

The European Union's Programme for Ukraine

Support to the Development of Business Capacity of  
Ukrainian SMEs – International Dimension

EuropeAid/124928/C/SER/UA

# Software and IT Services in the European Union Market Survey



The project is funded  
by  
the European Union



The project is implemented by  
a WYG International led consortium

# **SOFTWARE AND IT SERVICES IN THE EUROPEAN UNION**

## **MARKET SURVEY**

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# TABLE OF CONTENTS

**1 LIST OF ABBREVIATIONS.....4**

**1 EXECUTIVE SUMMARY .....5**

**2 INTRODUCTION .....8**

**3 SOFTWARE AND IT SERVICES CHARACTERISTICS.....10**

**4 DEMAND FOR SOFTWARE AND IT SERVICES IN THE EU .....16**

**5 SUPPLY OF SOFTWARE AND IT SERVICES IN THE EU .....22**

**6 THE OFFSHORE/NEARSHORE OUTSOURCING MARKET IN THE EU.....23**

**7 OUTSOURCING LOCATIONS FOR SOFTWARE AND IT SERVICES .....31**

**8 DISTRIBUTION CHANNELS .....38**

**9 PRICES .....42**

**10 CONCLUSIONS ON THE EU MARKET OPPORTUNITIES FOR UKRAINIAN SME .....44**

**ANNEX I USEFUL SOURCES OF INFORMATION ON THE EU MARKET FOR IT SOFTWARE AND SERVICES .....48**

**ANNEX II A.T.KEARNEY GLOBAL SERVICES LOCATION INDEX METRIX.....50**

**ANNEX III EVALUATION OF IT OUTSOURCING POTENTIAL OF UKRAINE .....51**

**ANNEX IV REFERENCES.....53**

## 1 List of Abbreviations

AM	Application Management
BI	Business Intelligence
BPO	Business Process Outsourcing
BPM	Business Performance Management
CBI	Centre for Promotion of Imports from Developing Countries
CRM	Customer Relationship Management
DC	Developing Country
ECODE	European Center for Offshore Development
EITO	European Information Technology Observatory
ERP	Enterprise Resource Planning
EU	European Union
EuroITX	European Information Technology Exchange – offshore outsourcing adviser
ICT	Information and Communications Technology
IPP	Intellectual Property Protection
IS	Information System
IT	Information Technology
ITO	IT Outsourcing
NDOS	Network and Desktop Outsourcing
SaaS	Software as a Service
SAP	Systems, Applications and Products in Data Processing
SCM	Supply Chain Management
SME	Small and Medium Enterprise
SOA	Services Oriented Architecture
UASWD	Ukrainian Association of Software Developers
UNCTAD	United Nations Conference on Trade and Development

# 1 Executive Summary

## Introduction

This survey has been prepared according to the project Terms of Reference (page 20, section 4.2.1, activity No 7), which state that: *“The Consultant shall conduct market research in the appropriate EU countries for the identification of niches to be occupied by Ukrainian SME”*. The tender for the project and the Inception Report, presented to the Steering Committee on 11 December 2007 and 18 January 2008, outlined our concept of the market survey for the three sectors selected for the project support: IT services, woodworking & furniture, machinery & equipment.

The purpose of this survey is to assist the small and medium-sized exporters of software (related) services and IT services from Ukraine interested in entering or strengthening a position in EU markets, through:

- providing information on developments of the IT sector in the EU,
- identifying market opportunities and potential competitors,
- indicating strategies to enter the market and develop commercial links with the EU partners.

This document is a reference tool. The Centre for Promotion of Imports from developing countries (CBI) has been the main source of information for this survey. The Ukrainian IT companies will need to do their own in-depth research to determine if the EU is the suitable market and which country or countries are the most promising. Useful sources of information for an in-depth study are provided in Annex I to this survey.

## Services covered

The definition for software, IT services and outsourcing that is used in this survey is the one used by the European Information Technology Observatory (EITO). Software products consist of system software and application software. IT services include professional and support services.

The software, IT services and offshoring / nearshoring market is a good opportunity for IT Ukrainian companies if they wish to participate in the global software and IT services market. This participation is also advantageous for the EU companies. They can fulfill their continuing desire to improve quality and reduce costs by profiting from the lower costs and high-quality skills in Ukraine. At the moment the most promising segment for Ukraine is offshoring / nearshoring, therefore it is a major part of this survey.

## Demand for software products

The total market for software products in the EU amounted to €76 billion in 2006, increasing 12.9% compared to 2004. The market was expected to realise a solid growth of another 6.6% in 2007. The market consists of system software (€40.5 billion in 2006) and application software (€35.1 billion in 2006). Germany was the largest market for software products in 2005. It was followed by the UK, France, the Netherlands, Italy, Sweden, Spain, Belgium and Denmark.

## Demand for IT services

The total market for IT services in the EU was valued at €140 billion in 2006, a growth of 11% compared to 2004. Growth in IT services is anticipated to reach almost €156 billion (plus 11%) in 2008. The UK was the largest market for IT services in 2005. It was followed by Germany, France, Italy, the Netherlands, Spain, Sweden, Belgium and Denmark.

## **Supply**

A consolidation can be seen in the European market for software and IT services supply. Open source software is gaining in importance. Several governments have promoted the use of open source software. Furthermore, near- and offshoring is gaining in importance.

## **The EU offshore / nearshore outsourcing market**

Growth of the European spending on offshoring is expected in the next few years. Opinions on the intensity of this growth differ. One source expects a 50% year-on-year rise in spending in 2007-2008. Another source forecasts that European spending will achieve an average growth of 6% over 5 years and European companies will spend a total of €146 billion in 2011. IT jobs will move offshore most rapidly from the UK with continental countries matching that trend at a lower level of impact. Up until now it is mainly the larger companies that have started to offshore and nearshore their software and IT services. Although still developing slowly, there is a trend in the Northern European countries (such as Sweden, the Netherlands, Denmark and Germany) and the UK towards a greater involvement of SMEs in outsourcing software and IT services. Offshoring / nearshoring software and IT services will be the next step for these SMEs. In other countries such as Belgium, France, Spain and Italy, SMEs are not ready for offshoring / nearshoring yet. According to experts, the SMEs in these countries are only just discovering onshore outsourcing.

Driving factors for offshoring are still cost cutting, access to skilled labour and improving quality. The main barriers are cultural and language differences and a lack of trust.

The best potential for offshoring / nearshoring lies in software applications and software systems. For professional IT services, the best chances for offshoring / nearshoring lie in implementation and operations management services. Support services have the lowest chance in offshoring / nearshoring.

## **Offshoring / nearshoring trends**

Offshore / nearshore software and IT services outsourcing is now accepted as a normal business practice.

- Nearshoring is one of the most important trends in the EU, due to cultural and geographical advantages and a greater sense of control for EU companies.
- Security and Intellectual Property Protection are becoming increasingly important.
- Multi-sourcing will emerge. It is characterised by making use of several suppliers and supply markets to spread risks.
- Growth, efficiency and the availability of a skilled labour force will become more important next to cost savings.
- A significant investment in project management offices is expected because of multi-vendor, multi-model and multi-country contracting that is coming up.
- India will strengthen its position by offering more extensive choices.
- Many mergers and acquisitions in the EU software and IT services market.

- Integrated ITO and BPO deals will have mixed success.
- Mainly large companies will offshore and nearshore in the EU.

### **Offshore / nearshore locations**

India remains the best offshore location by a wide margin, although wage inflation and the emergence of lower-cost countries decreased its overall lead. However, more and more European countries look to nearshore destinations for offshoring tasks. According to some experts, there is a threat of the labour pool running dry in some developing countries (e.g. India). It may create market opportunities for Ukraine which is an emerging outsourcing location.

### **Distribution channels**

In practice, there are three most common sales channels for service providers from non-EU countries:

1<sup>st</sup> option - establishing a sales office in an EU member country could be a very good option to battle the lack of trust and credibility among EU companies.

2<sup>nd</sup> option - working with an intermediary (broker/consultant). An example of a broker is the European Information Technology eXchange. It focuses on suppliers from developing countries and buyers from Europe.

3<sup>rd</sup> option - building a partnership with an EU company (e.g. a joint-venture).

### **Price developments**

As the shortage in IT professionals in EU countries increases, prices for software and IT services will also increase. However, there is also price pressure in the offshore / nearshore market. The price pressure seems to be particularly strong for IT services with low requirements for skills and experience. Wages for IT outsourcing service providers in key offshore markets, including India, China and Poland, are increasing by an average 8 to 11% per year, according to findings in 2006 by the Everest Research Institute – an outsourcing research institution. According to CBI experts, the EU market will tolerate a small price increase as price is no longer the only focal point for EU companies that want to offshore / nearshore their software or IT services. The emphasis is also on quality and security of the projects.

## 2 Introduction

### Objective

The purpose of this survey is to assist the small and medium-sized exporters of software (related) services and IT services from Ukraine interested in entering or strengthening a position in EU markets by:

- providing information on developments of the IT sector in the EU,
- identifying market opportunities,
- indicating strategies to enter the market and develop commercial links with the EU partners,
- specifying useful sources of information for an in-depth study which can be undertaken by an individual company.

This document is a reference tool. It has been prepared based on the market analysis available in Internet. The CBI Market Information Database has been the main source of information for the EU market survey<sup>1</sup>. The Ukrainian service provider will need to do his own in-depth research to determine if the EU is the suitable market and which country or countries are the most promising. It should be noted that although there are many similarities in the EU countries, each country must be treated differently. Useful sources of information for an in-depth study are provided in Annex I.

### Services covered

As a result of a decreasing workforce in the software and IT-services sector in most EU countries and an increasing need for skilled but competitively priced labour, companies in the EU have to start looking for other solutions for their software development and IT-services. Outsourcing, offshoring and nearshoring are solutions that can then be used.

This market survey profiles the market for software and IT services in the EU. The emphasis of this survey lies on the potential for offshoring / nearshoring these services to Ukraine, as it is considered as the best opportunity for Ukrainian SMEs that offer software and IT services.

This market survey discusses the following service groups, as they are the most interesting for exporters:

- Software applications,
- System software,
- Professional IT services,
- Support IT services.

### ICT sector in Ukraine

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<sup>1</sup> The Centre for the Promotion of Imports from developing countries (CBI) is an Agency of the Ministry of Foreign Affairs and part of the development cooperation effort of The Netherlands. Its mission is to contribute to the economic development of developing countries by strengthening the competitiveness of companies from those countries on the European (EU & EFTA) markets. Ukraine is included on the OECD list of developing countries.



