest in 2005.



IVSZ, Hungarian Association of IT Companies

The Hungarian Association of IT Companies represents the interests of the Hungarian information and communications technology sector. Founded in 1991, IVSZ has grown to become the only major IT association in Hungary and one of the largest ICT associations in Central and Eastern Europe. With more than 330 members, it represents over 75% of the total annual output of in the sector. Its membership consists of a balanced mix of SMEs, large Hungarian enterprises and multinational corporations.

IVSZ's mission is to contribute to the development of the Hungarian information society and knowledge-driven economy through intensive lobbying and by identifying and exploring breakthrough points. Examples of breakthrough points include the promotion of e-confidence, the acceptance and promotion of the use of digital signatures, and issues of Internet access and content quality. The organisation has an active membership that contributes considerably to its success. IVSZ maintains strong relations with Hungarian government bodies and lobbies strongly to accelerate the creation of a productive legal environment for a competitive Hungarian ICT sector.

IVSZ is a member of EICTA, the largest ICT organization in Europe, allowing it to effectively represent the interests of its members in the European Union. IVSZ President Zoltán Kovács is a member of the EICTA board.

IVSZ is building an international bridge for the Hungarian ICT business community and supports every initiative that strengthens and develops cross-border business relations. The association provides assistance to foreign partners interested in establishing new business, investing in Hungary and building partnerships with Hungarian companies by organizing presentations and conferences, and by informing its members of new opportunities.

Education

The primary strength of the country is still its highly qualified and creative workforce, thanks to its world-class education system.

- Hungary's active labour force of around 4.1 million is highly educated and skilled.
- All diplomas require at least one language

examination and basic computing skills. Around 90% of students speak English. The second most popular language is German followed by French.

- Hungarian employees are seen as flexible, service oriented, highly motivated and very efficient, as well as open-minded and eager to learn.

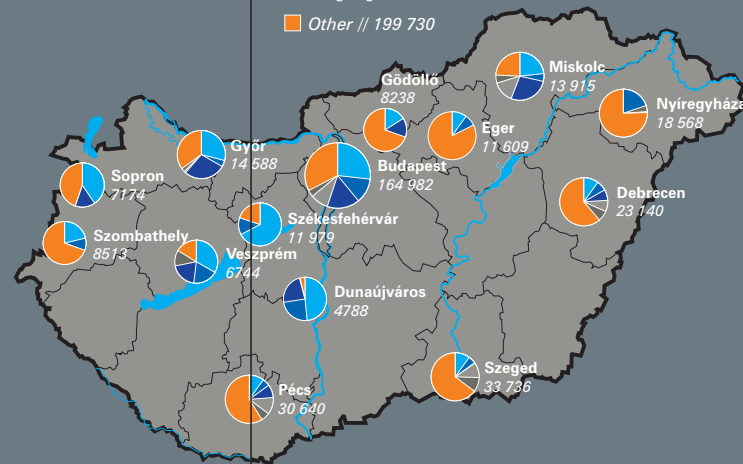
The largest IT faculties in Hungary

Budapest:
Budapest University of Technology and Economics

- Faculty of Electrical Engineering and Informatics
- Number of students enrolled at the IT Faculty: 8,000
- Graduates/year: 270

Major universities in Hungary

- Business & Management // 106 732
- IT // 32 738
- Engineering // 45 952
- Law // 24 451
- Language // 21 829
- Other // 199 730



Did you know?

- that one of the first access control solutions deploying automatic number plate recognition was installed at Ferihegy Airport in 1992? The heart of the system is the Carmen® license plate recognition software developed by Adaptive Recognition Hungary Inc. Today, this software is used in 128 countries around the world. Carmen® is the only software on the market that has higher than 95% accuracy in recognizing Latin, Cyrillic, Persian, Chinese and Arabic license plates.

