

Central & Eastern Europe IT Outsourcing Review '2007

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TABLE OF CONTENTS PAGE

INTRODUCTION	4
EXECUTIVE SUMMARY	5
EXPERT VIEW	6
ANALYTICAL SURVEY BY CHRISTIAN BERNER	6
ANALYTICAL SURVEY BY NATASHA STARKELL	8
ANALYTICAL SURVEY BY PARVIS HANSON	10
ANALYTICAL SURVEY BY MARYNA YAROSHCHUK	17
COUNTRY ANALYSIS	22
MARKET VOLUME	22
NUMBER OF COMPANIES	23
NUMBER OF EMPLOYEES	24
RATES	25
COUNTRY SPECIFIC FEATURES	26
COUNTRY PROFILES	28
ALBANIA	28
BELARUS	29
BULGARIA	30
CROATIA	31
CZECH REPUBLIC	32
ESTONIA	33
HUNGARY	34
LATVIA	35
LITHUANIA	36
MOLDOVA	37
POLAND	38
ROMANIA	39
SERBIA AND MONTENEGRO	40
SLOVAKIA	41

SLOVENIA	42
UKRAINE	43
INFORMATION ABOUT EXPERTS AND PARTNERS	44
EXPERT PROFILES	44
PARTNER PROFILES	47
UKRAINIAN HI-TECH INITIATIVE	50
LIST OF RESPONDENTS	51

LIST OF FIGURES

FIGURE 1 MARKET VOLUME	22
FIGURE 2 NUMBER OF COMPANIES	23
FIGURE 3 NUMBER OF EMPLOYEES	24
FIGURE 4 RATES PER YEAR	25

LIST OF TABLES

TABLE 1 LIST OF RESPONDENTS	51
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INTRODUCTION

Europe has enormous potential for development of IT Outsourcing industry. This region will definitely keep the appreciation of the customers from all over the world for yet another decade. It will attract new clients by professionalism of the experts, low labor cost, friendly legislation as well as by geographical vicinity and cultural connection to the Western Europe.

Main indicators of IT Outsourcing industry development (market volume, number of professionals, number of companies) take Central and Eastern Europe to the level of such global outsourcing centers as India, China, and Russia.

Research objectives and methodology:

The main objective of this research conducted by the Ukrainian Hi-Tech Initiative with the support of ITONews.eu, Baltic Outsourcing Association, JNN Consult Ltd and Employers' Association of the Software and Services Industry is formation of the complete view on the potential of CEE region - the promising cluster for nearshore IT Outsourcing for the Western European countries and offshore IT Outsourcing for the US.

The data presented in this research have been derived from collected and processed third party information, individual interviews with the representatives of associations and companies involved into IT Outsourcing as well as the views of independent experts.

The research was conducted in August - February 2007-2008. National IT Associations and largest IT companies from 16 countries of the region kindly responded to the research.

EXECUTIVE SUMMARY

The research examines key development indicators of IT Outsourcing market in Central and Eastern Europe region: market volume, number of professionals, number of IT companies providing outsourcing services, cost of one professional for the end customer.

Market volume is the main indicator of the development of IT Outsourcing industry in the country. The scope of final IT products served as the basis for the calculation of market volume. Other estimation sources were the total number of employees and average rates on the country market. The use of open analytical reviews, data received from the national IT associations and expert opinions allowed adding more precision to this index.

When calculating the number of IT companies, considered were the IT and software development companies providing Outsourcing services with more than 5 employees. Central and Eastern European region is satiated with the small companies undergoing intensive development. Low threshold was taken purposefully in order to provide a complete market snapshot for each country.

When calculating the number of professionals, considered were only those IT specialists that are involved into IT Outsourcing less administrative personnel.

The attempt was made to calculate also minimum and maximum annual cost per service of one IT professional in each of the countries. The cost includes salary, taxes, office facilities, etc.

All findings were placed into the country profiles for more convenience.

Independent experts Christian Berner, Natasha Starkell, Parvis Hanson, and Maryna Yaroshchuk provided their views on the IT Outsourcing markets of Central and Eastern European region.

We hope that the "Central & Eastern European IT Outsourcing Review '2007" will be of use both for those who already work and those who only plan to establish the business in this region.

EXPERT VIEW

This chapter outlines the expert estimations of IT outsourcing market in Central and Eastern European countries.

Analytical Survey by Christian Berner

Ukraine is set to benefit most from the new value chain in IT services

CIO's in Western Europe, especially in Germany, Austria and Switzerland are facing a serious challenge. In 2007, for the first time since the peak of the internet bubble in 2000, the demand for IT specialists exceeded the supply. The last BITKOM survey indicated that 43% of the German companies encounter serious difficulties in finding appropriate IT staff.

Some background information about this situation:

The first reason is simple, it's demography: the first generation of IT-experts who started their career in the 60ties is already starting to retire.

The second reason is supply of young IT specialists is not up to the demand: In 2007 only 29.000 new students started higher education in IT, compared to 38.000 in the year 2000. And not even 50% of them will graduate because many do not finish their studies for multiple reasons.

Now, one could think this shortage of resources leads to higher prices for IT services...but on the contrary!

New sourcing options from Asia, Eastern and Central Europe are more and more influencing the definition of tariffs and rates in the outsourcing industry. From a historical point of view, this picture is not unknown. Look at the situation of the automotive industry in the 80'ties: low standardization of components and processes. Global competition appeared: Japanese manufacturers introduced "lean production": standardized processes and components allowed to outsource a lot of production activities to specialised suppliers which can realize economies of scale and innovations easier because they have a higher degree of specialisation. We can observe the same situation in the IT services industry today with the development of multiple global sourcing options and innovative value chains.

At the same time the main tasks of CIO's are changing fundamentally. CIO's have to concentrate their resources on selected core competencies because the insourcing of commodities, such as IT infrastructure services is not economical anymore. On the other hand, outsourcing options are multiple and attractive. The classical IT value chain plan, build and run is being replaced by a new one: make, buy or re-use and deliver. It is obvious that this new value chain is also a result of the increasing importance of offshore outsourcing as a sourcing option.

Germany is the biggest market for IT services in Europe. It is also among the late adopters of global sourcing options, because German customers like to deal with local partners. What does this mean for the Ukrainian outsourcing industry?

The supply of IT skills from countries with overheated IT labour markets like Czech, Poland, Hungary, Slovakia, Latvia, Estonia or Lithuania is not an option to

increase the competitiveness of the German IT service providers facing competition from India and China.

Economically, it is obviously not in the interest of the German IT services industry to deal with outsourcing companies from Eastern EU member states like Czech, Hungary or Latvia which will themselves subcontract parts of the work to outsourcing companies in Ukraine or Belarus. Thus, Ukraine may become for the German and Swiss IT services sector what Slovakia is already today for the German automotive industry: An integrated part of their cross-border value chain. These delivery models combine nearshore and onshore service components and go along with a high organisational maturity level. As an example, Ukrainian outsourcing market leader Infopulse with their partner REVACOM from Germany deliver software management services "Made in Ukraine" to customers around the globe.

Successful worldwide projects uniting IT engineers from Ukraine and delivery managers from Germany have already become reality and it mainly depends on the direction of the educational policy of Ukraine if the country will become the leading Eastern European supplier of outsourcing services to the German-speaking markets.

Analytical Survey by Natasha Starkell

In our advisory work at GoalEurope when IT executives came to us to help find the best possible location to outsource software development, we often recommended Ukraine. Our choice is explained by the fact that Ukraine has a large well-educated population, which provides a source of IT talent, and it is not an EU member state, an additional hurdle for labor migration. But in the last year the picture has changed: when the international IT community has learned about the advantages of outsourcing to Eastern Europe, the demand for IT professionals everywhere in the region sky-rocketed.

Now no matter how convincing the macroeconomic factors may sound, speak to any IT manager in Eastern Europe, and he or she will tell you about rising prices and difficulties to expand IT team. The comments such as "Don't come to Romania if you need more than 100 developers", "Another multinational is just the thing we need here in Sofia" and "Isn't Ukraine getting expensive?" would not be uncommon. The result of this research proves the point by showing the diminishing gap in gross salaries of an IT developer across the region. According to this survey, the salary gap between Polish and Albanian developers is only 10 000 Euros: in Poland IT developer could expect 30% more than in Albania. At the same time Polish GDP Per Capita indicator (purchasing power parity) was almost 3 times higher than that in Albania (Euro 11200 versus Euro 3800, Source: CIA World Factbook est. 2007).

So the two critical elements of the offshore outsourcing: resource availability and affordable prices are at question. This didn't stop Accenture, Logica CMG, EDB, Siemens, Nokia and a long list of other multinationals to establish and expand their presence in Eastern European countries. The quality of work, tolerable labor unions, proximity to Western Europe and a cultural compatibility are all the factors which contribute greatly to the interest in the local workers beyond cost arbitrage.

As for the IT industry, acquisitions of outsourcing companies have been happening across Eastern Europe for a few years but now there are signs of accelerated consolidation. In the portfolio of US outsourcing company Exigen Group is Dati Gruppa, a Latvian IT company, and Starsoft, a Ukrainian company. US- and India- based Global Logic merged with Ukrainian Bonus Technologies, whilst Kharkiv-based Telesens was sold for \$2.7 million to NASDAQ-listed TTI Telecom in December 2007. Earlier that year Norwegian IT giant EDB bought Miratech and Infopulse, two Ukrainian outsourcing companies and there are a few other transactions there which are about to happen.

In Poland, the third largest country in the region after Russia and Ukraine there are few large specialized offshore outsourcing service providers, with majority focusing on the local market. Key IT players still offer software development services to their international customers but its prices perhaps match those in Western Europe by now. Here IT companies merge to survive fierce competition for resources and customers from the international corporations such as IBM and HP. In 2007 Computerland merged with Emax to form 3000-people strong Sygnity Group and in the end of the year Asseco merged with Prokom, creating Poland's largest IT company. The labor migration to the countries such as UK and Ireland is also seen as a major problem affecting labor market in general.

In Romania, when the country entered the EU on the first of January 2007, its outsourcing industry was simply sold out. US-based Techteam acquired Akela, one of the oldest Romanian outsourcing companies; UK-based Endava acquired AGS; and Adecco bought IP Devel to expand its embedded development team. US-based Computer Generated Solutions bought EasyCall, the largest Romanian call center operator with 600 employees and Euro 1.8M revenue. Also in 2006 Adobe bought the Dreamweaver development experts InterAKT. Now 80 to 90 percent of the industry turnover is produced by the branches of ICT multinationals or joint ventures where the main shareholder is a foreign company according to Vasile Baltac, the president of ATIC - Romanian IT association.

In Bulgaria too the demand for the software developers is strong, and the local providers are fighting with Coca Cola, HP, SAP, and Siemens for the talent. One of the leading Bulgarian outsourcing suppliers Sciant has been recently sold to VM Ware, which retain most of its workers for internal development projects.