For IT companies from Ukraine, participation in the global software and IT services market provides a good opportunity for growth. These companies can offer the competitively priced labour and at the same time Ukraine has a high number of technically trained and skilled people: the sector employs 25,000-30,000 certified programmers and many more specialists of different backgrounds and qualifications beginning from students that work on a part-time basis up to rocket scientists and aviation engineers that assist in creating customized programmes for complicated technological processes. Ukraine has ca 30,000 IT graduates arriving into the workforce each year.

Ukraine has emerged as a low cost site for high quality software development and it is considered as an one of the most attractive outsourcing destination for software and IT services in Central and Eastern Europe. If several years ago the producers worked mostly alone or in small quasi underground groups on outsourced projects ordered from abroad, now there is a growing interest among Ukrainian computer companies to organize software production centres that could participate in international software development projects. On the other hand, established computer development companies started creating consortia and professional associations to increase their market competitiveness and visibility.

#### Key figures on the sector

There is a lack of reliable statistical indicators on the sector development in Ukraine. According to estimates:

- the share of IT industry in GDP is approx. 3%;
- the computer software development accounts for 10-30 percent of IT market revenues;
- the software development for exports (including outsourcing) is approx 30-40% of total software development and it grows better than sales in the domestic market: almost 50% a year during last three years<sup>2</sup>;
- the nearshore/offshore outsourcing market in Ukraine reached \$246 million in 2006<sup>3</sup> ; however it should be underlined that approx 90% of the outsourcing is done on the “black market”<sup>4</sup>
- average annual export sales for forty leading software development firms vary from \$ 315,000 to \$ 6 million per company;
- there are some 1,300 officially registered companies delivering software-related products and services, in this approx 300 companies specialize in nearshore / offshore outsourcing development projects; company staff varies from 10 to 380 employees;
- approx 14,000 IT specialists are involved in IT outsourcing services;
- IT professionals’ rates per year range between \$ 25,920 and \$ 49,600 (this includes salary, taxes, office facilities etc.)<sup>5</sup>;
- most of the exported software is developed and customized based on customer orders;
- export is dominated by legacy systems, solutions for corporate accounting and planning, billing systems, embedded solutions, web applications and computer games; finished solutions account for 20-30% of exported products.

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<sup>2</sup> Estimates by The Association of Software Developers “IT Ukraine”

<sup>3</sup> According to goaleurope.com, a leading expert on Russian & Eastern European software development.

<sup>4</sup> In 2000 the government officially registered 3.1 million USD of the offshore software development in Ukraine, while the real value was estimated at 32 million USD - according to data given by the UASWD in the White Paper on Offshore Development in Ukraine produced by the IT Committee of the American Chamber of Commerce in Ukraine.

<sup>5</sup> According to “Central & Eastern Europe IT Outsourcing Review ‘2007” by Ukrainian HI-TECH Initiative

The IT sector in Ukraine benefits from geographical proximity to the EU market and positive changes in social and economic life in the country which boosting partnership between EU and Ukrainian companies. Frequent changes in the government do not affect the outsourcing businesses, however its policies such as increase of education budget to 6.5% of GDP play a positive role in the long-term prospects of the software development industry. A lack of the integration with the EU keeps the prices in check and IT professionals from leaving the country. Both new and old EU member states qualified IT resources in Ukraine. In particular UK and Germany recognize the outsourcing opportunity in Ukraine. According to estimations German customers employ 6% of all offshore outsourcing resources in Ukraine.

### 3 Software and IT Services Characteristics

#### Definitions software and IT services

In this survey, the definitions for software products and IT services from the European Information Technology Observatory (EITO) are used. This is a well-reputed source in the industry that has very detailed and up to date information available. Table 2.1 presents the different product groups within software products and IT services.

**Table 3.1** Product group definition software products and IT services

Software products	<ul style="list-style-type: none"> <li>• System software; system infrastructure and application tools</li> <li>• Application software</li> </ul>
IT services	<ul style="list-style-type: none"> <li>• Professional services</li> <li>• Support services</li> </ul>

Source: EITO, modified by Facts Figures Future (2007)

#### Software products

According to EITO, software products are 'commercially available packaged programmes for sale or lease from systems services and Independent Software Vendors (ISVs)'. Value includes the packaged software fees plus related non-consulting revenue, such as fees for maintenance and/or support. It includes licence fees for software maintenance, services, and/or support. Other forms of software support would be counted within the support services category. Software products can be categorised into two segments:

- System software,
- Application software.

#### **System software**

It includes system infrastructure software and application tools:

- System infrastructure software includes system management software, network management, security software, storage software, server ware, networking software, and system-level software.
- Application tools include information and data management software, application design and construction tools, application lifecycle management, application deployment platforms, middleware, other development tools and information access and delivery tools. Examples include database engines, 4GL(fourth generation programming language. Class of computer

languages closest to human languages), AMD (Analysis, Modelling and Design) and 3GL(third generation programming language e.g. C, C++, and Java).

### ***Application software***

It includes consumer, commercial, industrial and technical programmes and code sets designed to automate specific business processes in an industry or business function. Application software increases productivity and supports entertainment, education and data processing. The packaged application market consists of the following sub segments:

- Consumer applications (also known as consumer off the shelf software),
- Content applications (e.g. content management systems),
- Collaborative applications (e.g. groupware or messaging software)
- Enterprise applications. This is application software that performs business functions such as accounting, production scheduling, customer information management, bank account maintenance. The segment consists of back-office, engineering, and CRM (Customer Relationship Management) applications.

### **IT services**

As mentioned in table 2.1, IT services can be divided into two product groups:

- Professional services,
- Support services.

Processing services were removed from the scope of IT services as they are increasingly provided by business services players as part of their Business Process Outsourcing (BPO) activities.

### ***Professional services***

These services consist of:

- Consulting,
- Implementation,
- Operations management.

### ***Consulting***

This product group consists of a wide variety of IT-related planning and design activities that assist clients in making IT-related decisions on business direction or information technology. Within consulting, two kinds can be defined, namely IT related business consulting and IT consulting.

IT related business consulting includes:

- Corporate strategy assistance.
- Process improvement.
- Capacity planning.
- Business process re-engineering. This is consulting aimed at improvements by means of elevating efficiency and effectiveness of the processes that exist within and across organisations. IT plays a role as enabler of new organisational forms, and patterns of collaboration within and between organisations.
- Change management services for business. Providing organisations with a disciplined process that can introduce required changes into the business environment with minimal disruption to ongoing operations.

Excluded are consulting services involving tax, audits, benefits, financial, and/or engineering issues.

IT consulting includes:

- Information systems strategy assistance.
- Information system and network planning.
- Architectural and supplier assessments.
- Product consulting.
- Technical designs for information technology.
- Maintenance planning.

#### *Implementation*

Implementation comprises all activities directly involved with the creation of technical and business IT solutions. It includes:

- Procuring information technology.
- Configuring information technology.
- Installing information technology.
- Developing information technology.
- Moving information technology.
- Testing information technology.
- Managing information technology.

Implementation services also consist of all activities involved with custom application development and work performed on packaged applications. Training and education is also included in this segment. It comprises activities required for the transmission of new behaviours, skills or actions that can be used to start performing job-specific tasks or improve performance in IT-related functions.

#### *Operations management*

This involves taking responsibility for managing components of a client's IT infrastructure. Specific activities include:

- Help-desk services.
- Asset management services.
- Systems management.
- Network management.
- Software update management.
- Facilities management.
- Back-up and archiving.
- Business recovery services.

#### **Support services**

These services include all activities involved with ensuring that hardware, software and networking products are performing properly as a service to clients. Activities include all maintenance contracts for hardware, software and networking products, as well as services, such as telephone support to resolve problems for clients and help with workarounds. Services in this category appear as bundled packages of other services or stand-alone.

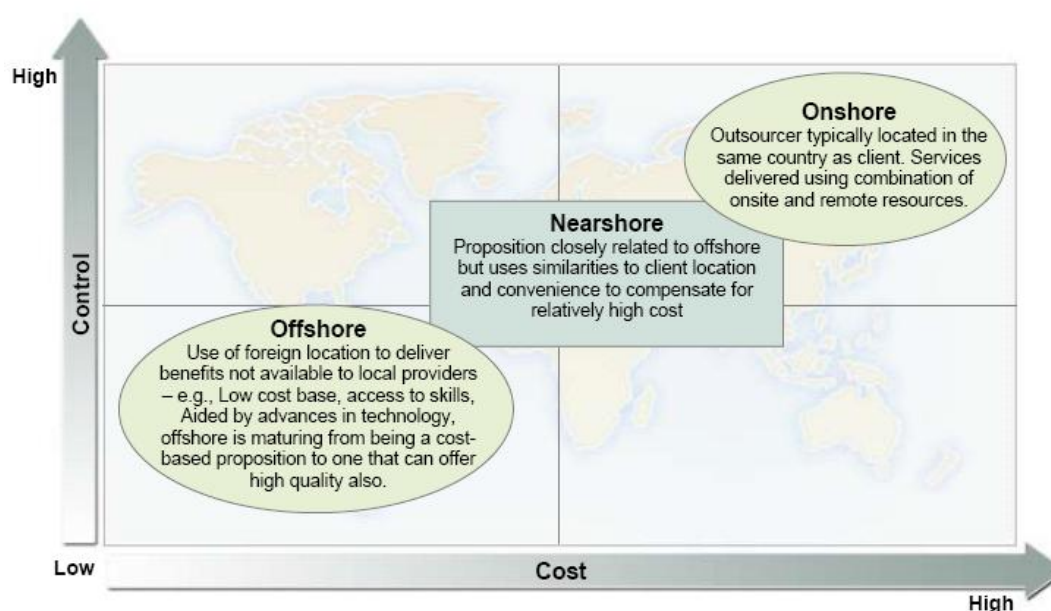
#### **Definitions of outsourcing, onshoring, offshoring and nearshoring**

Companies in advanced, 'high-cost' economies are increasingly looking to contract out software and IT services work to companies in 'low-cost' nations or regions that can offer a skilled workforce and high quality solutions.