Eötvös Lóránd University, Budapest

- Faculty of Informatics
- Number of students enrolled at the IT Faculty: 2,934
- Graduates/year: 150

Szeged

University of Szeged

- Faculty of Informatics
- Number of students on the IT Faculty: 1,700
- Graduates/year: 200-300

Debrecen

University of Debrecen

- Faculty of Informatics
- Number of students on the IT Faculty: 1,500
- Graduates/year: 200-300

Pécs

University of Pécs

- Institute of Mathematics and Information Technology
- Number of IT students: 1200-1300
- Graduates/year: 180-200

Miskolc

University of Miskolc

- Institute of Informatics
- Number of IT students: 700
- Graduates/year: 80-90

Veszprém

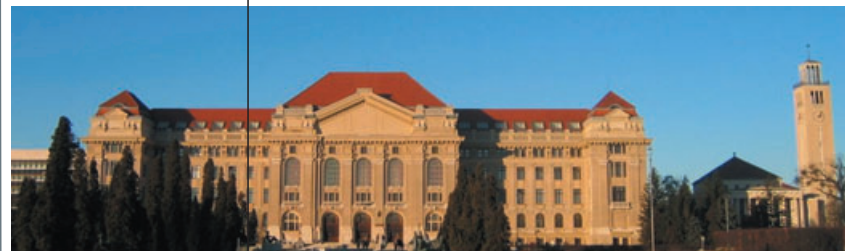
Pannon University

- Faculty of Information Technology
- Number of students in IT Faculty: more than 1,200
- Graduates/year: 230

Cooperation between industry and academia

Successful co-operation between multinational firms and universities

- Infopark, Budapest – Budapest University of Technology and Economics, ELTE University of Natural Sciences, IBM, Hewlett Packard and Panasonic
- Innovation and Knowledge Centre, Budapest – Budapest University of Technology and Economics and nine major IT companies
- Digital Community Centre, Miskolc – Miskolc University and Hewlett Packard
- Research and Training Program, Szeged – Szeged University and Tata Consultancy
- eScience Knowledge Centre, Budapest – ELTE University of Natural Sciences, Delta Elektronik, Econet, ESRI and MultiRáció
- Oracle Competency Center, Budapest – Budapest Technical College
- CISCO Networking Academy Program, Budapest – Budapest Technical College, University of Szeged, Pécs and Veszprém
- SAP Competency Centre – Budapest Technical College
- SUN Java and Solaris Certificates



Outstanding business infrastructure

IT parks in Hungary

Budapest

- Infopark Budapest (*already exists, new building under construction*): www.infopark.hu
- Graphisoft Park (*already exists*): www.graphisoftpark.hu
- Talentis Business Park, Zsámbék, Pest County (*opening: summer 2007*): www.talentis.hu
- Corvin Park (*planned*): www.corvinpromenade.com

Debrecen

- Airport Debrecen Business Park: www.airportinvest.hu

Hungary as an investment venue

Why Hungary?

There are several factors that make Hungary the ideal location for service sector investments:

- A talented, creative, flexible and qualified labour pool
- Professional, technical and foreign language skills
- Outstanding business infrastructure in terms of telecoms, power supply and office space
- Central location a real business centre in the heart of Europe
- Competitive labour costs combined with high productivity
- Economic and political stability
- Attractive incentives and supportive government
- Outstanding quality of life

Why invest in the Hungarian ICT sector?

- Outstanding growth rate in recent years
- Internationally high per capita expenditure on IT
- Booming segments, fast-growing software market
- Highly skilled, cost-effective workforce
- Continuous expansion of large multinational ICT companies into Hungary, many of which are relocating R&D activities
- Favourable policy environment



Why work with Hungarian software specialists?

- Hungarian scientists have played major roles in the development of information technology
- Students receive a high-standard of mathematical and IT education
- Hungarian IT experts consistently prove themselves on the international stage
- Hungarian employees are creative and willing to work
- Hungarians are highly motivated

Testimonials – why Hungary?

"The accumulated knowledge in the field of business process technology and the stable infrastructural background made it an easy decision."