Even in Russia, the largest country out of the post-Socialist bloc, the IT workers are in short supply. One of the explanations is a growing local market: as its oil-fueled economy expanded, so did the demand for IT services. According to RosBalt, in 2007 the IT market in Russia grew by 25 percent not dissimilar to the growth in the previous years. Thus many software development companies have seen more success on the local IT market than abroad. Increasing local market need for IT professionals resulted in the first signs of the industry consolidation. In 2007 one of the largest Russian system integrators, IBS Group acquired Borlas, a consultancy and an IT services company. At about the same time Systematica acquired systems integrator TopS BI, whilst Verysell raised \$50 million to acquire an IT services companies in preparation for an IPO.

The consolidation of the IT industry is set to continue, but the mismatch of supply and demand for IT workers is temporary if the governments of the Eastern European countries embrace their new source of economic growth.

The new policies, which in part are already being implemented, should include incentives to the businesses looking to establish knowledge-based operations in the region; growth of the education spending and simplified visa and work permit regimes.

Inevitably the long-term outsourcing industry will flourish in those countries which would be able to retain the cost of living for a long period of time and provide stable political environment.

Analytical Survey by Parvis Hanson

Offshoring to new shores Nearshoring to Central and Eastern Europe

Central and Eastern Europe (CEE) is an important region for services offshoring. The imports of IT-based services from Central and Eastern Europe into the EU-15 rose by an average of 13% per year between 1992 and 2007. Imports from India, by comparison, increased only slightly faster during the same period at 14% per year.

Close cultural and geographical ties make suppliers from CEE an attractive option. The close ties – in terms of culture, geography and partly language – between the CEE countries and the key Western European markets, the low wages, the high standard of education and stable macroeconomic and institutional environment constitute some of the strengths of the region.

However, CEE cannot boast any IT specialisation in exports or education. IT-based services account for less than 4% of total exports in CEE, whereas the share in India is 17%. Also, the share of graduates gaining information technology degrees – a key qualification for IT offshoring – is lower in CEE than the Western European and Indian averages. It is therefore unlikely that offshore production of standard IT services will become as important for CEE as is the case for India.

The comparative strength of CEE lies in more complex back-office processes. The cultural background shared by providers and their clients in CEE is particularly important for more complex business processes. Clients from outside English-speaking countries also appreciate the widespread language skills in CEE. Moreover, the lack of IT specialisation in CEE is less significant for typical back-office processes – such as bookkeeping.

India has shown the way. And others want to follow. Many emerging markets and regions aspire to become not only the extended workbench of companies from high-wage countries but also their backoffice. Offshoring is a special form of trade in which certain business processes are spun off and outsourced to foreign locations. This applies in particular to IT services and general back-office process sectors.

IT offshoring: Robust growth from a low base

The economic significance of offshoring is debated controversially. A particularly heated discussion was ignited during the last US presidential election. However, the international division of labour and specialisation constitute an important motor of world trade and the prosperity of nations. The global distribution of the internet along with high-powered computers and software has improved the tradability of services. The goods can be converted into digital form and distributed via global data networks. Many services can thus be produced in processes where there is a division of labour. Specialisation boosts productivity and offshoring allows international cost advantages to be exploited. Two methods are frequently used for measurement. Firstly, companies can be asked directly about their expenditure on offshoring. These figures are frequently used as the basis for estimates about the market as a whole. Consultancy firms and commercial data providers are the typical users of this instrument. A second method is to observe the trade flows reported in official balance of payments statistics. Authors at the OECD and the IMF are particularly keen users of this information.

US companies are the biggest consumers of IT offshoring services. India is the most important production location.

Central and Eastern European output for the US was worth just under USD 0.5 bn, while the value of the Philippines' output for the US came to USD 0.4 bn. Offshoring leads to imports and exports of services that are reported in international balance of payments statistics. For this reason some authors attempt to gauge the volume of offshoring using trade flows. Two items are frequently used in the literature:

1. Computer & information services (CIS)
2. Other business services (OBS)

In 2006 the EU-15 recorded an export surplus with CEE and an import surplus with India. Worldwide, the EU-15 imports CIS and OBS services worth nearly EUR 220 bn – primarily from other industrial nations.

Trade flows present a more mixed picture than is often painted by the media. The trade in IT-based services is not a one-way street: locations like India or CEE are both exporters and importers of these services.

High growth rates

While the volume of IT-based services rendered in low-wage countries for firms in high-wage countries is still modest, the growth rates are striking. IDC estimates that spending on IT offshoring will grow by an average of 14.4% per year in the US and by 16.5% per year in Western Europe until 2009.

New production locations

Many new locations are trying to copy India's success in IT services. However, export structures reveal that India evidently possesses a pronounced comparative advantage. The share of a country's total exports generated by a sector or industry is often regarded in the literature as an indicator of a revealed comparative advantage. It is a plausible assumption that countries specialise in those goods and services they produce more efficiently than other countries. Export specialisation is thus evidence of a comparative advantage.

The figures for IT-based services, that is the balance-of-payments items CIS and OBS, confirm India's leading role as an export nation. In India 17% of all exports are IT-based services. This figure is only topped by Ireland's 19%. In absolute terms the US is the biggest exporter of CIS and OBS, worth USD 76.4 bn, but these services constitute only less than 7% of all the country's exports. CIS and OBS account for less than 4% of exports from CEE countries, which is much lower than in other countries. Russia's export share is just a little over 2%. In the Philippines only just under 0.8% of exports are generated with IT-based services. The growth rates are also interesting: while India has grown its CIS and OBS share of exports by an average of 4.5% per year in the past few years, the share in the new EU member states fell 3% per year on average. There has been a nominal increase in exports of IT-based services by both India and CEE – the only thing is that exports by other sectors have increased even faster in the new EU member states. The export structure however reflects the current state of specialisation. If demand increases, then the supply side will react in turn. It is therefore worth taking a closer look at the factors pertinent to locations in the CEE.

What Central and Eastern Europe has to offer

Language skills and cultural ties make communication easier

CEE countries have close geographical and cultural ties with the markets of Western Europe. Typical nearshoring locations score high marks because of their lower costs for communication between the purchaser and the provider of the nearshoring service. There are three reasons for this:

– **Personal contact:** Complex problems are best solved face to face. Nearshoring locations are closer to the client, which makes visiting each other easier.

– **Common language:** Nearshoring locations often have personnel that are proficient in the language of their client – even though their official languages may differ.

– **Cultural understanding:** In most cases nearshore personnel have a better knowledge and understanding of the cultural background of their clients than their counterparts in offshore locations. This allows easier, more implicit communication as misinterpretations occur less frequently.

Language skills are particularly important. India's success is attributed in no small measure to the large supply of English speakers – and most offshoring contracts come from Anglo- American clients. This puts continental European companies at a disadvantage. Although English is regarded as a lingua franca, communication nevertheless becomes more efficient if both partners speak the language fluently. This is evidently not always the case in some continental European companies. Moreover, proficiency in the language used by the procuring company is essential for many services, for example for providing customer care in call centres or processing receipts issued in the client's native tongue. CEE is particularly interesting for German companies. Nearly 40% of schoolchildren in the new EU member states learn German. The proportion is particularly high in those countries bordering Germany. Though this does not mean that German is spoken fluently, it does however signify that at least there is a basic level of proficiency that can be built upon. Furthermore, over 70% of schoolchildren learn English, which enables language gaps to be plugged. Romania is interesting for French companies as 85% of schoolchildren there learn French.

These language skills are an important selling point that should not be carelessly wasted. In some CEE countries, such as the Czech Republic or Slovakia, fewer schoolchildren are learning German than in 1998.

Along with speaking the language, knowledge of the culture and customs represent the prerequisites for efficient communication.

Big differences in wages

Cost savings are the primary motive for most outsourcing. Producing services is labour intensive, that is why wages and non-wage labour costs are important. In CEE, labour costs are much lower than in Western Europe: In the new EU member states the average labour costs for non-public services are around one-fifth of those in Germany. In Romania and Bulgaria labour costs are less than 10% of those in Germany. The costs in recent years have however risen considerably: between 1996 and 2004 labour costs in the new EU member states rose by an average of 7.7% each year. In Romania they have climbed 8.1%, in Slovakia by 9.7% and in Lithuania by no less than 15% per year. By contrast, wage growth in Western Europe was modest: 2.1% in Germany and 3.4% in the EU-15. Wage differences remain pronounced, but

they are narrowing. Most of the CEE countries are not among the cheap offshoring locations for skilled jobs. In China and above all in India the wages are mostly lower. Only a few non-EU countries can compete at that level. An engineer in the Czech Republic is paid about USD 7.40 per hour, whereas he can be hired for just USD 3.50 per hour in China or USD 2.40 per hour in India. In Romania the corresponding wage is around USD 4.60 per hour, and in Bulgaria it is only USD 4.40 per hour.

The decisive factors for the future development of wages are labour market supply and demand as well as the structural development of the labour markets themselves. Structural issues are still of less importance specifically in poorer offshoring locations.

High standard of education – but no IT specialisation

The supply of well-trained labour is a key determinant of the appeal of a location. Most Central and Eastern European countries can boast competitive educational systems. The number of graduates produced in the new EU member states is slightly higher than the average in the EU-15 or the US. Per 1,000 inhabitants aged between 20-29 there are around 60 students gaining degrees in the new EU member states and the US, while the corresponding number of students graduating in the EU-15 is about 51. Public spending on education is similar in all three regions at around 5.3% of GDP. The figures are lower in most of the CEE countries outside the EU: In Bulgaria, for example, the graduate ratio is 4.1% and state spending on education is equivalent to 3.6% of GDP.

The pool of skilled labour is quite large in most offshoring locations. However, formal qualifications often provide very little indication of whether the people concerned are also suitable for employment by a service provider with international clients (insourcer). Not all universities satisfy the standards that are usually met in Western Europe or the US. Moreover, some degree courses do not provide the opportunities for students to gain sufficient language skills or practical experience. There can be a striking discrepancy between the number of persons with the requisite formal qualifications and the number of actually suitable job candidates. According to a study by MGI, just 10% of graduate engineers, mathematicians, statisticians and physicists in China or Russia are suitable candidates – in terms of their training – for the jobs available at insourcers. In the Czech Republic, Hungary or Poland (CEE-3) the share is nearly 50%, whereas in the industrial nations about 80% of graduates are suited to working for international service providers.

Although in India and China only a small proportion of trained specialists are suitable for skilled jobs at insourcers, there are nevertheless more of them – in absolute terms – than in other offshoring or nearshoring locations. Moreover, the low ratio of suitable candidates suggests that extensive reserves can be tapped in the medium term by improving the quality of training and education.

Poor countries have weak institutions

Low wages for well-trained personnel are not the sole criterion when deciding on a location. Macroeconomic and institutional factors also play a part. After all, the offshored processes are often very important to the companies doing the offshoring – even if they are standard services. If, for example, an offshored IT support service were to become interrupted due to external influences, this could have major repercussions for the entire production process. Other problems arise if the offshore location does not take data protection or intellectual property rights seriously, if contracts are not honoured or if government behaviour is unpredictable. The quality

of a country's institutions is clearly correlated to its level of economic development. In the literature the International Country Risk Guide Composite Indicator (ICRG) is often used as yardstick for institutional quality. It combines estimates of political risk, the rule of law, the quality of bureaucracy etc. with economic and monetary policy variables. Since typical offshore locations are mostly poorer countries – as only they can offer the desired wage cost advantages – allowances thus have to be made on the institutional side.