The contracting out of parts of a business is called outsourcing. This is by far the most promising ICT segment for companies in developing countries, in this from Ukraine. There are different types of outsourcing, namely:

- Onshore outsourcing
- Nearshore outsourcing
- Offshore outsourcing

**Figure 3.1** Onshore, nearshore and offshore market characteristics



Source: neoIT (2005)

### ***Onshore outsourcing***

It is the outsourcing of a certain part of a business process within your own country.

### ***Nearshore outsourcing***

It is defined as outsourcing parts of a business to a neighbouring country or a country that is less than 3 hours by plane away from the country of origin. Nearshore destinations for companies in the EU are: Eastern Europe (in this Ukraine), the Baltic states and North African countries such as Morocco and Tunisia.

### ***Offshore outsourcing***

Syntect Informatique – a French research agency specialising in the ICT sector- defines offshore outsourcing as outsourcing parts of a business overseas (from the European point of view). This means outsourcing to countries outside Europe and more than 3 hours away by plane from the country that is outsourcing the part of the business. The most important offshore outsourcing destination for the EU companies is India.

IT outsourcing is usually chosen by businesses as a way of concentrating upon core business competences, and transferring control of some or all of the IT functions and services to professional providers that possess the required expertise and resources. IT outsourcing is a very complex set of relationships, much more sophisticated than outsourcing of other business functions such as manufacturing, marketing etc. Nearshore/offshore IT outsourcing is a lot more challenging for business when compare to domestic IT outsourcing in many respects. Companies are embracing nearshore/offshore outsourcing in order to maintain their competitive levels. The major reasons and value proportions for companies outsourcing their projects abroad are simple: cost savings, better product quality, faster delivery times, access to scarce skills and improved efficiency. Although there has been some “backlash” and return of provision of nearshore/offshore locations, many companies are still considering outsourcing possibilities as managers and executives begin to realise the numerous advantages of this approach in business performance. Apart from the above mentioned internal objectives that companies pursue in today’s business environment, there are external forces that assist firms in deciding to outsource. The most notable external sourcing drivers in the global economy are globalization, deregulation and the impact of the Internet<sup>6</sup>.

### **Software and IT services outsourcing**

In this survey we mainly focus on the possibilities for nearshoring and offshoring as these are the areas that offer the best opportunities for Ukrainian companies.

#### ***IT services offshore/nearshore outsourcing***

The core interest consists of custom development solutions, web application development, system integration, database management and IT consultancy services (re-engineering, localisation, maintenance, testing, coding, IT security services, web enablement, migration).

Outsourcing services that are IT driven or require the help of IT infrastructure and resources are called business process outsourcing (BPO). A few examples of BPO are medical (legal) transcription, online education, online training, data processing (data entry), data digitisation and the call centres. It is important to understand that IT services and BPO have overlapping areas. Some examples are data centres, network management, desktop PC management, helpdesk support, IT facility management, imaging and engineering.

In general, the following activities can be considered as IT-activities with a high potential for offshore outsourcing:

- Activities with a high degree of commoditisation.
- Activities with a low degree of customer intimacy.

#### ***Software development offshore/nearshore outsourcing***

Only very few firms in developing countries<sup>7</sup>, in this in Ukraine, are able to build and market application software themselves. Success in their domestic market is essential and without any local market for packaged software it is almost impossible to finance export marketing. Software development, large programming projects and maintenance are activities with a high

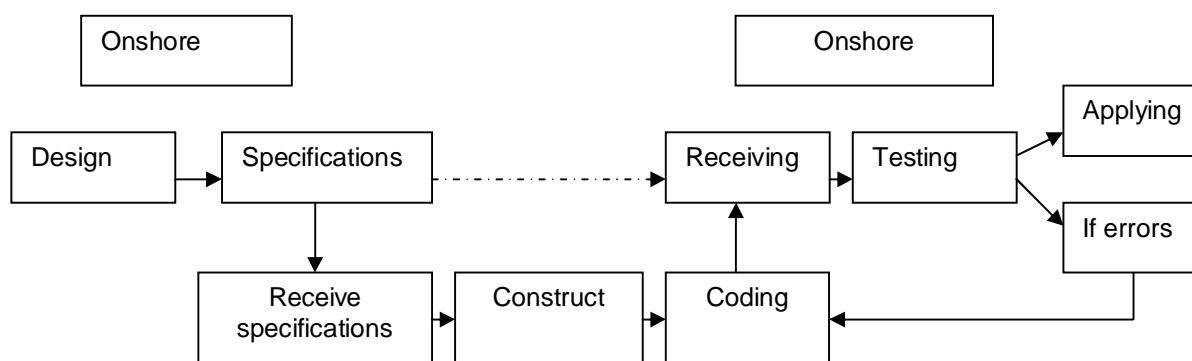
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<sup>6</sup> Busher, J. (2002) What is your Sourcing Strategy?, The Outsourcing Project, Vol. 1., March 11.

<sup>7</sup> When referring to developing countries in this market surveys, reference is made to the group of countries on this OECD DAC list of January 2006. Ukraine is included to this group.

(offshore/nearshore) outsourcing potential. To be more specific, the actual development of software could be outsourced more easily than design, specification, and receiving and testing. Figure 2.2 shows this in a simplified manner.

**Figure 3.2** Software development process



Source: Hee, van (2004)

### Statistical product classification

Measuring trade in software and IT services for business purposes is very complicated, due to limitations in definitions and challenges in measuring the data. There are no well-defined classifications in 6 or 8 digits HS-codes, as is the case with trade in goods.

#### Software

Although software is included in international merchandise trade statistics, relevant trade data are difficult to gather. This is because only the trade in the medium that contains the software is measured. As this mainly concerns consumer products, software for business purposes is hardly dealt with.

#### IT services

In general, international (trade) statistics of services are also hard to measure. This is the case for imports as well as for exports of IT services. As an indication, IT services are included in the trade in services statistics of the Balance of Payments (BOP) of many countries. IT services appear in the following sections of the BOP-system (source UNCTAD):

- Computer services (263)
- Royalties and license fees (266).

### Focus on offshore/nearshore outsourcing

There are many practical challenges with these definitions. The import statistics just give a very rough indication and detailed statistics are lacking. In fact, outsourcing could be regarded as a way of importing software services by the EU-countries. For this reason, and since offshore/nearshore outsourcing forms a major opportunity for Ukrainian exporters (as stated before), this market survey is about offshore/nearshore outsourcing in particular.

### Classification of software outsourcing nations

Table 2.2. shows “The 4-tier Taxonomy” model that has been developed and can be used to classify software outsourcing nations. This rigorous taxonomy is based on maturity, clustering and export revenues in the global market, and can be employed for comparative and benchmark analysis. The model’s tiers embrace a range of countries from the successful nations to countries with little impact yet on the global market.

**Table 3.2** Taxonomy of Exporting Nations

	<b>Type</b>	<b>Nations</b>
<b>Tier 1</b>	Major software exporting nations	Mostly OECD nations such as the USA, UK, Germany, etc.  New entrants include Ireland, Israel and India
<b>Tier 2</b>	Transition software exporting nations	Only Russia and China
<b>Tier 3</b>	Emerging software exporting nations	South Africa, Brazil, Mexico, the Philippines, Malaysia, Pakistan, Poland, <b>Ukraine</b> , Romania, Bulgaria, Hungary, others
<b>Tier 4</b>	Infancy stage software exporting nations	Egypt, Bangladesh, Vietnam, Iran, Indonesia, others

Source: Caramel, E.B. (2003)

## 4 Demand for Software and IT Services in the EU

### DEMAND FOR SOFTWARE

The total market for software products in the EU amounted to €76 billion in 2006, increasing 12.9% compared to 2004. The market was expected to realise a solid growth of another 6.6% in 2007<sup>8</sup>. The market consists of system software (€40.5 billion in 2006) and application software (€35.1 billion in 2006). System software was the largest growing segment, increasing 14% compared to 2004. For 2007 the system software market was expected to grow by 7% to €43 billion. The market for application software increased 11.6% compared to 2004. In 2007, the market for application software was expected to rise to €37.2 billion (plus 5.9%).

When studying the Top 200 software vendors present in the European market, it is clear that American software vendors are omnipresent (73 in the Top 200, 53 in the Top 100, and 8 in the Top 10), thanks in particular to their positioning on software infrastructure tools. The three other large countries are Germany (12%), the United Kingdom (UK) (5%) and France (5%). Germany’s position is unique, as it includes the worldwide leader in enterprise applications, SAP, which represents 69% of Germany’s weight in the Top 200.

Germany was the largest EU-market for software products in 2006, amounting to almost €17 billion. This is an increase of 9.2% compared to 2004. It was followed by the UK, with a total of

<sup>8</sup> Data for 2007 are not available yet.



€15.5 billion in 2006, increasing 17.6% compared to 2004. Ranked third was France (€12.7 billion in 2006, increase of 15.3% compared to 2004).

The fastest growing countries between 2004 and 2006 in applications were the Czech Republic (+40%), Poland (+36%) and Slovakia (+34%). For the future (2006-2008), the strongest growth in the applications market is expected in Poland (+30%), Slovakia (+24%), Bulgaria (+24%) and Romania (+24%). For the systems market, Poland (+37%), Slovakia (+35%) and the Czech Republic (+34%) have shown the strongest growth between 2004 and 2006. In the near future ('06-'08), Poland (+25%), the Czech Republic (+22%) and Bulgaria (+22%) will show the fastest growth. For figures of all EU27 countries, please refer to Table 3.1.