"R&D plays a fundamental role in SAP's life, because, from the point of view of both our clients and our company, innovation is the driving force of success. SAP Labs Hungary will contribute greatly to expanding the capabilities of our SCM applications, enabling us to provide support to our clients, their business partners and their own clients in establishing the adaptive corporate networks of the future."

Claus Heinrich, Member of the Board, SAP AG.

“The choice of Hungary was due to positive experiences with the quality of its labour force and the country's political and economic stability.” *President of Morgan Stanley International Jonathan Chenevix-Trench and head of Morgan Stanley Global Operations and Technology Eileen Murray*

“The unique advantages of the Hungarian branch can be summarized as favourable location – all European countries easily accessible within 2 hours -, a growing economy, EU accession, and technically qualified and highly skilled professionals with language knowledge at a reasonable cost.” *S.V. Mani, head of Tata Consulting Services Hungary*

“EDS Hungary was established in 1991 and has a fourteen-year track record of successful operations. Through our broad range of services across a wide client base, we are present in almost every market segment, with special focus on the telecommunications and financial industries. EDS Hungary operates with 1,000 experienced professionals at 30 different locations in Budapest and across the country. With its pool of highly qualified employees, particularly with regard to language and technology skills, and competitive cost base, Hungary is a preferred strategic "near shore" delivery location for EDS operations throughout EMEA and globally.” *László Szakál, Managing Director of EDS Hungary*



A Favourable Policy Environment for the ICT Industry

- The Hungarian Information Society Strategy was approved in 2003
- The National Development Plan II, 2007-2013, has earmarked 3% (approximately EUR 790 million) of EU funds for the development of the ICT sector
- 10% tax deduction on software developers' labour costs

Information Society Programmes

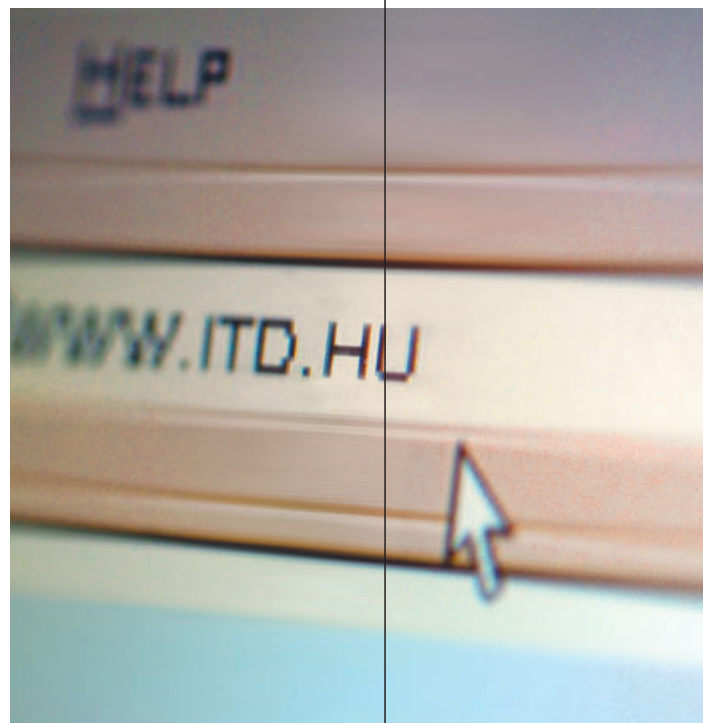
- The Hungarian Information Society Strategy was expanded in 2004 with the addition of 19 programmes
- Public Web Project launched in 2004
 - EUR 40 million government programme
 - 7,300 access points in first phase by September 2005
- eHungary Points (a complementary project that aims to extend Internet coverage across the country)
- The New Electronic Communications Strategy for 2006-2010 aims to strengthen competition in the market