Offshoring means that a medium to long-term supply relationship is agreed between the buyer and the seller for a specific service. The type and quality of the service is laid down in a Service Level Agreement (SLA). It is important that the specifications laid down in the SLA are fulfilled. In some countries, however, the costs of contract fulfilment are considerable. A general estimate of the average costs can be found in the Doing Business database of the World Bank, which measures how long it takes and how much it costs for the legal enforcement of a pecuniary claim in the case of a dispute. In India this can cost over 40% of the outstanding amount. In China and Russia the figure is over 20%. In Hungary and the Czech Republic, by contrast, the costs are lower than in Germany at less than 10%. In Romania and Bulgaria, too, the costs are under 15%.

The contractual relationship becomes even more complicated by the fact that requirements change over time, for example thanks to technical developments or regulatory changes. These changes are not always foreseeable. Supplier and purchaser must therefore agree on changes during the life of the contract that were not expected when it was signed.

Good institutions, however, stabilise the business relationship by offering a reliable forum and set of rules for settling disputes that extends as far as a fair legal resolution.

Buoyant demand Backlog demand in continental Europe

Companies from the US and the UK are the leading purchasers of offshoring services. To date they have benefited from the supply structure as the most important supplier – India – has been able to cater mainly for their requirements.

Over 70% of all European offshoring expenditure occurs in Great Britain or Ireland. Germany, Austria and Switzerland account for a combined share of just 9%, while France claims 8%. Southern European countries like Italy, Spain and Portugal play only a very peripheral role.

Continental Europe is an attractive market for suppliers from CEE as the backlog demand there is bigger than in the UK and Ireland. Moreover, CEE possibly offers precisely those factors that companies in continental Europe have been waiting for – in terms of language and culture in particular. However, other regions are also playing to their strengths: French firms are finding French-speaking personnel in North Africa; Spanish companies are looking for partner firms in Latin America. Smaller firms are more reluctant to resort to offshoring. For them CEE offers an interesting range of offshoring services. Smaller firms tend not to be able to split up and standardise their processes as much as large firms. For this reason the investment in selecting and monitoring an offshoring partner is often more costly than the potential savings. Nearshoring is an alternative in this case because the set-up costs tend to be lower.

New processes

Offshoring is no longer restricted to only the simplest programming tasks and call centres. Complicated and complex processes are also being outsourced to foreign locations where the expertise for these tasks is growing. Indian radiologists, for example, analyse and interpret X-ray images for American hospitals. Other skilled backoffice activities are also being offshored, such as legal advice (Legal Process Outsourcing) or the evaluation of economic data. The technology consultancy Forrester estimates that by 2010 nearly 39,000 legal advice jobs will have been outsourced from the US to offshore locations.

The inventiveness of companies knows no bounds when it comes to offshoring. Many services – and not only the traditional IT services – can be provided inexpensively in low-wage countries. Discovering suitable processes and creating the necessary corporate structures for outsourcing will increasingly develop into a business management skill.

Conclusion: Selective offshoring

IT services and back-office tasks for companies in high-wage countries are an attractive business area for many emerging economies. Offshoring creates well-paid jobs and export revenues there as well as promoting technology and knowledge transfers. It is no wonder that so many countries are attempting to imitate India's success by promoting themselves as an offshoring or nearshoring location. Central and Eastern Europe (CEE) is a promising location thanks to its close geographical and cultural ties with major markets and its comparatively attractive wage levels and educational standards.

The market for IT and other business process offshoring is expanding markedly. The growth rates are much higher than for other business activities – albeit starting from a low base. Continental European and Asian companies are still more reticent than their Anglo-American competitors, but they cannot ignore the expected cost advantages in the long term. In addition, the range of business activities is expanding, as new processes are discovered for offshoring – for example research and development. On the supply side typical local factors are important. The wage level in the advanced CEE countries is lower than in the old EU member states, but higher than in the standard offshoring locations. Outside the EU, however, there are more inexpensive nearshoring locations such as Romania or Bulgaria. Typically, the poorer the country, the lower the wages. However, the macroeconomic and institutional risks increase when processes are offshored to particularly poor countries.

CEE is playing to its strengths in precisely those areas where communication between the purchaser and provider of outsourcing services is particularly important. This is often the case with more complex business processes. Moreover, the lack of IT specialization in CEE is less significant for typical back-office processes, such as bookkeeping. Their close geographical and cultural ties with the client make communication easier. This reduces misunderstandings and makes it easier to exchange complex and abstract information. Furthermore, many personnel in CEE have German and French language skills and can therefore service these markets more easily. Each company has to decide for itself how important it considers communication. It is to be expected that companies desire intensive communication with their clients regarding complex, innovative or creative processes. Inexperienced

companies will pay closer attention to the offshoring relationship in the beginning and frequently seek reassurance. Simple, standardised services, by contrast, require less interaction. In these cases companies tend to base their decision on price, even if communication with the client is more complicated. A nearshoring location like CEE becomes more appealing as the intensity of the communication desired increases.

Analytical Survey by Maryna Yaroshchuk

Drivers of IT industry in Ukraine, Bulgaria and Romania

In the era of global knowledge-based economy, informational technology (IT) plays a unique role in increasing competitiveness of all the different sectors of the economy and the country as a whole, because IT helps to spur productivity in the production process, to bring businesses to the global level, to make government more transparent and keep society informed. The success of the IT industry will be a key determinant of Ukraine's potential to compete on the international arena, as there is a pronounced need to resort to knowledge-intensive, value-added production for creating wealth for the country and providing sustainable social development. At present, Ukrainian IT is one of the most dynamic sectors in the country, with ICT increase in volume revenues by 23% in 2007 compared to 2006. Although Ukraine cannot yet compete with India or Ireland, but it is no longer terra incognita anymore for foreign customers and investors.

The question is: how successful is the Ukrainian IT sector compared to other countries in transition and what impact does it have on the country's economy? The valuable lessons can be learned when comparing and contrasting Ukrainian case with Bulgarian and Romanian IT industries. Bulgaria and Romania were chosen as the three countries have a lot in common when it comes to legacies of the past. Bulgaria, Romania and Ukraine had patrimonial type of communist regimes with little rational bureaucratization. Another common feature is that they shared a similar starting point in terms of educational foundation after the collapse of the Soviet Union, which makes it interesting to track the evolution of the IT industry in these three states and to observe features of diversity and commonalities. At a first glance, it is conspicuous that in the 1990s and till 2003 Bulgaria had predominantly local ownership, which is changing rapidly, now with the growing interest of MNCs in the country, whereas Romania has consistently enjoyed increased the presence of multinationals. Thus, the aim is to locate Ukraine on this axis and understand the causes and effects.

To better appreciate the IT competitiveness of Romania (#40), Bulgaria (# 42), and Ukraine (# 56), as rated by the Economist Intelligence Unit in 2007, it is worth evaluating skilled labor supply and governmental policies (factor conditions), domestic and external demand (demand conditions), collaboration and clustering, as well as related and supporting industries.

1. Factor conditions. Skilled Labor

The situation on the labor market in Bulgaria, Romania and Ukraine is ambivalent, and it is worth discussing whether the quantity and quality of workers supplied meets the demand of the market, the reaction of the state to this issue and activities of the business community in this field. For this purpose, software industry is considered, because it serves as a driver of ICT development.

Ukraine is conspicuous among the international IT community, judging from the observation that almost every Ukrainian company has a western project in its portfolio. The most popular trend is IT outsourcing, which is supported by the fact that Ukraine was included in the five most attractive outsourcing directions in some Western countries in 2006.

What are the reasons that prompt western companies to outsource their projects to Ukraine? According to the Global Outsourcing Report, the leading forces in the IT outsourcing market worldwide are now quality and speed to market, not just cost of services. It is commonly known that Ukraine has inherited a scientific base along with its various technological and scientific establishments, mathematics schools and centers of computing technologies. Another fact is that 30,000 computer students graduate each year, who are praised for their analytical and creative skills.

Employers are not satisfied, however, as graduates do not have good command of English, management skills and solid knowledge of the software development process. Thus, despite the large number of capable young workforce the industry experiences a shortage of IT specialists. The larger spending of budget on education (5.4%), compared to Bulgaria (3.5%) and Romania (3.5%), also does not bear fruit yet. At the moment, the percentage of professionals trained by higher educational institutions is growing, but is still low.

As a result, the business community calls on the state to reform the educational system. Companies suggest that the content of curriculum should undergo change, as the quality of IT-education in Ukraine cannot satisfy modern market demands and challenges. Industry observers also point to the problem that educational institutions do not employ practitioners to teach new courses in computer sciences. Consequently, more potential employees go abroad for education.

The representatives of the educational field bring up an argument that national universities should give a good basic foundation, and the rest of skill tailoring is to be done by the industry players, because IT industry evolves rapidly. Nevertheless, most recently Ministry of Education and Ministry of Transport and Communication have started to pay attention to this issue by organizing several conferences, which called for brainstorming solutions to the problem of educational service in ICT discipline, the practical outcome of which is still to be seen.

The IT sector in Bulgaria has been surging recently, which predictably led to a shortage of highly qualified labor force in the software industry. Unlike in Ukraine, the competition for professionals became even more intensified with an impressive influx of MNCs. According to InvestBulgaria, in the last 3 years big name companies decided to capitalize on Bulgarian advantages, among which the most prominent are IBM, HP, Tumbleweed, Software AG, Jonson Controls, Microsoft, and Cisco. At present, Bulgaria produces only 3,500 software engineers per year and it becomes more challenging for foreign companies to find suitable employees. A common feature is that the education system appeared not to be ready to produce specialists with the "right profile" at such a fast rate of market growth.

However, unlike in Ukraine, the key technical universities in Bulgaria have already introduced new programs that meet international standards and industry's demands: The Faculty of mathematics and informatics (FMI) of Sofia University, Plovdiv University, and the American University in Bulgaria implemented an updated computer science curriculum, as well as joint research labs in cooperation with the abovementioned MNCs. Moreover, the Bulgarian government started to be active since 2005 in its support for the industry by providing PCs in the schools, but mostly via cooperation with foreign companies.

Having the same problem, the key divergence between Bulgaria and Romania is that the government of the latter started to act earlier and more vigorously. Such a

commitment on behalf of Romanian authorities, as well as the evolution of policies and introduction of various programs commissioned by the state, can be explained by Romanian accession to the EU. The emphasis is put on strengthening the research base, providing competitive financial incentives to decrease the digital divide in the society, and furthering the certification program for IT professionals. Therefore, the EU enlargement has positively influenced an interaction between the actors and stakeholders. The commonality between Bulgaria and Romania lies in the fact that both MNCs and the EU enlargement prospect gave external push to the IT market development.

I think that no industry can stay competitive long enough just based on the inherited factors of production and without support from the government in the form of favorable policies. Of course each state has its own tradition and blindly duplicating policies in order to gain competitive advantage can lead to unexpected outcomes. However, it is useful to look at the strategies of the three states and to check to what extent they are similar or different.