**Table 4.1** EU software market, by member state, € million, 2006

	2006		Systems		Application	
	Systems	Application	Growth '04-'06	Growth '06-'08*	Growth '04-'06	Growth '06-'08*
<b>EU total</b>	<b>40,531</b>	<b>35,102</b>	<b>14%</b>	<b>15%</b>	<b>15%</b>	<b>12%</b>
Germany	8,664	8,306	9%	12%	11%	12%
United Kingdom	8,597	7,039	18%	17%	33%	12%
France	7,073	5,655	15%	13%	12%	11%
Netherlands	2,878	2,465	15%	17%	10%	13%
Italy	2,680	2,357	6%	13%	3%	8%
Spain	1,723	799	16%	16%	19%	11%
Switzerland	1,458	1,333	14%	14%	10%	13%
Sweden	1,393	1,425	17%	17%	10%	12%
Belgium/Luxemburg	925	989	15%	16%	10%	11%
Austria	872	722	13%	14%	11%	12%
Denmark	842	834	17%	17%	11%	12%
Finland	754	603	15%	15%	11%	12%
Norway	722	599	19%	18%	12%	12%
Poland	410	440	37%	25%	36%	30%
Czech Republic	295	303	34%	22%	40%	21%
Portugal	291	240	14%	16%	11%	13%
Ireland	284	265	15%	12%	14%	16%
Greece	220	166	10%	6%	15%	18%
Hungary	208	236	16%	18%	17%	20%
Slovakia	69	83	35%	22%	34%	24%
Romania	61	72	33%	20%	33%	24%
Slovenia	44	57	22%	18%	24%	21%
Lithuania	20	31	33%	20%	24%	19%
Bulgaria	18	33	29%	22%	32%	24%
Latvia	17	27	21%	18%	17%	22%
Estonia	13	23	8%	15%	15%	13%
Malta	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Cyprus	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

\*forecasts

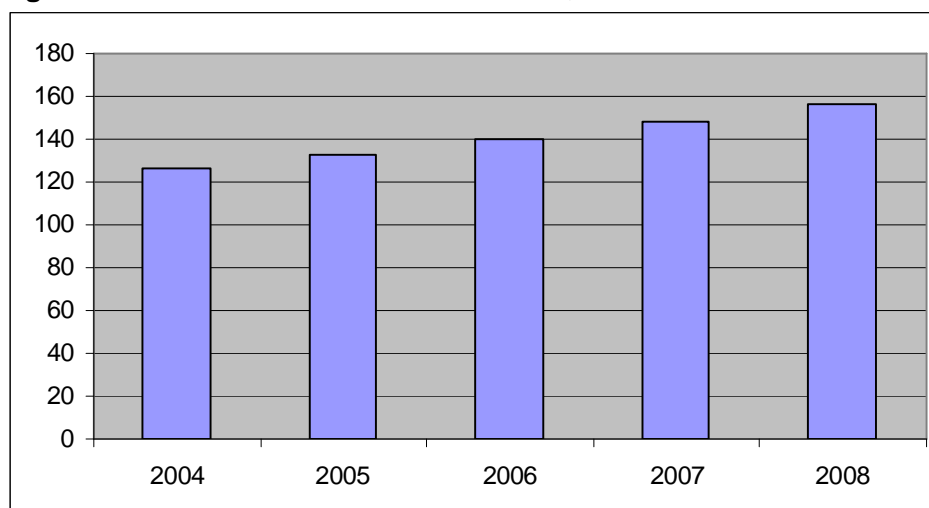
Source: EITO (2007)

## DEMAND FOR IT SERVICES

The total market for IT services in the EU was valued at €140 billion in 2006, a growth of 11% compared to 2004. Growth in IT services is anticipated to reach €156 billion (plus 11%) in 2008. Overall, outsourcing and managed services will continue to be the main drivers of market growth. This trend, however, shows strong geographic differences, with considerably more

contract activity in Northern Europe than in Central or Southern Europe and with Germany and Italy continuing to show rather disappointing performances. The EU IT services market is subdivided into professional services and support services. EITO only supplied figures for IT services without a further specification in the two different sectors within IT services (professional services and support services).

**Figure 4.1** EU IT services market in €million, 2004-2008



Source: EITO (2007)

EITO has gathered data on professional and support services for the former EU15 countries. For the new EU members, the data consist of a total figure for IT services. Therefore, there are two separate tables for these services (Table 3.2 for the EU15 and Table 3.3 for the new EU members).

### ***EU15 countries***

The UK was the largest EU-market for IT services in 2006 (as in 2005), amounting to almost €31 billion, an increase of 14% compared to 2004. Germany was the second largest market (€28 billion in 2006, an increase of 12% compared to 2004), followed by France (€26.5 billion in 2006, an increase of 12% compared to 2004), Italy (almost €10 billion in 2006, an increase of 1% compared to 2004) and the Netherlands (€7 billion in 2006, an increase of 11% compared to 2004).

The fastest growing countries between 2004 and 2006 in professional IT services were Spain (+19%), Ireland (+15%) and Greece (+15%). In the near future (2006-2008), the countries with the fastest growth in professional IT services will again be Spain (+18%), Ireland (+15%) and Greece (+15%). For support services, Spain (+19%), Austria (+13%) the UK (+12%) and Greece (+12%) have shown the strongest growth in the period 2004-2006. For the period 2006-2008, Spain (+19%), Greece (+14%) and Norway (+12%) are expected to realise the highest growth figures. Refer to Table 3.2 for more information.

**Table 4.2** IT services by EU15 country in €million, 2006

	2006	Professional	Support

	Professional	Support	Growth '04-'06	Growth '06-'08*	Growth '04-'06	Growth '06-'08*
<b>EU15 total</b>	<b>99,918</b>	<b>35,803</b>	<b>12%</b>	<b>13%</b>	<b>7%</b>	<b>9%</b>
United Kingdom	22,544	8,520	14%	11%	12%	11%
Germany	20,680	7,387	12%	13%	3%	1%
France	19,204	7,320	12%	12%	8%	9%
Italy	7,051	2,813	1%	6%	-2%	2%
Netherlands	5,713	1,340	11%	12%	9%	10%
Spain	3,916	1,479	19%	18%	19%	19%
Sweden	3,816	1,421	10%	11%	8%	8%
Switzerland	3,587	1,196	8%	11%	5%	7%
Belgium/Luxemburg	2,790	1,044	11%	12%	7%	9%
Austria	2,552	864	14%	4%	13%	3%
Norway	2,316	771	13%	14%	10%	12%
Denmark	2,306	819	11%	8%	11%	8%
Finland	1,712	507	9%	12%	9%	10%
Portugal	658	213	9%	12%	7%	8%
Ireland	645	209	15%	15%	11%	11%
Greece	517	251	15%	15%	12%	14%

Source: CBI Market Information Database

\* forecasts, source: EITO (2007)

### **"New" EU members**

Poland (€1.5 billion) is the new EU member with the highest value in IT services. Poland is followed by the Czech Republic (€1 billion) and Hungary (€700 million). When looking at the growth figures in Table 3.3, all countries show double digit growth. Poland (+52%), Romania (+41%) and Slovakia (+38%) showed the strongest growth in this period. For the period '06-'08, again double digit growth is expected for all countries, with Romania (+36%), Poland (+35%) and Estonia (+30%) showing the fastest growth (refer to Table 3.3).

**Table 4.3** IT services by new EU member in € million, 2006

	2006	Growth '04-'06	Growth '06-'08
<b>New EU total</b>	<b>4,204</b>	<b>34%</b>	<b>27%</b>
Poland	1,570	52%	35%
Czech Republic	1,017	27%	21%
Hungary	689	17%	19%
Slovakia	288	38%	26%
Slovenia	196	12%	11%
Romania	191	41%	36%
Latvia	69	28%	28%
Lithuania	64	28%	28%
Bulgaria	63	24%	29%
Estonia	57	27%	30%
malta	n.a.	n.a.	n.a.
Cyprus	n.a.	n.a.	n.a.

Source: EITO (2007)

## MARKET TRENDS FOR SOFTWARE

**Application software** will be mainly shaped by the following trends:

- The market for Enterprise Resource Planning (ERP) is expected to show healthy growth throughout 2007-2008. Vendors are showing good results thanks to continuous demand for both upgrades and new installations. Growth is mainly driven by product categories such as financials, human capital management and procurement.
- Business Performance Management (BPM), collaboration and compliance are three areas in which companies are investing and will continue to launch initiatives in the short run. Compliance (with rules and regulations) needs to become an enterprise-wide concept. For this reason, compliance investments are increasingly coupled with BPM and enterprise governance needs. Spending on analytics tools will therefore show high growth rates as they represent the most important element in order to deploy data for both compliance and performance monitoring issues.
- Collaborative applications are increasing in importance. The most important areas of growth are integrated collaborative environments as well as stand-alone collaborative applications. There will be specific growth in content management platforms, product information management, enterprise portals and operating environments.
- Supply Chain Management (SCM) will continue to increase its importance in the manufacturing sector.
- Customer Relationship Management (CRM) is expected to attract special attention, especially in the banking and insurance industries. New delivery channels and an altered way of conducting business as a result of increased competition creates a need for financial institutions to invest in more innovative solutions that help them interact better with customers.

The **system software** area will be characterised by the following trends:

- Security is an important issue. Terrorism and increasingly sophisticated phishing attacks are just two examples of problems that companies need to address. Therefore, modern infrastructure software, storage replications solutions, antivirus protection and firewalls will see notable demand.
- IT simplification and optimisations are priorities, especially for large companies. IT optimisation can lead to cost reduction through lower maintenance costs while simplification can ensure better IT quality and can therefore lead to improved products and services, happier customers and increased revenues.
- Demand for Business Intelligence (BI) tools will show healthy growth. The BI software market is a maturing market and BI tools will increasingly find their way into midsize companies across the EU marketplace. A shift can also be seen from stand-alone BI solutions to embedding BI in all business processes. Financial services, retail, manufacturing, and government are the largest vertical markets for BI software solutions.
- Investments in Services Oriented Architecture (SOA) are continuing to show healthy growth rates. The reasons for this growth are the need to speed up the development and deployment of new business solutions, the need for improving quality of IT systems and the expectations for a considerable cost reduction as a result of using a SOA approach.
- Protection and management of data is an important concern for EU organisations. The continuous investment in storage software proves this. Revenues in the storage software markets are increasing at double-digit growth rates. Business continuity and disaster recovery, regulatory and standards compliance and information life-cycle management are

important issues within EU organisations. Therefore, they invest in this area. Additionally, these business issues are reinforced by the more technical trends of archiving (which is important to cut storage costs and ensure compliance), continuous data protection (which is a vital part of business continuity and disaster recovery), and concern about the security of information assets. The fastest growing sub-market is replication software. So far, the use of replications software has been limited to disaster recovery of critical systems. With the increasing adoption of low-cost hardware, application software will increasingly be used for backup and archive purposes.