ITD Hungary is the Hungarian government's Investment and Trade Development Agency established by what was then the Ministry of Industry, Trade and Tourism in 1993. Its objective is to promote international economic relations and business endeavours that have a direct impact on the development of the Hungarian economy. ITD Hungary has regional representative offices in eight regional centres of Hungary, from which most of the company's services are directly available. The Agency's foreign network operates under Hungary's diplomatic services at 55 offices in 43 countries. ITD Hungary focuses on the following activities:

Investment Promotion

ITD Hungary is the information and consultation centre for foreign investments in Hungary. As such, it is a single point of contact to support decision-making for foreign investors looking for investment opportunities in Hungary. Its main tasks include:

- Identifying Hungarian suppliers and sub-contractors for foreign investors
- Providing information on Hungarian investment, legal, taxation and financial conditions
- Offering advice on government programmes to support investment
- Compiling information to support decision-making for brown and green field investments, as well as for joint ventures



- Identifying available sites and recommended investment locations
- Liaising with local governments and authorities
- Maintaining company databases
- Producing and publishing information brochures in printed or electronic form
- Organising awareness and business networking events
- Advising Hungarian companies on the investment environment and on opportunities in foreign countries

ITD Hungary's investment programmes currently focus on investments in knowledge-based and high value-added sectors including life science, ICT, automotive supplies, logistics, business support services and renewable energy utilisation and management.

Trade Promotion

Through a diverse set of marketing tools and support programmes, ITD Hungary offers substantial logistical, financial and professional assistance to both start-up and established Hungarian exporters. A substantial part of ITD Hungary's trade promotion is carried out by the Euro Info Centre operating within the Agency's structure.

These activities, targeting mainly small and medium size enterprises, include the following key elements:

- Offering leads on export opportunities in electronic and printed form
- Organising business networking events
- Gathering and disseminating information on EU and local funding opportunities
- Offering advice on export procedures, customs, legal and taxation issues
- Managing, on behalf of the Ministry of Economy and Transport, the Government's trade promotion application programmes (grant schemes)
- Maintaining regional company and project-specific databases
- Advising companies on export-related promotional materials and communications projects



Enterprise Europe Network

ITD Hungary co-ordinates the Hungarian activities of the European Union's new Enterprise Europe Network. The network offers support and advice to businesses across Europe and helps them make the most of the opportunities in the European Union. The network's services are specifically designed for small and medium enterprises (SMEs) but are also available to all businesses, research centres and Universities across Europe.

EEN's Hungarian structure currently consists of nine organisations established at regional chambers, enterprise development agencies and innovation centres operating across the country.

Publications

ITD Hungary develops and distributes printed and electronic business guides, trade directories and information booklets in Hungarian and foreign languages. The Agency's prime communications tool is its recently revamped website at www.itd.hu, currently published in English and Hungarian. ITD Hungary's weekly business newsletter contains the offers and requests ITD Hungary receives from abroad through trade offices, embassies, trade promotion organizations or directly from various business entities.

Event management

ITD Hungary arranges business programmes for individual visitors and delegations, organizes conferences, exhibitions, product showcases and other business events. The company has substantial mailing lists and databases to support its PR and direct mailing activities.

Useful links

- National Communication Authority – www.nhh.hu
- Hungarian Association of IT Companies – www.ivsz.hu
- Inter-University Centre for Telecommunications and Informatics – www.etik.hu
- John von Neumann Computer Society – www.njszt.hu
- National Office for Research and Technology – www.nkth.gov.hu
- Hungarian Official Gazette Publisher – www.mhk.hu/mhknew/intro.htm



- National Development Office – www.nfh.hu
- Ministry of Economy and Transport www.gkm.hu
- Telecoms Industry Information System. Registration required. – www.e-stat.hu/en_ihm_h-pir/
- Digital media news for Hungary – www.dmeurope.com/default.asp?CountryID=17
- UNESCO Information Society and Trend Research Institute, Hungary www.ittk.hu/english/
- International Telecommunications Union, ICT – Free Statistics Home Page – www.itu.int/ITU-D/ict/statistics/
- ICT, workforce, employment – www.ittk.hu/english/ict.html