2. Governmental Policies

As it is impossible to imagine any innovative advancement without IT, officials have declared information technology among priorities for national development. Thus, at the beginning of 2007 the previous parliament adopted the Law of Ukraine "On the Foundations of the Development of Ukrainian Information Society in 2007-15", which was followed by the Action Plan on Implementing the Tasks Envisaged by the Law of Ukraine. The goal of the law and the subsequent documents is to promote an information society in Ukraine, hence strengthening basis for IT sector development.

The growth of the IT market is conditioned also on improvement of investment climate. In this domain, president Yushchenko issued a decree at the end of 2005 which created a State Agency for Investment and Innovations (SAII). Two more additional bodies were brought into existence in 2006, such as the Ukrainian Center for Investment and the State Company for Innovations, which later were brought under the auspices of SAI. In May 2007, thanks to initiative of SAI and the National Technical University "Kyiv Polytechnic Institute" a special corporation was born, Science Park "Kyiv Polytechnic", which now brings together academia, science researchers and manufacturers to reinforce innovative and informational development of the country. Yet, according to Anatoliy Zayets, the First Deputy Head of the State Agency for Investment and Innovations, "one key effort needed to improve the situation is the development of a sustainable strategy in creating legislation that would help build institutional infrastructure in this industry."

Explanation for the absence of a concrete strategy on behalf of the state is mentioned by business community. They argue that if the IT industry is considered per se, then its current share of GDP is only 3%, whereas the threshold figure is 10%. Thus, according to the General Director of Microsoft Ukraine, Vitaliy Lanovenko, when IT industry in Ukraine reaches this point, it would be difficult to neglect it, and then it could be more realistic to expect assistance from the state. Thus, the IT market has to grow by at least 3 times before the state will take notice of it. Yet, this poses a puzzle, as it seems that such support is already badly needed, especially when it comes to IPR protection laws and their enforcement, alleviation of draconian taxes, custom rules, changes in copyrights, etc. The light at the end of the tunnel is given by

such influential companies, as Microsoft, Intel, and Oracle, which repeatedly engage in discussions with the government to take necessary steps in this direction.

The root problems can also be eliminated by Ukraine's eventual accession to WTO, which imposes certain sets of laws, standards and society's awareness of IPR issues. Accession to WTO, should serve as a positive boost for export-oriented industries, which is also a feature of Ukrainian IT at the moment. Consequently, an additional optimistic prospect for the Ukrainian economy will be the launching of a Free Trade Area with the EU as a part of the upcoming Enhanced Agreement, which is currently under negotiation. These two milestones are the last chances for Ukraine to bring its regulations into compliance with international standards.

Being a late comer to the ICT market, Bulgaria has to catch up with the leaders by implementing necessary steps even more adroitly and massively, but in the shorter lapse of time. The government realized this, and especially right after Bulgaria joined the EU, it has put software industry and ICT as a whole on top of its policy agenda. The character of policies is naturally driven by the EU, which has high standards that Bulgaria is now striving to reach. Bulgaria has also created the State Agency for Information Technology and Communications to expedite its integration to the EU club of information societies.

Apart from the numerous projects supported by the EU and the funds from international financial institutions, the government of Bulgaria has also served as a main procurer of IT services and equipment. Governmental purchases totaled 50% of market sales, which grew last year by 23% (in dollar value). However, according to the observers from the Bulgarian ICT Cluster, there is a problem in absence of control over execution of public procurement contracts for IT projects. Although there is a Public Procurement Act, it is an implementation and interpretation of the law that is obscure (a pattern characteristic for majority of post-Soviet states). On a positive side, as mentioned by InvestBulgaria, the latest incentives are "annual depreciation rate of 30% for machinery & equipment, 50% for new equipment used in new investments or expansion projects and 50% for software and hardware". ICT business community has considerable bargaining power in voicing their dissatisfaction or proposing new measures, because industry accounts for a considerable 9,9% of GDP (in 2003 it was 7%). Furthermore, business representatives could draw the attention of state authorities to experience of Romania, which had introduced encouraging tax incentives for local IT companies earlier.

In Romania the state must have realized that growing IT industry, even if it is foreign owned, provides numerous opportunities for mushrooming consultancy firms, research and development centers and ICT industry growth in general. The actions of the Romanian government are not on an ad hoc basis, but rather a part of a sound strategy. Starting from 2001 the government has recognized the ICT sector as a strategic priority for the national economy. Consequently, a separate body was created, the Ministry for Communication and Information Technology, whose responsibility is to devise necessary policies for the industry. Additionally, as reported by Businessmonitor, since 2004 the government started to lead IT spending and is recognized, along with banks and telecoms as the largest spender.

The most pronounced policies are exemption of employees employed by software companies from income taxes, reduction of income tax for programmers from certain universities, and a 25-month VAT postponement for new goods. Another possible explanation for increasing attention to such incentives is that the "brain drain" still

remains an issue for the industry. Thus, the government tries to reward those active industry players and indirectly tries to create more benefits and better conditions for IT specialists.

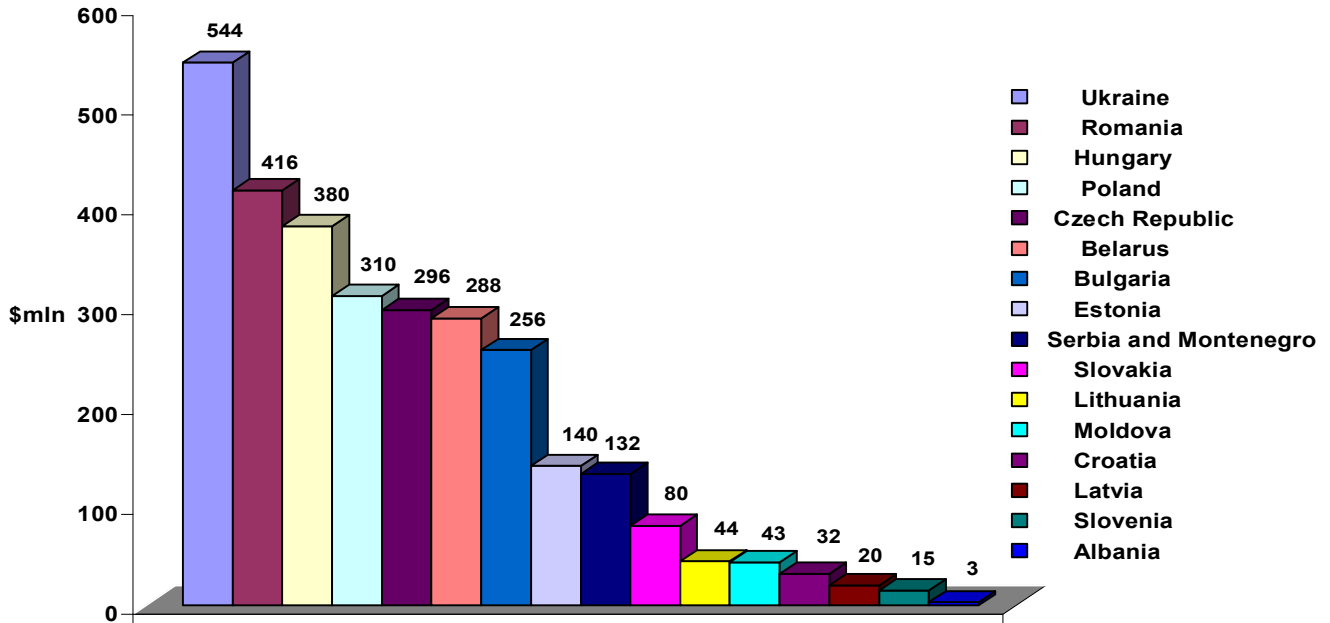
Thus, the capability of government to prioritize and focus on development of a specific sector by devising and deploying a clear strategy along with providing financial investment, can be an effective driver of progress. Looking at the dynamics of the IT industry development in the region and comparing the approaches that state governments have adopted in order to aid this development, it can be seen that although Bulgaria and Romania have been in more or less similar condition in the beginning, the Romanian government's timely efforts to recognize the potential for the IT industry and to coordinate efforts in order to build up the sector has been paid off by the country's leading position among the two. In comparison to its neighbors. Ukraine has yet to model their successful practices and attempt to avoid the dangers.

Conclusion

The success of IT industry was discussed in 3 NIS countries, which are currently in the focus of international investment community. Although Ukraine, Bulgaria and Romania had similar starting point in terms of the former regime and educational base, the trajectories of development varied respectively depending how the opportunities were embraced and strategies were employed by the key actors (state, business and universities). When reviewing factor conditions, it becomes apparent that favorable and timely governmental policies still play a significant role in improving the country's image needed for international investment and for normal functioning of domestic industry players. In this respect, Ukraine can learn from regional leaders, which in turn emulated best practices of mature international IT nations. First, a clear-cut and balanced state strategy is needed in Ukraine to support the growing market, which, on the one hand, has a critical set of attraction factors, but, on the other hand, suffers from a weak business environment. Then, links with international markets can be more easily achieved due to improved credibility rating. Thus, work is to be done on two fronts: domestic and international, because a combination of strong players both local and foreign-owned is more beneficial for the country's economy as a whole. While international companies serve as drivers most of the time (for policies, collaboration initiatives, etc), local firms are perceived as necessary for development of high-value added national products needed to maintain competitiveness in future. While Ukraine rates better in terms of market size, salary level, and potential for growth, it still has to catch up with Bulgaria and Romania when it comes to relevant educational policies, share of services and infrastructure to maintain favorable local and international demand. Therefore, the key to success is to be ready when the opportunity comes.