## **MARKET TRENDS FOR IT SERVICES**

IT services will mainly be characterised by the following trends:

- Outsourcing remains the fastest growing market segment, despite a tendency towards smaller (narrower scope, lower-priced) and shorter deals.
- Outsourcing segments that drive overall market growth include Application Management (AM) outsourcing, Network and Desktop Outsourcing (NDOS), Information System (IS) outsourcing and hosting infrastructure services.
- Despite a multi-sourcing trend in outsourcing, many companies still prefer a strategic relationship with one supplier outsourcing services.
- As a result of the focus on business efficiency consulting and system integration will remain important. IT investments will involve all aspects of business in an organisation, companies are not only looking for a strictly technical IT solution.
- Software as a service (SaaS) which includes software on demand and hosted application management (hosted AM) is an addition to existing applications. SaaS will increase in importance because it can offer increased flexibility, providing both the chance to access business functions remotely and the possibility to pay-per-use.
- Offshore sourcing is increasing in importance rapidly and it is more accepted in application services than in infrastructure services. Since large parts of infrastructure outsourcing can be offshored, with time and increased experience on the side of the vendors, this area is also expected to grow in importance. Customers are also becoming used to the fact that operations can take place offshore and nearshore. Southern Europe is less likely to accept offshoring than northern Europe, but large and mid-sized companies from Southern European countries are also starting to use the opportunity. A good option is to choose for a nearshore option first, because the cultural similarities will overcome many of the barriers. The right mix of onshore, nearshore and offshore locations will be critical, not only to enlarge the customer base but also to spread geographical risk and use the advantages of different competences and time zones.

## **OPPORTUNITIES (+) AND THREATS (-)**

- + Within software applications ERP, BPM, collaborative applications, supply chain management and CRM offer good opportunities on the market. This can also provide opportunities for SMEs in Ukraine that want to be active in the EU market for these software applications.
- + Within system software security, IT simplification and optimisation, data protection and data management and business intelligence tools show healthy growth. This also offers opportunities for SMEs from Ukraine that want to be active in the EU market for these services.

- + Outsourcing is still the most important growth driver. Together with outsourcing, offshoring and nearshoring also come more in the picture. This offers good opportunities for SMEs from Ukraine.
- Obligatory tendering for projects of governmental institutions makes it difficult to apply for SMEs from Ukraine.

## 5 Supply of Software and IT Services in the EU

This section discusses the “production” of software and IT services in the EU. However, software and IT services can hardly be called products. In this case it is better to talk about “supply”.

### SIZE OF SUPPLY

Detailed and up-to-date supply data for software and IT services are very hard to provide. Only some rough indications can be given by, for example, the supply statistics of IT service companies and their employment level by country in 2001. This may be ‘old’ information, but at least it gives information about all 27 EU countries, enabling a comparison between them.

In 2001, IT service companies in the large EU countries like France, Germany, Italy and the UK generated more than 70% of the production value and added value in the EU25. In contrast, IT services companies of the new EU member states had almost no importance for the sector in 2001. This situation, however, has changed. Many Eastern European IT service companies are currently offering outsourcing services (nearshoring) to West European businesses. More information is provided in table 4.1.

**Table 5.1** Production value of IT services, value and employment, 2001 (EU 25)

	Production value in €million	Production value % of EU-25	No. of persons employed
<b>EU*</b>	<b>261,799</b>	<b>100%</b>	<b>2,383,666</b>
United Kingdom	69,379	27%	576,733
Germany	51,825	20%	379,175
France	36,704	14%	335,532
Italy	30,782	12%	340,373
Netherlands	14,902	6%	138,257
Sweden	13,613	5%	121,323
Spain	10,928	4%	165,489
Belgium	7,411	3%	49,446
Ireland	5,303	2%	22,260
Denmark	5,200	2%	45,984
Austria	4,118	2%	38,759
Finland	3,705	1%	37,505
Poland	2,463	1%	n.a.
Czech Republic	1,424	1%	43,031
Portugal	1,186	1%	17,297
Hungary	1,154	0%	42,237
Luxembourg	566	0%	4,804
Slovakia	372	0%	11,616
Slovenia	335	0%	n.a.
Latvia	120	0%	4,534
Lithuania	96	0%	4,070

Estonia	84	0%	2,804
Cyprus	75	0%	1,269
Malta	52	0%	1,168

\* EU without Greece, Romania and Bulgaria

Source: E-Businesswatch (2005)

## TRENDS IN SUPPLY

### ▪ **Consolidation**

Triggered by the long-lasting economic downturn after the end of the dot-com boom, rivalry in the IT services market has significantly increased in the past years. The recent consolidation process in the software market, for example, has driven mergers & acquisition dynamics and led to headlines like “In the flat enterprise software market the message is clear: It is time to hunt or to be hunted”. A prominent example of this development was the hostile takeover of PeopleSoft by Oracle (both active in the ERP market). As a consequence, IT services companies have to deal with a continuously changing industry structure.

### ▪ **Open source**

The use of open source software and standards is promoted more and more. Even governments promote the use of these “free” software sources and standards. The operating system Linux is gaining ground on “paid” systems like Microsoft Windows.

### ▪ **Nearshore / offshore outsourcing**

The labour costs per employee of IT enterprises in countries like Poland, the Czech Republic or Hungary used to be only about one third of those in companies in most former EU15 countries. These low labour costs together with relatively good technical and linguistic expertise provide IT companies in these countries with the opportunity to offer nearshore services. A successful establishment of Eastern European nearshore providers could, in turn, accelerate the increase of wages within the EU. Nearshore destinations (mainly for France) can also be found in Northern Africa (e.g. Morocco and Tunisia).

## OPPORTUNITIES (+) AND THREATS (-)

- ± In a period when cost cutting and at the same time delivering good (superior) quality and access to skilled employees are the main issues, companies in the EU increasingly accept near- and offshoring. This is an opportunity for SMEs in DCs as they can be found in nearshore and offshore destinations.
- ± The fast development of Eastern Europe can be a problem for DCs in offshore destinations as it increases competition. Of course it is an opportunity for DCs in nearshore destinations.
- For small DC suppliers, increased competition due to market consolidation can be a threat.
- Open source software replaces other (paid) software systems. This is a threat for DC suppliers as these services are also supplied by them.

## 6 The Offshore/Nearshore Outsourcing Market in the EU

This section specifically focuses on *offshore / nearshore* outsourcing in software and IT service. As reliable and recent statistics on imports of software and IT services are hardly available, this section gives an overview of the main developments and trends in software and IT services nearshoring and offshoring (in the EU).

Because of the lack of reliable statistical indicators on global outsourcing, the results of market research, on-off surveys and case studies have been studied for relevant information. These sources may be coloured, either positively or negatively, by the specific interests of the agencies. Estimates of the impact on Europe are vague, especially in relation to offshoring to smaller Asian countries and Eastern European states. But almost all sources agree: the European outsourcing market is booming.

## OVERVIEW OF EU OFFSHORE / NEARSHORE OUTSOURCING MARKET

According to Gartner (2006)<sup>9</sup>, European-based companies will fuel the growth in offshore outsourcing with a 50% year-on-year rise in spending on the world market in 2006 and 2007. For Europe as a whole, Forrester Research<sup>10</sup> forecasts a sustained but moderate growth. European spending will achieve an average growth of 6% over 5 years and European companies will spend a total of €146 billion in 2011. Forrester and Gartner obviously present different forecasts and data. Their working methods may differ or they may use a different definition of offshore outsourcing. This could explain the difference in data they present.

Globally, the percentage of companies using high levels of offshore / nearshore activity is set to increase from 13 to 20% in 2008-2009. European companies will be the first to act when new markets open up. Demand is largest in the UK and the Nordic countries. As stated earlier, the activity is considerably less in Central and Southern Europe.

The UK and Ireland spend a large part of their IT-budgets on offshoring / nearshoring. This is mainly due to the lower language barrier they have to a country like India. Therefore, the largest increase is expected to come from these countries in the near future. According to Forrester Research, the UK will account for three quarters of all European offshore outsourcing in the next five years. The companies in the Nordic countries are more attracted to nearshoring. The presence of a mature nearshore market in Eastern Europe and the Baltic States is the main reason for this. Southern European countries are less keen on offshore and nearshore outsourcing. Especially France is not so eager to engage in offshoring and nearshoring.

### ***IT jobs going offshore***

IT jobs will move offshore most rapidly from the UK with continental European countries matching that trend but at a lower level of impact. Across the whole of Europe, Forrester expects that almost 150,000 pure IT jobs will move offshore by 2015 (see Table 5.1).

**Table 6.1** IT jobs moving offshore by country, 2005-2015

	2005*	2010*	2015*
<b>Total</b>	<b>37,482</b>	<b>85,731</b>	<b>150,304</b>
UK	26,728	48,597	87,474
Germany	2,733	10,163	17,091
France	1,480	9,051	15,447
Netherlands	1,475	5,511	9,236

<sup>9</sup> A worldwide research and consultancy firm

<sup>10</sup> A worldwide research and consultancy firm



Italy	853	1,771	2,807
Sweden	861	3,127	5,358
Belgium	310	1,082	1,910
Switzerland	424	1,456	2,604
Denmark	420	1,548	2,620
Spain	345	677	1,132
Austria	313	1,218	1,980
Finland	285	1,012	1,762
Ireland	127	231	416
Portugal	79	162	259
Greece	34	67	111
Luxembourg	16	58	98

\* forecasts

Source: Forrester (2004)

However, in these large markets the competition is fierce. In the UK alone, hundreds of offshore service providers are trying to find clients. Small countries can be attractive because competition is less fierce. Table 5.2 shows that even computing professionals will face job displacement offshore.

**Table 6.2** Forecast: European IT jobs moving offshore by job type, 2004-2015

	2004	2010*	2015*
<b>Information Technology total</b>	<b>30,855</b>	<b>85,731</b>	<b>150,304</b>
Computing professionals	24,151	65,951	118,712
Junior computing staff and operatives	6,705	19,780	31,592

\* Forecast

Source: Forrester (2004)

### ***Which companies offshore / nearshore***

For most large European companies, outsourcing and offshoring / nearshoring is becoming common ground. This is not yet the case for most SMEs in the EU. Although still developing slowly, there is a trend in the Northern European countries (such as Sweden, the Netherlands, Denmark and Germany) and the UK towards a greater involvement of SMEs in outsourcing of software and IT services. Offshoring / nearshoring of software and IT services will be the next step for these SMEs. In other countries such as Belgium France, Spain and Italy, SMEs are not ready for offshoring / nearshoring yet. In the opinion of experts, the SMEs in these countries are only just discovering onshore outsourcing.

In the UK, ECODE– European centre for offshore development- and the National Outsourcing Association have already tried to promote outsourcing and offshoring to SMEs, so far still without much success. SMEs that are active in offshoring or nearshoring tended to be used to the international environment because of the kind of business they are in (e.g. transportation). Most other SMEs still have the old fashioned generic image of offshoring. Their view of developing countries is that these have little knowledge and are incapable of offering high quality services. According to experts, fear of losing control is an important constraint on the propensity to outsource and nearshore / offshore services. Experts state that it is a miscomprehension that outsourcing and offshoring / nearshoring is only for the larger companies. According to EU experts, it is especially the smaller companies that have much to gain from outsourcing and offshoring / nearshoring.

### ***Contract duration***

Most offshoring / nearshoring projects within software are short term project based contracts. For IT services, longer contracts are being used.

### ***Drivers and barriers for offshore / nearshore outsourcing***

Recent research has identified a range of driving factors for software and IT service offshoring and nearshoring:

- Cost differentials regarding labour and other costs,
- Availability of labour and access to knowledge.

Cost savings has historically always been one of the most important drivers for offshoring and nearshoring. In recent years a shift from costs toward quality, security and availability of a skilled labour force can be seen.

The most important barriers that are important for EU companies when offshoring or nearshoring are:

- Cultural differences,
- Language differences,
- Lack of trust.

In the EU, a trend can also be seen towards a fear of major job losses as a result of offshoring and nearshoring. In many countries, there is pressure from unions and politics to safeguard jobs. However, experts state that the offshoring / nearshoring of software and IT services does not necessarily mean a job loss in the country that is offshoring / nearshoring. Often the content of jobs changes from development to project management. Most jobs are saved and sometimes even more people are necessary to manage all outsourced processes.

### **Offshore / nearshore potential per product group**

#### *Application software*

According to IT experts, the potential for offshoring and nearshoring of software applications is very high. The potential depends on the level of end-user interaction that is needed during the development process. Development projects with a small need for end-user interaction are easier to offshore or nearshore. Application software is very sensitive to Intellectual Property Protection (IPP).

Application outsourcing is expected to be one of the quickest growing categories of IT services over the next five years. Financial service firms in countries like UK, Scandinavian countries and the Netherlands will be responsible for the major part of spending here (€17 billion in 2006 and €27.5 billion in 2011).

There is no real difference between the potential for offshoring and nearshoring. It depends on the need for domain knowledge which country and company the EU company will choose.

#### *System software*

The potential for offshoring and nearshoring of these software services is high. IT experts state that there are few companies in developing countries that are capable of providing these services. The main problem is the need for domain knowledge. In reality, most systems still come from the US. For system software there is no real difference in potential for offshore or nearshore outsourcing.

#### *Professional IT services*

Potential for offshoring and nearshoring of these IT services depends on the amount of client interaction that is needed. In consulting, most companies in the EU still prefer having an EU consultant or a person from the developed world; therefore, the potential for offshoring and nearshoring of consultancy is not very high. This concerns trust and cultural differences. In implementation services there are chances in offshoring and nearshoring for configuration, development, testing and management. Although these services have a good potential for offshoring and nearshoring, according to IT experts there are only very few SMEs from developing countries that are capable of providing these services. The same counts for operations management. Although the potential for near / offshoring is good, there are only very few SMEs in developing countries that offer these services.

#### *Support IT services*

Chances for offshoring / nearshoring in these services are the lowest within software and IT services. These services depend more on languages and the physical presence of a maintenance man. In nearshore destinations the language barrier could be smaller. These nearshore destinations, therefore, offer better chances for support IT services, but the overall potential for offshoring / nearshoring still remains low.

#### ***Offshore / nearshore potential per country***

It is interesting to see that countries such as Germany and France qualify nearshoring as more important than offshoring, especially for software and IT services for which the potential for offshoring / nearshoring is not so high. This is mainly due to language and cultural resemblances. In the Netherlands, the UK and Sweden this is less the case. This might also have to do with the fact that offshoring and nearshoring are already more common in these countries. Belgium is not ready for offshoring and nearshoring and Spain is a very special country as it is profiling itself as a nearshore destination for other EU countries.

### **OUTSOURCING DECISION MAKING PROCESS IN EU COMPANIES**

To give the exporter an idea on how decisions are made by EU companies that offshore / nearshore, this section discusses some of the most important decisive factors for EU companies to offshore / nearshore and, more importantly, which destination to choose. They are divided into country-specific and service provider specific elements.

#### **Country-specific elements**

##### ***1 Cost saving***

Cost saving is an important issue for EU companies to survive. The price is therefore an important issue, although this does depend on the nature of the service. For example, language proficiency is important for language-based services (e.g. help desk and service desk). The levels of domain knowledge and skills generally also influence the possibility of cost savings.

##### ***2 Availability of skilled professionals***

The nature of the service determines the demand for specific skills. In general, the more complex the services, the higher the demand for highly skilled professionals.

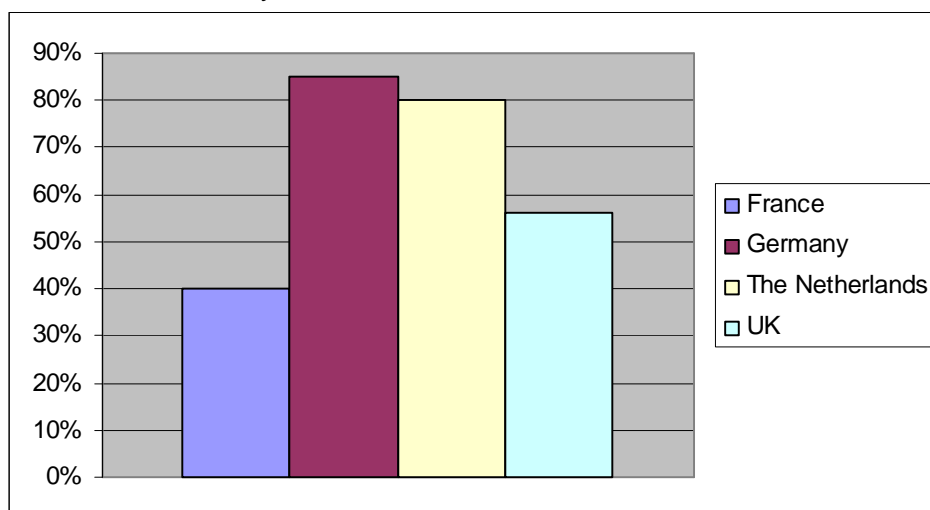
##### ***3 Language & culture***

Language is important for both the provider and the client to be able to communicate efficiently. Furthermore, culture is a very important issue. In the past, differences in culture led to problems during the execution of projects. Language is a tremendous asset for some IT service providers.

For some other services, like software applications development and software systems, it is less important. In programming a software application there, is no need for specific language abilities.

Many companies in Europe see language and cultural differences as a possible source of problems. As shown in Figure 5.1, the Netherlands and Germany perceive the most hindrance from these differences; even in a typical offshoring country like the UK, 56% of the companies consider these differences to be a problem. The relatively low level of hindrance perceived by French companies is surprising. However, as most French companies offshore to French speaking regions in Northern Africa, the problems may also be smaller than in the rest of the EU where the language and cultural difference with offshoring and nearshoring countries is often much larger.

**Figure 6.1** Cultural and language problems as obstacle for offshoring, % of companies per country



Source: Deutsche Bank research (2004) from Forrester (2006)

#### **4 Personal connection**

One of the most important factors driving outsourcing decisions is the existence of a personal connection between the European client company and the foreign country. A foreign officer within the client company in the EU could very well favour outsourcing. This is also called engaging “diaspora”.

#### **5 Political stability**

Political stability is an important issue for outsourcing decisions. This is especially true for services, as contractual relationships in this field often have a longer duration.

#### **6 Time zone difference**

In projects where communication is important, time zone differences could be an obstacle. It is the opposite for services, where this is regarded as one of the major benefits. Since operating night shifts is expensive, offshore options have become increasingly attractive.

#### **7 Country image**

One of the largest barriers (or opportunities) for Ukraine in these services may be the country image.

### **8 Western business practices**

Despite having good technical expertise, the lack of business, marketing and management knowledge can impede the smaller software provider within the IT industry. EU companies tend to select companies whose management team is trained and conducts business according to Western business practices and standards.

### **9 Telecommunications infrastructure**

Almost all IT services depend on voice and data telecommunication services. An EU company would be looking for an outsourcing provider that has the availability of a reliable infrastructure. Moreover, the bandwidth and its costs are important issues as well.

### **10 Government support**

Government support plays a critical role in near/offshore outsourcing. The degree of government support provided in the global market differs from country to country. Some countries like Philippines have managed to raise large offshore industries with little or no government support. Others, notably market leaders as India and Ireland, have enjoyed great support from their governments that has allowed the industry to progress faster. For example support in India ranges from providing education and investment in infrastructure facilities and technology parks, to setting up a Ministry of Information Technology and promoting the sector in a structured manner. Egypt is another good example. Companies here are very well supported by the government in their efforts to become active in the EU market. Countries that do not have a government support for the IT sector are at a disadvantage.

### **11 Legal and regulatory environment**

The regulatory environment and legal framework of a country can offer protection to those companies that utilize near/offshore outsourcing resources.

### **Service provider specific elements**

Aside from country-specific elements discussed earlier, when it comes to selecting the offshore service provider, some other elements may be applied. These include:

#### **1 Decision-making authority**

One of the major issues that EU companies could consider is where the decision-making authority is allocated within the offshore service provider. For example, many Indian firms are still Indian-centric, forcing delays when major decisions must be made. Some customers may consider it necessary to get fast decisions under certain circumstances, without having to wait for eight or sixteen hours.

#### **2 Domain expertise**

Expertise in specialised technologies can be an important asset for some service providers. In both software and IT services this is a very important requirement. The availability of specific domain knowledge and expertise highly influences the choice for a certain company.

#### **3 Quality initiatives**

Quality certification should play an important role within the IT outsourcing industry, and Indian and Irish firms often use this to gain competitive edge.

#### **4 Global presence**

This will become more important in the future.

### **5 Other elements**

Other elements that affect the decision making process include:

- Ample project expertise,
- Commitment,
- Customer references,
- End-user vs. product expertise,
- Financial stability,
- Flexibility on contract terms,
- Innovative solutions,
- Marketing and sales capability,
- Ongoing Research & Development (R&D),
- Process methodologies,
- Proven offshore methodologies,
- References and reputation,
- Size of vendor,
- Specialities,
- Staff retention,
- Strategic plan and vision,
- Superior service delivery.