COUNTRY ANALYSIS

Market Volume 2007

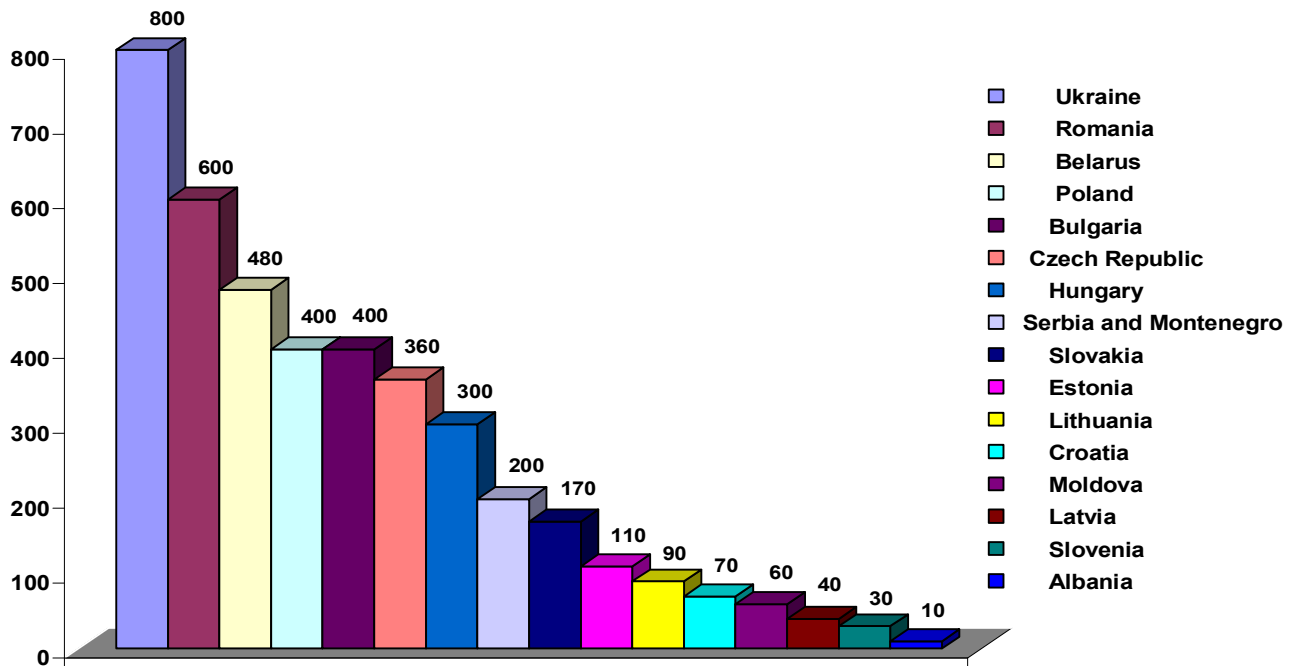


Source: Ukrainian Hi-Tech Initiative

		\$mIn
1	Ukraine	544
2	Romania	416
3	Hungary	380
4	Poland	310
5	Czech Republic	296
6	Belarus	288
7	Bulgaria	256
8	Estonia	140
9	Serbia and Montenegro	132
10	Slovakia	80
11	Lithuania	44
12	Moldova	43
13	Croatia	32
14	Latvia	20
15	Slovenia	15
16	Albania	3

Market volume is the main indicator of the development of IT Outsourcing industry in the country. The scope of final IT products in 2007 served as the basis for the calculation of market volume. Other estimation sources were the total number of employees and average rates on the country market. The use of open analytical reviews, data received from the national IT associations and expert opinions allowed adding more precision to this index. Each country IT Outsourcing market volume is indicated in USD Mlns.

Number of Companies



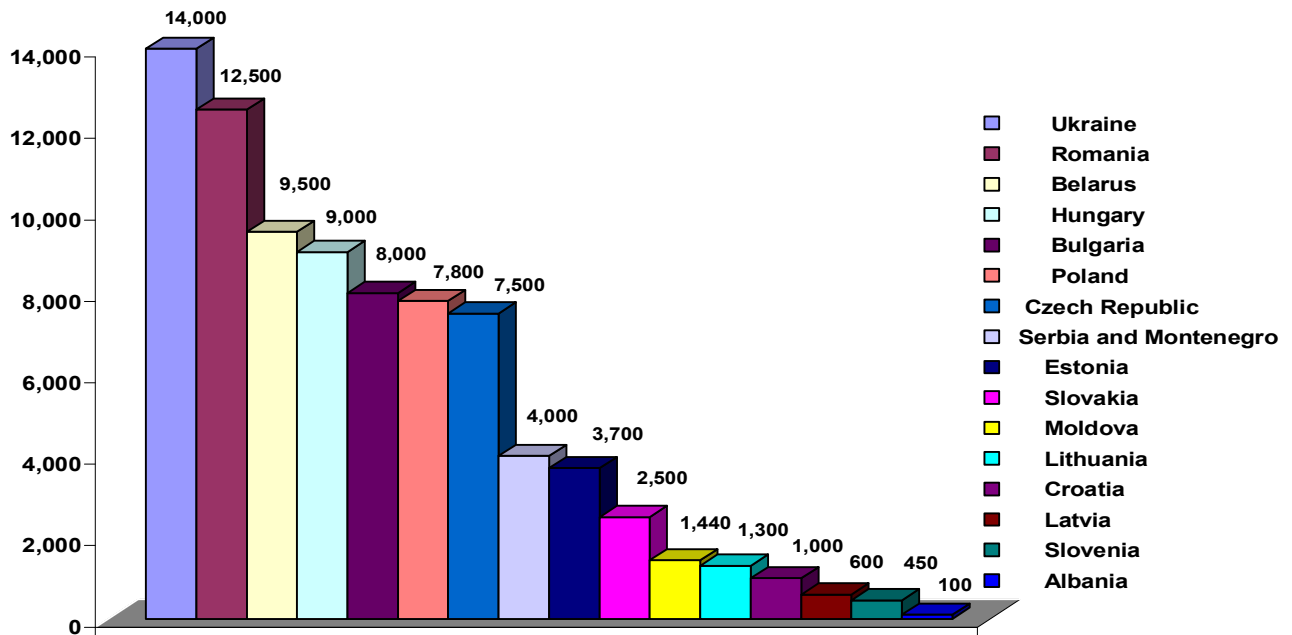
Source: Ukrainian Hi-Tech Initiative

1	Ukraine	800
2	Romania	600
3	Belarus	480
4	Poland	400
5	Bulgaria	400
6	Czech Republic	360
7	Hungary	300
8	Serbia and Montenegro	200
9	Slovakia	170
10	Estonia	110
11	Lithuania	90
12	Croatia	70
13	Moldova	60
14	Latvia	40
15	Slovenia	30
16	Albania	10

Number of companies is one of the key indicators of the country IT Outsourcing market development.

When calculating the number of IT companies, considered were only the IT and software development companies providing Outsourcing services and with the staff of more than 5 employees. Because the markets of Central and Eastern European region undergo the stage of rapid development, they are satiated with a large number of small companies. Low threshold was taken purposefully in order to provide a complete market snapshot for each country.

Number of Employees

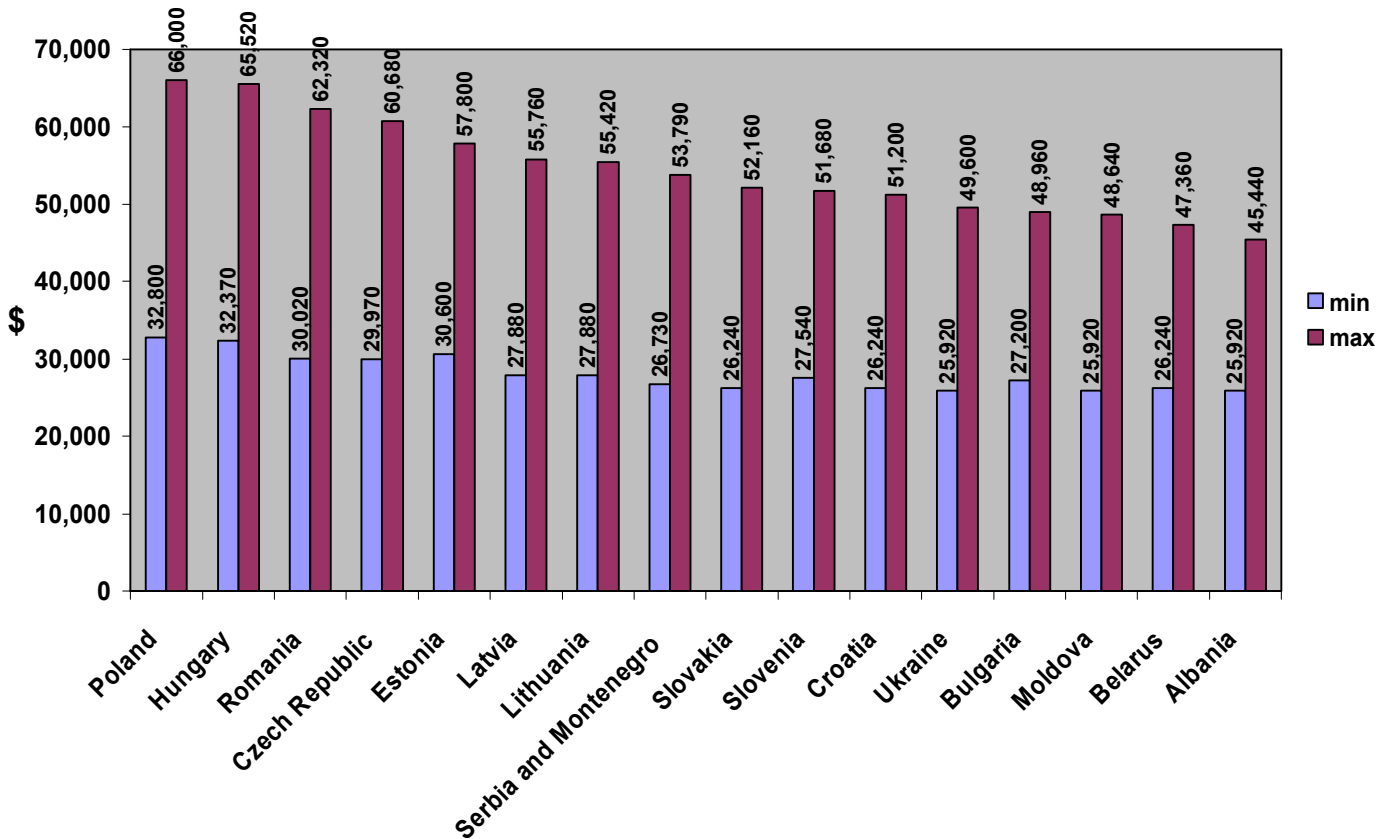


Source: Ukrainian Hi-Tech Initiative

1	Ukraine	14,000
2	Romania	12,500
3	Belarus	9,500
4	Hungary	9,000
5	Bulgaria	8,000
6	Poland	7,800
7	Czech Republic	7,500
8	Serbia and Montenegro	4,000
9	Estonia	3,700
10	Slovakia	2,500
11	Moldova	1,440
12	Lithuania	1,300
13	Croatia	1,000
14	Latvia	600
15	Slovenia	450
16	Albania	100

When calculating the number of professionals, considered were only those IT specialists that are involved into IT Outsourcing services less administrative personnel. Other estimation data sources were general information about each country such as population, as well as review respondents' feedback on the number of companies and the average number of employees in each of them.

Rates per Year



Source: Ukrainian Hi-Tech Initiative

		\$min	\$max
1	Poland	32.800	66.000
2	Hungary	32.370	65.520
3	Romania	30.020	62.320
4	Czech Republic	29.970	60.680
5	Estonia	30.600	57.800
6	Latvia	27.880	55.760
7	Lithuania	27.880	55.420
8	Serbia and Montenegro	26.730	53.790
9	Slovakia	26.240	52.160
10	Slovenia	27.540	51.680
11	Croatia	26.240	51.200
12	Ukraine	25.920	49.600
13	Bulgaria	27.200	48.960
14	Moldova	25.920	48.640
15	Belarus	26.240	47.360
16	Albania	25.920	45.440

Annual cost per professional means how much the end customer should pay for the services of one IT specialist yearly. This includes: salary, taxes, office facilities, etc.

The attempt was made to calculate both minimum and maximum annual cost per service of one IT professional in each of the countries. Findings are indicated in USD.