### **TRENDS**

One of the most important trends in Europe is **nearshoring**. Many European companies start choosing this option because of the geographical and cultural advantages. Another important point is the greater sense of control over the outsourced process that EU companies feel in a nearshore destination. Nearshore countries with potential are: the Czech Republic, Hungary, Poland, Slovakia, Russia, Romania, Bulgaria, the Baltic States, Egypt, Morocco and South Africa. Although these destinations might be more expensive than certain Asian countries, costs is no longer the only important factor. It is the cultural fit with the customers and the closer linguistic fit that is important. The ability to deliver more complex concepts is important too. Russia is also developing a niche in global IT and R&D offshoring, based on its strong human resources. The Czech Republic, Hungary, Poland and Slovakia will profit from the advantage of low costs, strong skills, the implementation of EU regulations and solid infrastructure. Romania, Bulgaria and the Baltic States will offer the same skills at an even lower price and are therefore expected to see a flow of new investments in nearshoring from the EU.

#### **Other trends**

- Offshore / nearshore software and IT services outsourcing is now accepted as normal business practice.
- Security and Intellectual Property Protection are becoming increasingly important.
- Multi-sourcing will emerge. Multi-sourcing is characterised by making use of several suppliers and supply markets to spread risks.
- Growth, efficiency and the availability of a skilled labour force will become more important beside cost savings.
- A significant investment in project management offices is expected because of multi-vendor, multi-model and multi-country contracting that is coming up.
- India will strengthen its position by offering more extensive choices.
- Many mergers and acquisitions in the EU software and IT services market.
- Integrated ITO and BPO deals will have mixed success.

### OPPORTUNITIES (+) AND THREATS (-)

- ± As the acceptance of offshoring and nearshoring grows, chances for Ukraine in the EU market are increasing.
- ± The increasing importance of multi-sourcing offers opportunities for Ukraine as companies want to spread risks and divide projects into pieces that are all managed by one of the companies.
- ± Price is no longer the only factor companies from Europe look at. This can be an opportunity for companies that can offer high quality but are not able to offer the lowest prices. It can also be a threat for companies that can only offer the lowest price and are unable to meet the higher quality requirements.
- ± India's stronger position is an opportunity for Indian companies but a threat for companies from other developing countries, in this from Ukraine.

## 7 Outsourcing Locations for Software and IT Services

This section provides an overview of the leading and emerging countries for location of software and IT services outsourcing. Exporters from Ukraine can use this information to get a view of their competitive environment in an indicative manner.

### OVERVIEW OFFSHORE / NEARSHORE LOCATIONS

This subsection shows a global overview of offshore locations by using the following sources:

- Global ranking by AT Kearney,
- NeolT Offshore Attractiveness Index.

These sources give an overview of the most interesting countries for offshoring and nearshoring in general. This means they are not focused on software and IT services specifically, but can be used for these service groups.

Table 6.1 shows a global overview of the main offshore countries, based on a study by AT Kearney (2007). The A.T. Kearney Global Services Location Index analyses the top 50 services locations worldwide against 50 measurements in three major categories: cost (financial attractiveness), people and skills availability, and business environment. These categories reflect important drivers for offshoring decisions. Information on detailed measurements across these three categories is provided in Annex 1 to this survey. The table can give Ukrainian exporters some help in determining their competitive position.

Countries from Asia such as India, Malaysia, Thailand, Indonesia, the Philippines and Singapore have the highest total scores. Interesting to see is the ninth place for Bulgaria, the only nearshore destination in the top 10. Chile and Brazil (both South America) are also ranked among the top 10. The Asian countries are considered to be the top service locations in the world. In the middle of the list the more nearshore destinations for Europe can be found. They are more attractive than most EU countries and the USA.

**Table 7.1** A.T Kearney attractiveness of global services locations, 2007

Country	Financial attractiveness	People and skills availability	Business environment	Total score
India	3.22	2.34	1.44	7

China	2.93	2.25	1.38	6.56
Malaysia	2.84	1.26	2.02	6.12
Thailand	3.19	1.21	1.62	6.02
Brazil	2.64	1.78	1.47	5.89
Indonesia	3.29	1.47	1.06	5.82
Chile	2.65	1.18	1.93	5.76
Philippines	3.26	1.23	1.26	5.75
Bulgaria	3.16	1.04	1.56	5.75
Mexico	2.63	1.49	1.61	5.73
Singapore	1.65	1.51	2.53	5.68
Slovakia	2.79	1.04	1.79	5.62
Egypt	3.22	1.14	1.25	5.61
Jordan	3.09	0.98	1.54	5.6
Estonia	2.44	0.96	2.2	5.6
Czech Republic	2.43	1.1	2.05	5.57
Latvia	2.64	0.91	2	5.56
Poland	2.59	1.17	1.79	5.54
Vietnam	3.33	0.99	1.22	5.54
United Arab Emirates	2.73	0.86	1.92	5.51
United States (tier two)	0.48	2.74	2.29	5.51
Uruguay	2.95	0.98	1.54	5.47
Argentina	2.91	1.3	1.26	5.47
Hungary	2.54	0.95	1.98	5.47
Mauritius	2.84	1.04	1.56	5.44
Tunisia	3.03	0.9	1.5	5.43
Ghana	3.27	0.9	1.25	5.42
Lithuania	2.6	0.83	1.98	5.42
Sri Lanka	3.18	0.96	1.22	5.36
Pakistan	3.23	1	1.11	5.34
South Africa	2.52	1.18	1.6	5.3
Jamaica	2.83	0.96	1.49	5.29
Romania	2.88	0.87	1.53	5.28
Costa Rica	3	0.86	1.36	5.22
Canada	0.77	2.09	2.3	5.16
Morocco	2.92	0.9	1.33	5.14
Russia	2.61	1.38	1.16	5.14
Israel	1.97	1.27	1.86	5.1
Senegal	3.19	0.82	1.05	5.06
Germany (tier two)	0.46	2.19	2.4	5.05
Panama	2.88	0.75	1.4	5.02
United Kingdom (tier two)	0.5	2.16	2.35	5.01
Spain	1.18	1.71	2.06	4.95
New Zealand	1.53	1.12	2.25	4.91
Australia	0.89	1.69	2.31	4.89
Portugal	1.59	1.14	2.11	4.84
<b>Ukraine</b>	<b>2.76</b>	<b>0.98</b>	<b>1.09</b>	<b>4.83</b>
France (tier two)	0.45	2.07	2.27	4.79
Turkey	2.06	1.31	1.41	4.78
Ireland	0.4	1.54	2.29	4.18

Source AT Kearney (2007)

Additional findings:



- The wage cost advantages of offshore locations will last for at least another 20 years.
- The relative cost advantage of the leading offshore destinations has declined, while their scores for people skills have increased. It can be said that the increase in people skills has compensated for the increasing labour costs.
- Failure to improve skills of the work force and the business environment will likely translate to a loss of competitiveness in the fast-moving offshore / nearshore services business. This again indicates the shift from cost savings as the most important reason to offshore / nearshore towards better quality and the demand for a highly skilled labour force.
- India and China continue to be the best offshore locations by a wide margin. Their declines in cost advantage are offset by improved talent and enhanced business environments.
- Southeast Asian countries are the primary replacements for India and China. Countries like Malaysia, Indonesia, the Philippines, Singapore, Thailand and Vietnam rank among the top 20 locations.
- Newcomers in Central and Eastern Europe are outgrowing more established locations. Bulgaria, Slovakia and the Baltic states move ahead, while the Czech Republic, Hungary and Poland either slip or remain unchanged in the ranking.
- The Middle East and Africa appear to be the next frontier in offshoring / nearshoring as countries such as Egypt, Tunisia, Ghana, South Africa, Israel, Turkey and the United Arab Emirates perform well. Egypt and other North African nations stress their unique combination of European language skills, technical proficiency and low wages.

Another interesting table to find out more information about competitors for Ukraine companies is Table 6.2. It details each country's suitability on a variety of business factors. As shown, India offers practically every kind of ITO service mentioned in the table. Of the other developing countries there is not one that offers the same number of ITO services. When looking at the countries in Eastern and Central Europe it can also be said that they offer a large number (most) of the services mentioned in the table.

When looking at services alone, it shows that all countries offer CAD services. Practically every country present in the table also offers application management & support, multimedia & animation and web-based applications.

**Table 7.2** ITO competency-destination matrix, 2005

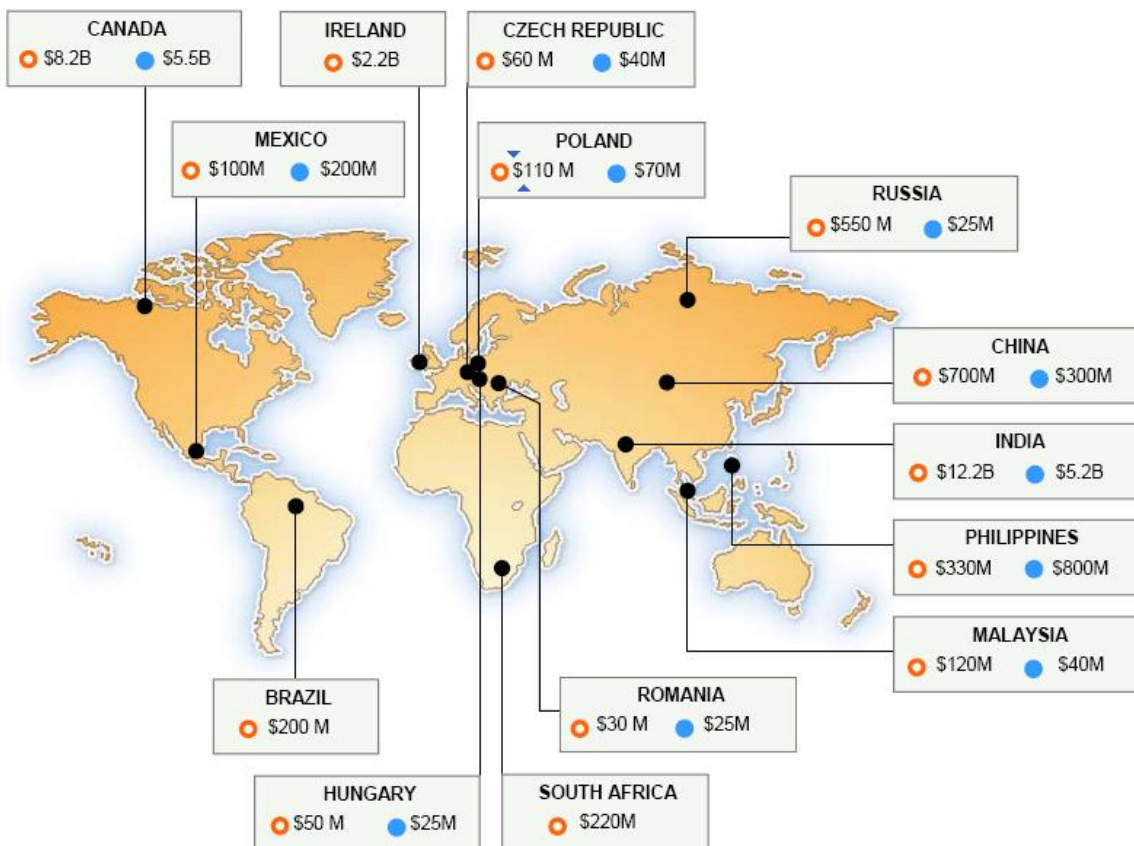
	Brazil	Canada	China	Czech Rep.	Hungary	India	Ireland	Malaysia	Mexico	Philippines	Poland	Romania	Russia	South Africa
CAD	•	•	•	•	•	•	•	•	•	•	•	•	•	•
QA/testing			•	•		•	•						•	
Application Management & Support	•	•		•	•	•	•		•	•	•		•	
IT Consulting		•				•	•				•			
System Integration/ EAI	•	•	•			•	•		•		•		•	
Packaged S/W Implementation		•				•	•	•					•	
S/W Localisation			•	•	•				•			•		
Infrastructure	•	•				•			•					