COUNTRY SPECIFIC FEATURES

Ukraine

IT industry sector in Ukraine has grown considerably during the recent years. Because this country is the closest to Europe out of those which have not yet joined the EU and which has a visa-free entry regime, Ukraine is very attractive to the Western European countries. A large number of small companies provide a whole variety of outsourcing opportunities for the medium and small businesses. Low rates and a huge pool of highly skilled professionals are other advantages of outsourcing to Ukraine. Ukraine is a very convenient place, a so called sluice for collaboration with Russian and Belarusian companies.

Albania

Recently the trade laws in Albania have been revised. The purposes of this initiative were to allow greater investments into the country as well as to simplify trade relationships with the other countries. This boosted tremendous increase of outsourcing in the country.

Belarus

Serious support of IT sector from the Belarus state does promote IT outsourcing in the country. The market consolidation is very strong related to the other Eastern European countries. Belarus has very stable positions in hardware design.

Poland

Poland, an EU member since 2004, is considered to be an attractive outsourcing location for Europe and especially for Germany due to cultural and time zones compatibility. Good skills of foreign languages, namely English and German add value to the country. There are numerous connections to the US.

Slovakia

Slovakia is an outsourcing attraction for the European countries. Low office facilities cost, industrial and storage premises make it possible for the companies to establish outsourcing centers here. It is also convenient to develop the business here due to well developed bank and finance sectors.

Lithuania

Lithuania has the fastest growing economy and the lowest corporate tax rates in Europe. Macro stability and flexibility, easy travel throughout the European Union, developing innovation policy all together attract the Western European countries. Well educated and professional personnel is guaranteed thanks to the highest number in EU of graduates that reaching 1000 per year.

Romania

Romania indeed attracts whole Europe, especially Italy and France. This country has the largest number of IT professionals per capita in Europe. Good mastery of Germanic languages. This is the perfect location for the multi-lingual call centers with the particular specialty in Italian and French. All the working in IT sector in Romania should not pay income tax that is 16%, flat.

Serbia and Montenegro

It is in Serbia where the customer will find highly skilled professional with great experience. Some companies have started outsourcing services provision since 1996.

Moldova

Due to the low rates and low cost of living in Moldova, as well as due to the low office facilities cost, it is very profitable to establish business in this country. Tax legislation is really friendly with the main advantage in the fact that all the companies that activate in the IT domain do not have to pay taxes for revenue.

Hungary

Hungary has established itself as a data center home for business in nearby European countries thanks to its proximity to Europe and cultural compatibility. Such companies as IBM and Siemens have their Headquarters in Hungary.

Czech Republic

Czech Republic is the ideal outsourcing center for German customer service needs. Low rates, political stability and qualified professionals are the things that make Czech Republic attractive for European countries. This is the best country for the variety of BPO and IT support.

Bulgaria

Bulgaria is the country with the strongest base of education. The excellent mathematics, science and engineering schools are found here. The most qualified professionals in the Eastern Europe are here as well. This is the best place for the high-end, complex, but small-scale projects.

Estonia

High quality of services and cost effective production attract customers to Estonia – a traditional outsourcing center for the Northern European countries. Estonia is the country that developed Skype and is also well known for the large number of know-how's of modern IT solutions for public sector.

Latvia

Latvia is business friendly country, what makes it easy-to-outsource. The fastest GDP growth rates in Europe, low taxes (corporate income tax is 15%, flat), but competitive labour costs and high productivity of Latvian professionals attract customers to this country.

COUNTRY PROFILES

Albania



Map of Albania



Capital – Tirana
 Population – 3,600,523
 GDP (PPP*) – \$19.818 billion
 Per capita – \$6,259
 Time Zone – [CET \(UTC+1\)](#)
 Summer ([DST](#)) – [CEST \(UTC+2\)](#)

Findings:

Volume of IT outsourcing market (USD Mlns) **3**

Number of IT outsourcing companies **10**

Number of employees involved in IT outsourcing **100**

Rates per year** (USD) **min 25,920 max 45,440**

Largest IT outsourcing companies: **TPKSolutions, Shkodra Software, AlbTek.NET, Kontabel, Bilanc, IBM**

IT Associations: **_____**

Belarus



Map of Belarus



Capital – Minsk
 Population – 9,724,723
 GDP (PPP*) – \$79.13 billion
 Per capita – \$7,700
 Time Zone – [EET \(UTC+2\)](#)
 Summer (DST) – [EEST \(UTC+3\)](#)

Findings:

Volume of IT outsourcing market (USD Mlns)	288				
Number of IT outsourcing companies	480				
Number of employees involved in IT outsourcing	9,500				
Rates per year** (USD)	<table border="0"> <tr> <td>min</td> <td>max</td> </tr> <tr> <td>26,240</td> <td>47,360</td> </tr> </table>	min	max	26,240	47,360
min	max				
26,240	47,360				
Largest IT outsourcing companies:	Epam, IBA, Belhardsoft, Belhard Group, Softclub, System Technologies, B-logic				
IT Associations:	Infopark www.infopark.by				

Bulgaria



Map of Bulgaria



Capital – Sofia
 Population – 7,322,856
 GDP (PPP*) – \$87.156 billion
 Per capita – \$10,843
 Time Zone – [EET \(UTC+2\)](#)
 Summer ([DST](#)) – [EEST \(UTC+3\)](#)

Findings:

Volume of IT outsourcing market (USD Mlns)	256
Number of IT outsourcing companies	400
Number of employees involved in IT outsourcing	8,000
Rates per year** (USD)	min max 27,200 48,960
Largest IT outsourcing companies:	SAP, HP, Melexis, Fadata Technologica, BIANOR, ICB, Haemimont, Nemetschek, Netage Solutions, Inc., OBS BG, Scient, SIRMA AI, Soft-Innovations Ltd., Webgate
IT Associations:	Bulgarian Association of Software Companies – BASSCOM. www.basscom.org Bulgarian Association of Information Technologies – BAIT www.bait.bg Bulgarian Web Association (BWA) http://www.bwa.bg

Croatia



Map of Croatia



Capital – Zagreb
 Population – 4,440,690
 GDP (PPP*) – \$69.87 billion
 Per capita – \$17,133
 Time Zone – [CET \(UTC+1\)](#)
 Summer (DST) – [CEST \(UTC+2\)](#)

Findings:

Volume of IT outsourcing market (USD Mlns) **32**

Number of IT outsourcing companies **70**

Number of employees involved in IT outsourcing **1,000**

Rates per year (USD)**

	min	max
	26,240	51,200

Largest IT outsourcing companies: Siemens PSE, Combis, Libosoft, Infodom, Bello, ABC Informativ

IT Associations: Croatian Association of Software and Online Entrepreneurs (Initium)
www.webstart.ini.hr;

HUP ICT (Croatian Employers' Association - ITC)
<http://ict.hup.hr>;

Croatian Information Technology Society (CITS)
www.hiz.hr

Czech Republic



Map of Czech Republic



Capital – Prague
Population – 10,349,372
GDP (PPP*) – \$236.536 billion
Per capita – \$25,346
Time Zone – [CET \(UTC+1\)](#)
Summer ([DST](#)) – [CEST \(UTC+2\)](#)

Findings:

Volume of IT outsourcing market (USD Mlns)	296	
Number of IT outsourcing companies	360	
Number of employees involved in IT outsourcing	7,500	
Rates per year** (USD)	min	max
	29,970	60,680
Largest IT outsourcing companies:	Abra Software, Aquasoft, Logica CMG, Software602, T-Soft and Velenthy Brno	
IT Associations:	Association for Information Society (SPIS) www.spis.cz	

Estonia



Map of Estonia



Capital – Tallinn
Population – 1,342,409
GDP (PPP*) – \$13.10 billion
Per capita – \$12,203
Time Zone – [EET \(UTC+2\)](#)
Summer ([DST](#)) – [EEST \(UTC+3\)](#)

Findings:

Volume of IT outsourcing market (USD Mlns)	140				
Number of IT outsourcing companies	110				
Number of employees involved in IT outsourcing	3,700				
Rates per year** (USD)	<table border="0"> <tr> <td>min</td> <td>max</td> </tr> <tr> <td>30,600</td> <td>57,800</td> </tr> </table>	min	max	30,600	57,800
min	max				
30,600	57,800				
Largest IT outsourcing companies:	Webmedia, Mandator Estonia, Helmes, Skype, Playtech, Microlink, Datel, ProExpert, Cybernetica, Zebra				
IT Associations:	Estonian Association of Information Technology and Telecommunications http://www.itl.ee				

Hungary



Map of Hungary



Capital – Budapest
Population – 10,053,000
GDP (PPP*) – \$208.157 billion
Per capita – \$20,700
Time Zone – CET (UTC+1)
Summer (DST) – CEST (UTC+2)

Findings:

Volume of IT outsourcing market (USD Mlns)	380
Number of IT outsourcing companies	300
Number of employees involved in IT outsourcing	9,000
Rates per year** (USD)	min max
	32,370 65,520
Largest IT outsourcing companies:	IBM, EDS, Getronics, SAO Synergon Ltd., KFKI-LNX, Hewlett-Packard, Kopint-Datorg, Máv Informatika, Accenture, Qualisoft, Beko
IT Associations:	Hungarian Association of IT Companies www.ivsz.hu
	Hungarian Outsourcing Association www.hoa.hu
	HSA - Hungarian Software Alliance Ltd. www.h-s-a.hu , www.outsourcehungary.com

Latvia



Map of Latvia



Capital – Riga
 Population – 2,281,305
 GDP (PPP*) – \$36.49 billion
 Per capita – \$16,000
 Time Zone – **EET (UTC+2)**
 Summer (**DST**) – **EEST (UTC+3)**

Findings:

Volume of IT outsourcing market (USD Mlns) 20

Number of IT outsourcing companies 40

Number of employees involved in IT outsourcing 600

Rates per year (USD)**

	min	max
	27,880	55,760

Largest IT outsourcing companies: Nexum IT, Tilde, DEAC, Lattelecom Technology, Exigen Services DATI, SAF Tehnika, TietoEnator Alise, Data Pro, DEAC, ZZ Dats, RIX Technologies, FMS GROUP.

IT Associations: Latvian Information Technology and Telecommunications Association – LIKT
www.litta.lv

Business Software Alliance
www.bsa.lv

Lithuania



Map of Lithuania



Capital – Vilnius
 Population – 3,575,439
 GDP (PPP*) – \$54.03 billion
 Per capita – \$17, 104
 Time Zone – [EET \(UTC+2\)](#)
 Summer ([DST](#)) – [EEST \(UTC+3\)](#)

Findings:

Volume of IT outsourcing market (USD Mlns)	44
Number of IT outsourcing companies	90
Number of employees involved in IT outsourcing	1,300
Rates per year** (USD)	min max
	27,880 55,420
Largest IT outsourcing companies:	Baltic Software Solutions, Sintagma, Sonex Group, Gaumina, Elsis Group
IT Associations:	Baltic Outsourcing Association www.balticoutsourcing.com
	Association INFOBALT www.infobalt.lt

Moldova



Map of Moldova



Capital – Chisinau
 Population – 3,383,332
 GDP (PPP*) – \$9,367 million
 Per capita – \$2,962
 Time Zone – [EET \(UTC+2\)](#)
 Summer (DST) – [EEST \(UTC+3\)](#)

Findings:

Volume of IT outsourcing market (USD Mlns)	43
Number of IT outsourcing companies	60
Number of employees involved in IT outsourcing	1,440
Rates per year** (USD)	min max
	25,920 48,640
Largest IT outsourcing companies:	Endava, Allied Testing, Penthalog, Tacit Knowledge, Deeplace IMSP, DAAC-Sistem, Ritlabs, Vivat Consulting
IT Associations:	The Association of Moldavian Programmers www.aim.md
	Association of Information Specialists

Poland



Map of Poland



Capital – Warsaw
 Population – 38,518,241
 GDP (PPP*) – \$ 631.8 billion
 Per capita – \$16,599
 Time Zone – [CET \(UTC+1\)](#)
 Summer ([DST](#)) – [CEST \(UTC+2\)](#)

Findings:

Volume of IT outsourcing market (USD Mlns)	310
Number of IT outsourcing companies	400
Number of employees involved in IT outsourcing	7,800
Rates per year** (USD)	min 32,800 max 66,000
Largest IT outsourcing companies:	Polcard, Euronet, HP Poland, Accenture, IBM Poland, Grytek, Business Point, Xerox Polska, COPI KGHM, Archidoc
IT Associations:	Polska Izba Informatyki i Telekomunikacji - PIIT www.piit.org.pl

Romania



Map of Romania



Capital – Bucharest
Population – 22,276,056
GDP (PPP*) – \$ 256.9 billion
Per capita – \$11,800
Time Zone – EET (UTC+2)
Summer (DST) – EEST (UTC+3)

Findings:

Volume of IT outsourcing market (USD Mlns)	416	
Number of IT outsourcing companies	600	
Number of employees involved in IT outsourcing	12,500	
Rates per year** (USD)	min	max
	30,020	62,320
Largest IT outsourcing companies:	SAP, Endava, Romsoft, Totalsoft, Ubisoft, Epicor, Ingenio Software	
IT Associations:	ANIS - Employers' Association of the Software and Services Industry www.anis.ro	
	Information Technology & Communication Association of Romania (ATIC) www.atic.org.ro ;	
	Ministry of Communications and Information Technology www.mcti.ro	

Serbia and Montenegro



Map of Serbia and Montenegro



Capital – Belgrade
Population – 10,350,265
GDP (PPP*) – \$54.547 billion
Per capita – \$7,265
Time Zone – CET (UTC+1)
Summer (DST) – CEST (UTC+2)

Findings:

Volume of IT outsourcing market (USD Mlns) 132

Number of IT outsourcing companies 200

Number of employees involved in IT outsourcing 4,000

Rates per year (USD)**

	min	max
	26,730	53,790

Largest IT outsourcing companies:

Božić i sinovi, Teletrader, Independent Expert Group, Execom, Spinnaker, Antegra, Pexim, Pakom Solution Centre, Virtual Team, Micro Business Solutions, Datalab Tehnologije, Arius, PanonSoft

IT Associations:

JISA - Union of ICT societies
<http://www.jisa.org.yu>

Informational society SCG
www.e-drustvo.org

Slovakia



Map of Slovakia



Capital – Bratislava
Population – 5,447,502
GDP (PPP*) – \$99.19 billion
Per capita – \$20,002
Time Zone – [CET \(UTC+1\)](#)
Summer ([DST](#)) – [CEST \(UTC+2\)](#)

Findings:

Volume of IT outsourcing market (USD Mlns)	80
Number of IT outsourcing companies	170
Number of employees involved in IT outsourcing	2,500
Rates per year** (USD)	min max
	26,240 52,160
Largest IT outsourcing companies:	HP, Accenture, IBM, Soitron, Dell, T-systems
IT Associations:	IT Association Slovakia - ITAS
	www.itas.sk

Slovenia



Map of Slovenia



Capital – Ljubljana
Population – 2,019,406
GDP (PPP*) – \$47.841 billion
Per capita – \$26,576
Time Zone – [CET \(UTC+1\)](#)
Summer (DST) - [CEST \(UTC+2\)](#)

Findings:

Volume of IT outsourcing market (USD Mlns)	15
Number of IT outsourcing companies	30
Number of employees involved in IT outsourcing	450
Rates per year** (USD)	min max
	27,540 51,680
Largest IT outsourcing companies:	Manard, S&T Slovenia, SRC.SI
IT Associations:	—

Ukraine



Map of Ukraine



Capital – Kiev
Population – 46,490,400
GDP (PPP*) – \$364.3 billion
Per capita – \$7,832
Time Zone – EET (UTC+2)
Summer (DST) – EEST (UTC+3)

Findings:

Volume of IT outsourcing market (USD Mlns) 544

Number of IT outsourcing companies 800

Number of employees involved in IT outsourcing 14,000

Rates per year (USD)**

	min	max
	25,920	49,600

Largest IT outsourcing companies: Luxoft, Softserve, Miratech, Infopulse, Ciklum, Softline, Validio, Aricent, Lohika

IT Associations: Ukrainian Hi-Tech Initiative
www.hi-tech.org.ua

IT Ukraine
www.itukraine.org.ua

* Purchasing Power Parity

** The cost per one IT specialist per year performing services for final customer that includes salary, taxes, office, etc

INFORMATION ABOUT EXPERTS AND PARTNERS

Expert Profiles

Christian Berner, founder & managing partner of CBP Cross Border Projects



Christian Berner is founder & managing partner of CBP Cross Border Projects. He is an e35xpert in offshore outsourcing, management of cross border value chains and mergers.

Due to more than 15 years of work as global account manager and managing director for IT service providers in Europe, Asia and North America, Christian understands the challenges, opportunities and risks of international business, especially in offshore outsourcing, with its wide array of different business cultures, market conditions, administrative and legal structures. As a manager of a systems integration division in Australia and France, he monitored and lead cross border mergers as well as a large number of offshore projects. In the role of a global account manager he created a worldwide account team and gained in-depth experience of complex sales processes and coaching of sales staff of different nationalities and business cultures. Being experienced, creative and initiative, he is a motivator, coach and change agent for international teams. He helps his clients to define goals, develop ways to make them reality and implement them successfully.

Most of his projects and assignments are connected with:

offshore strategy development and implementation; offshore outsourcing; cross border mergers and alliances; management of geographically distributed teams.

Cross Border Projects provides advice and support to the IT and Hi-Tech companies willing to cut their expenses and increase their competitiveness by working with Eastern European outsourcing providers. Currently the company activity is focused on Ukraine, Russia and Belarus – the leading countries in IT and Hi-Tech outsourcing in Eastern Europe.

CBP provides a wide range of services related to:

selection of the appropriate offshore delivery model; identification and selection of the appropriate outsourcing partners; offshore governance, management and realignment of offshore IT projects; merger and integration management for captive offshore initiatives; recruitment and consulting; assistance to expatriates; business-culture education and coaching.

CBP professionals are well-acquainted with the local business environment and have wide experience in successful offshore IT projects implementation. CBP currently runs offshore projects in Germany, France, Slovakia, Switzerland, Ukraine, UK and USA.

Contact details: Phone/Fax: +49 331 979 918-28, +49 331 979 918-29

Email: cb@cb-projects.com

Website: www.cross-border-projects.com

Natasha Starkell, CEO of GoalEurope



Natasha is a CEO of GoalEurope, advisory firm for Western companies looking to do business in Russia and Eastern Europe and a leading commentator on outsourcing industry in the region.

Natasha Starkell has worked in the IT industry (Unisys Corporation) for seven years in the area of Corporate strategy and M&A, Finance and Outsourcing. In 2003 she completed an executive MBA and a Corporate Finance course at London Business School.

Having experienced an information gap and the challenges in the cross-border collaboration whilst working on the offshore outsourcing project for Unisys, she decided to establish Goaleurope, set to bridge the gap between Russian and Eastern European companies and Western businesses.

She comes from Novosibirsk, Russia and lived in Switzerland, United Kingdom and Germany. She speaks Russian, English and German.

Maryna Yaroshchuk



Maryna's interest in life comes from organizing challenging projects. At the moment Maryna is the Affiliated Researcher for Ukraine at the Offshoring Institute (HQ in Berlin, Germany), which provides reliable location data at city level to its members in order to equip them with objective, neutral and independent information on potential offshoring options.

Maryna has worked as Business Development Manager at BirchBob International, a Belgian Innovative Technology Transfer, Information and Service Company. During this time she co-founded and coordinated the FLEX4IPR community in Ukraine, which is a new network of young leaders, businessmen, academia, and governmental representatives working on the frontiers of innovation and intellectual property rights. Thanks to the events held in the framework of this project, the network members explored the best practices of such innovation champions as Silicon Valley and the Greater Region of Leuven in Belgium and discussed current problems and developments in the innovations policy of Ukraine.

Other organizations that Maryna has contributed to the success of include Rich Strategy, CFC Consulting, IntellectTechnologies and American Councils for International Education. Currently, Maryna is pursuing her Master's degree in International Relations and European Studies, with emphasis on Political Economy, at Central European University in Budapest, Hungary.

Parvis Hanson, President of The Manor Group



Parvis Hanson is the President of The Manor Group. The Business Strategic Insights Community. Through The Manor Group, he is a Senior Advisor to the leadership of corporations from Asia, Europe and North America. Prior to founding The Manor Group, Parvis Hanson was Senior Manager of the World Economic Forum, in charge of Asian affairs, Information Communication Technologies member corporations and the New Asian Leaders Community. During this time he has developed an extensive experience and knowledge on the world's economic, business and political scene and of its key players. Under his leadership, the World Economic Forum has expanded their presence in Asia and of "Davos" Summits have evolved to facilitate the exchange of expertise between leaders in business, government, and civil society.

The Manor Group is a leading strategic advisory on long term scenarios related to globalization, systemic risk and business needs. Horasis our business partner on Asia is a visions community - together with clients and partners we explore, define, and implements trajectories of sustainable growth. Horasis hosts the annual China Europe Business Meeting - the foremost annual gathering of Chinese business leaders and their counterparts from Europe, North America and other parts of the world. The event is open to Chief Executive Officers of the world's leading companies.

Parvis Hanson is an innovative, results orientated management professional with over 15 years of broad based experience and visible achievements in strategic business partnerships and emerging markets.

Accomplished manager having worked for and with numerous Fortune 500 companies such as UBS, Credit Suisse, Citigroup, Sony, Toshiba, Haier, Swisscom, BT, Deutsche Telecom, BP, Shell, Lukoil, Gasprom, Volkswagen, Ford, DaimlerChrysler, Dell, LogicaCMG, Microsoft, Ariba, SAP, Oracle, Swiss Airlines, Lufthansa, Air France, Novartis, Hoffman La Roche, Merck Serono, Pfizer and other.

Furthermore Parvis Hanson has been working with many Governments from around the world such as Singapore, Australia, China, German, French, UK, Spain, Portugal, Russia and the European Commission.

He has lived, studied and worked in Europe, US and Asia for almost a decade, principally in San Francisco, Moscow, Singapore and in Beijing where he developed and managed European Multinationals' operations. He has a thorough understanding of how the world functions today - an understanding created through an on-going interaction with top business, political and intellectual leaders around the world.

Parvis Hanson has addressed audiences at the World Economic Forum, IMD University, and several high-level corporate events. Parvis Hanson was educated in Germany, England, France and Switzerland and is fluent in German, French and English.

Contact details: Phone: +41786063615
Email: phanson@hanscon.ch

Partner Profiles



ITONews.eu – Outsourcing News from Central and Eastern Europe!

ITONews.eu – information analytic platform about IT Outsourcing in Central and Eastern European countries. The main aim of ITONews.eu is to show activities of IT companies, providers of outsourcing services the most widely and impartially, and to serve as a place for IT outsourcing services providers and customers meetings.

The portal, that started its work in 2008, contents daily updatable news, press-releases, analytic materials, information about global and regional events concerning IT outsourcing.

ITONews.eu gathers, analyzes and distributes information about IT outsourcing markets in CEE countries. The main objective of the information portal is formation of the complete view on the potential of CEE region - the promising cluster for outsourcing services provision and creation of common information flow from Central and Eastern Europe.

We know everything about outsourcing in CEE!

ITONews.eu adheres to main principles of information activity – efficiency, uniqueness and thematic scope of the widely-spread information. Easy way of getting the news, recipient-oriented distribution and the team of professionals give you an opportunity to get all the needed information about outsourcing in Central and Eastern European region.

ITONews.eu accepts for submission press-releases, reviews, analytic materials concerning outsourcing and BPO.

Contact details:

Email: general@ITONews.eu
Subscribe for ITONews.eu Newsletter: subscribe@ITONews.eu
Submit news or press-release: press@ITONews.eu

Baltic Outsourcing Association



The Baltic Outsourcing Association is an independent non-for-profit professional advisory body.

BOA strategic OBJECTIVES:

- market education and members training activities
- promotion and sharing of best practices, benefits and innovative solutions in outsourcing industry
- development and communication of BOA vision and the main value propositions to both potential Buyers and Providers of ITO and BPO
- representation the interests of the BOA members' organizations at the regional and international target markets and target groups
- promotion of outsourcing service management capabilities of Baltic SME of various industries
- promotion of regional and international networking
- increase BOA brand and service value awareness at regional and international scene

BOA operational OBJECTIVES:

- provision a match between what Western customers want and need, and what Baltic organizations are able to supply
- business opportunities development
- provision of integrated assistance through each business establishment process (value creation chain) to both local and international Customers
- partnering with Baltic SME of various industries

BOA Products:

- Training
- Corporate Hospitality
- Business information

BOA Business development portfolio:

- Analysis and Research
- Strategic and Operational Business Development Solutions
- Integrated Brand Communication Strategies
- Legal Services
- IT Solutions
- Accounting, Audit & Tax Services
- Property Valuation & Real Estate Advice
- Human Resource Support

Contact details: Saulius Masalskis

Chairman / Managing director

Phone/Fax: +370 526 52002

Website: www.balticoutsourcing.com

E-mail: info@balticoutsourcing.com



Marketing Consultants

JNN Consult Ltd.

BUSINESS & BACKGROUND:

JNN Consult Ltd. is the first marketing consulting company in Bulgaria established in 1999. The company is specializing in Integrated marketing, Information & Communications Technologies (ICT) Market, Internet and Business-to-Business marketing, providing full range of marketing services, marketing information, consulting, training and coaching. The company combines unique Bulgarian industry knowledge and marketing expertise and have proven results of increasing R.O.I. of marketing investments for its clients.

JNN Consult Ltd. is one of the publishers of The FIRST "WHITE PAPER of ICT in Bulgaria", the "White Paper of ICT&SME in Bulgaria", "White Paper of Bulgarian e-Government", "White Paper of Bulgarian Telecommunications, Services and Technologies" and "White Paper of Bulgarian Business Intelligent Software for Business Management".

The General Manager and Senior Marketing Consultant Ms. Janet Naydenova has experience in ICT and Marketing fields since 1986. In particular, she spent 8 years of her professional career with the Worldwide Fortune 500 IT Distributor reaching the position of Channel Marketing Director for Europe, Middle East and Africa. Her articles on marketing, analyses on ICT and Internet Markets, surveys, researches and interviews have appeared in all specialized newspapers and magazines in Bulgaria, business-oriented Bulgarian and German newspapers and Magazines, the first electronic E-zine in Bulgaria, dedicated to the Internet and in the European magazines PC EUROPA and Connects (Magazine of Financial Times). Ms. Naydenova is the first Certified Master of Guerrilla Marketing Coach in Central & Eastern Europe. She is an ICT marketing expert of European Union's (EU) and marketing consultant of the World Bank Group.

MISSION:

"Our mission is to help our clients receive higher R.O.I. (return on investments) of their marketing, sharing our experience & knowledge on the Bulgarian Market and inspiring a human touch in long-term partnership!"

VISION:

JNN Consult Ltd. to become a "bridge between leading European companies and Bulgarian Market!"

Contact details: Janet Naydenova

General Manager

Phone/Fax: +359 2 971 14 01, +359 2 971 14 02

Website: www.jnn-marketing.com

E-mail: jnn@jnn-marketing.com



Employers' Association of the Software and Services Industry

ANIS represents the interests of Romanian IT companies, particularly of software producers and services providers. The association was founded in 1998, and at present we count more than 120 members, some of the foremost IT companies in the field. For detailed information regarding our members and the projects we are currently involved in, we invite you to visit our website or to contact us directly.

Through its actions, ANIS contributes to helping Romania become one of the regional leaders in software production and an acknowledged international exporter of high standard software products and IT-enabled services. One of ANIS' prerogatives is to act as a point of access to any information regarding the Romanian software industry.

During the last years, ANIS has been involved in creating and promoting the brand of the Romanian IT industry. Cooperation with partners both in public and private sectors was the success factor in many of the association's projects.

In 2007, ANIS took a strategic option to merge with ARIES – Romanian Association for the Software and Electronic Industry in order to create the most representative national organization in the IT field in Romania.

If you are searching for partners or sub-contractors on the Romanian IT market, collaborating with us can provide you with:

- Support in identifying partners or business opportunities on the Romanian IT market
- General information regarding the Romanian business environment
- Information through third-party consulting regarding general and specific legal and fiscal aspects
- The opportunity of taking part in the association's own events, in events organized by ANIS in collaboration with various third parties, or ANIS partners' events

Contact details: Valerica Dragomir

Executive Director ANIS & ARIES

Phone/ Fax: : 0040-21-312.13.97

Website: www.anis.ro, www.romaniaIT.com

E-mail: office@anis.ro



Ukrainian Hi-Tech Initiative

Ukrainian Hi-Tech Initiative is a leading Ukrainian alliance of offshore software development and IT outsourcing providers. The mission of the alliance is to promote Ukrainian software development companies in the global market.

Hi-Tech Initiative provides the Ukrainian software developers with the opportunity to enhance their business in the areas of IT outsourcing and offshore programming by using the partner network and marketing channels of the Initiative in the external markets.

Ukrainian Hi-Tech Initiative provides the services in establishing partnerships, collaborating in IT projects implementation, assisting in BPO between Ukrainian and western companies.

Ukrainian Hi-Tech Initiative is an organizer of annual Ukrainian Outsourcing Forum (www.outsourcing-forum.com.ua) – IT business forum dedicated to promotion and development of Ukrainian software development and outsourcing market.

The first Ukrainian Outsourcing Forum was held in 2003. Since, it became the major event of Ukrainian software development industry. Participation in the Forum provides a possibility for Ukrainian and Eastern European companies to present their potential to the clients establish business relations and sign advantageous contracts

The Forum objectives are boosting software development and outsourcing services market, discussion of global trends in IT markets, and addressing current issues in the outsourcing area.

Ukrainian Hi-Tech Initiative objectives:

- setting up and development of international connections in the sphere of software development;
- creation of a possible image of Ukrainian software development on the foreign markets;
- search and selection of partners supplying IT services outsourcing and BPO in Ukraine;
- finding investors into Ukrainian software development industry;
- establish stable channels for exchanging information with foreign markets;
- promote development of hi-tech industries in Ukrainian economy;
- promote the export potential of Ukrainian enterprises engaged in hi-tech industries;
- promote utilization of scientific potential in products of the Ukrainian hi-tech industries.
- encourage advanced training of hi-tech professionals.

Contact details: Victor Maznyuk

President

Phone: +38 044 458 1753

Website: www.hi-tech.org.ua

E-mail: hi-tech@hi-tech.org.ua

LIST OF RESPONDENTS

We would like to thank all who have contributed to the "Central & Eastern Europe IT Outsourcing Review '2007":

ANIS - Employers' Association of the Software and Services Industry	www.anis.ro
Abit	www.abit.hr
Association INFOBALT	www.infobalt.lt
Baltic Outsourcing Association	www.balticoutsourcing.com
Baltic Software Solutions	www.bss.biz
Bluebird International	www.bluebird.co.hu
Bulgarian Association of Software Companies - BASSCOM	www.basscom.org
Bulgarian Association of Information Technologies - BAIT	www.bait.bg
Bulgarian Web Association	www.bwa.bg
CEED (Competitiveness Enhancement and Enterprise Development Project)	
Croatian Association of software and online entrepreneurs (Initium)	www.webstart.ini.hr
Czech ICT Alliance	www.czechict.cz
Data Solutions	www.ds-bg.com
Dekart	www.dekart.com
DIS	www.dis.waw.pl
Estonian Association of Information Technology	www.itl.ee
Estonian Information Technology Society (EITS)	www.eits.ee
Hungarian Association of IT Companies	www.english.ivsz.hu
Hungarian Outsourcing Association	www.hoa.hu
HUP ICT (Croatian Employers' Association - ITC)	www.ict.hup.hr
I.C.S. Tacit Knowledge S.R.L.	www.tacitknowledge.com
Belarusian Association "Infopark"	www.infopark.by
Information Technology & Communication Association of Romania (ATIC)	www.atic.org.ro
JISA - Union of ICT Societies	www.jisa.org.yu
JNN Consult Ltd.	www.jnn-marketing.com

Latvian Information Technology and Telecommunications Association - LIKT	www.litta.lv
Logosoft d.o.o.	www.logosoft.co.yu
Macedonian Association for Informatics Technology - MASIT	www.masit.org.mk
Magic Solutions	www.magicbg.com
Mansoon Outsourcing SRL	www.mansoon.ro
Ministry of Communications and Information Technology	www.mcti.ro
Neocom AD	www.neocom.com.mk
Nexum IT	www.nexum.lv
PanonSoft d.o.o.	www.panonsoft.com
Polska Izba Informatyki i Telekomunikacji - PII	www.piit.org.pl
Seedot.com	www.seedot.com
Semantic Soft	www.semanticsoft.net
Softec	www.softec.sk
Softex	www.arobs.com
Syntactic Sugar s.r.o.	www.syntacticsugar.com
The Association of Moldavian Programmers	www.aim.md
Tilde	www.tilde.lv
WebSoft	www.websoft.co.yu

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Parvis Hanson, The Manor Group
Jüri Jõema, Estonian Association of Information Technology
Dmitry M. Sharadkin, RQL Ukraine