Management Services														
E-business	•	•				•	•				•		•	
Embedded Technology			•			•							•	
Multimedia & Animation		•	•	•	•	•	•	•	•	•	•	•		•
Web-based Applications	•	•	•			•	•	•		•	•	•	•	•
Wireless technology		•	•			•	•						•	
EA (ERP, CRM, SCM, DW/DI, KM)		•		•	•	•	•				•			

Source: neoIT (2005)

As an addition to this index, NeoIT also developed the 'offshore location map' (2005). It compared the most important offshore locations on their strengths and weaknesses (see Figure 6.1 and Table 6.3)

**Figure 7.1** ITO and BPO Industry size in outsourcing destination countries, 2004





Source: neoIT (2005)

Table 7.3 Growth opportunities, threats and future prospects

	Strength	Weakness	Opportunity	Threat	Future Attractiveness (ITO)	Future Attractiveness (BPO)	Necessary Activities
India	<ul style="list-style-type: none"> <li>Huge skilled labor pool</li> <li>Superior service maturity</li> <li>Strong governmental support</li> <li>Cost competitiveness</li> </ul>	<ul style="list-style-type: none"> <li>Infrastructure</li> <li>Bureaucracy</li> </ul>	<ul style="list-style-type: none"> <li>Move up the value chain</li> <li>Expand into countries other than US</li> </ul>	<ul style="list-style-type: none"> <li>Emerging low-cost nations</li> <li>Unstable geopolitical situation</li> <li>Rising costs</li> </ul>	High	High	<ul style="list-style-type: none"> <li>Maintain a continuous supply of skilled labor</li> </ul>
Canada	<ul style="list-style-type: none"> <li>Geographical proximity to US</li> <li>Excellent business environment</li> <li>Excellent supplier capabilities</li> </ul>	<ul style="list-style-type: none"> <li>High wage rates</li> </ul>	<ul style="list-style-type: none"> <li>Further penetrate US market using geographical proximity as leverage</li> <li>High-end niche jobs</li> </ul>	<ul style="list-style-type: none"> <li>Increasing service maturities and capabilities of low-cost nations</li> </ul>	Moderate	Moderate	<ul style="list-style-type: none"> <li>Maintain attractiveness as nearshore location for US firms</li> <li>Develop high-end niches for sustenance</li> </ul>
China	<ul style="list-style-type: none"> <li>Very cost-competitive</li> <li>Large labor pool</li> <li>Strong government support</li> </ul>	<ul style="list-style-type: none"> <li>Low service maturity</li> <li>Lacks of English proficiency</li> <li>Negative perception of geopolitical risk; generally low country image</li> </ul>	<ul style="list-style-type: none"> <li>Further penetration into Japanese market</li> <li>Penetration into English-speaking countries</li> <li>Non-voice BPO</li> </ul>	<ul style="list-style-type: none"> <li>Increasing salary levels that may dilute low-cost advantage</li> </ul>	High	Moderate	<ul style="list-style-type: none"> <li>Maintain cost-attractiveness</li> <li>Improve service maturity</li> <li>Develop English language proficiency</li> </ul>
Poland	<ul style="list-style-type: none"> <li>Proximity to Western Europe</li> <li>EU membership</li> <li>Compatible time zones</li> <li>Cultural compatibility</li> </ul>	<ul style="list-style-type: none"> <li>Lack of service maturity</li> <li>Comparatively smaller labor pool</li> </ul>	<ul style="list-style-type: none"> <li>Lucrative WE market</li> </ul>	<ul style="list-style-type: none"> <li>Other CEE nations</li> </ul>	High	High	<ul style="list-style-type: none"> <li>Build up size and competency of labor pool</li> <li>Differentiate capabilities from other countries</li> </ul>
Ireland	<ul style="list-style-type: none"> <li>High level of service maturity</li> <li>Highly skilled labor pool</li> <li>Excellent infrastructure</li> <li>Cultural compatibility</li> </ul>	<ul style="list-style-type: none"> <li>High cost of labor</li> <li>Labor demand/supply gap</li> </ul>	<ul style="list-style-type: none"> <li>High-end niches</li> </ul>	<ul style="list-style-type: none"> <li>Low-cost countries in the region</li> </ul>	Low	Low	<ul style="list-style-type: none"> <li>Position for high-end niche jobs</li> <li>Improve labor situation</li> </ul>
Czech Republic	<ul style="list-style-type: none"> <li>Proximity to WE</li> <li>Language and cultural compatibility</li> <li>Cost competitiveness</li> </ul>	<ul style="list-style-type: none"> <li>Low-level maturity</li> </ul>	<ul style="list-style-type: none"> <li>Further penetration into WE market</li> </ul>	<ul style="list-style-type: none"> <li>Other CEE nations</li> </ul>	High	High	<ul style="list-style-type: none"> <li>Build up labor pool</li> <li>Enhance service maturity</li> <li>Differentiate capabilities from other countries</li> </ul>
Russia	<ul style="list-style-type: none"> <li>Low wage rates</li> <li>Highly skilled ITO labor pool</li> <li>Ability to carry out complex ITO projects</li> </ul>	<ul style="list-style-type: none"> <li>Lacks of project management skills</li> <li>Unfavorable geopolitical situation</li> <li>Lack of English or WE language proficiency</li> </ul>	<ul style="list-style-type: none"> <li>High-end niche IT jobs</li> <li>Technical non-voice BPO</li> </ul>	<ul style="list-style-type: none"> <li>Brain drain</li> <li>Government apathy</li> </ul>	Moderate	Low	<ul style="list-style-type: none"> <li>Maintain high-end niche activity</li> <li>Enhance policy support for the industry</li> <li>Develop English and WE language proficiencies</li> </ul>

<b>Malaysia</b>	<ul style="list-style-type: none"> <li>Strong governmental support</li> <li>Excellent business environment</li> <li>Cost competitiveness</li> </ul>	<ul style="list-style-type: none"> <li>Low service maturity</li> <li>BPO jobs not popular</li> </ul>	<ul style="list-style-type: none"> <li>Leverage as firms' secondary location to spread risk</li> </ul>	<ul style="list-style-type: none"> <li>Small labor pool</li> </ul>	High	Low	<ul style="list-style-type: none"> <li>Build up labor pool</li> <li>Enhance service maturity</li> <li>Differentiate capabilities from other countries'</li> </ul>
<b>Mexico</b>	<ul style="list-style-type: none"> <li>Geographical proximity to US</li> <li>Large labor pool</li> <li>Spanish language proficiency</li> </ul>	<ul style="list-style-type: none"> <li>Lack of English language proficiency</li> <li>Low maturity</li> <li>Not very cost competitive</li> </ul>	<ul style="list-style-type: none"> <li>Leverage nearshore opportunities with US</li> <li>Other Spanish speaking countries</li> </ul>	<ul style="list-style-type: none"> <li>Other emerging Latin American countries</li> </ul>	Moderate	Moderate	<ul style="list-style-type: none"> <li>Enhance English language proficiency</li> <li>Improve policy support for the industry</li> <li>Enhance attractiveness as nearshore location for US firms</li> </ul>
<b>Hungary</b>	<ul style="list-style-type: none"> <li>EU membership</li> <li>Language and cultural compatibility</li> </ul>	<ul style="list-style-type: none"> <li>Small labor pool</li> <li>Low service maturity</li> </ul>	<ul style="list-style-type: none"> <li>Penetrate the WE markets, particularly Germany and France</li> </ul>	<ul style="list-style-type: none"> <li>Other neighboring countries</li> </ul>	Moderate	Moderate	<ul style="list-style-type: none"> <li>Build up labor pool</li> <li>Focus on niche markets for sustenance</li> </ul>
<b>Philippines</b>	<ul style="list-style-type: none"> <li>Cost competitiveness</li> <li>Excellent English language proficiency</li> </ul>	<ul style="list-style-type: none"> <li>Low maturity for ITO</li> <li>Labor pool not highly skilled in ITO</li> <li>Unfavorable geopolitical situation</li> <li>Lacks infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>Leverage existing relationships with BPO players to get ITO deals</li> <li>Penetrate English speaking markets other than US</li> </ul>	<ul style="list-style-type: none"> <li>Emerging low-cost nations (especially for non-voice projects)</li> </ul>	Moderate	High	<ul style="list-style-type: none"> <li>Improve service maturity</li> <li>Develop more highly skilled labor pool</li> </ul>
<b>Romania</b>	<ul style="list-style-type: none"> <li>Cost competitiveness</li> <li>Cultural and language compatibility</li> </ul>	<ul style="list-style-type: none"> <li>Very small labor pool</li> <li>Low maturity</li> </ul>	<ul style="list-style-type: none"> <li>Likely accession into the EU in 2007</li> </ul>	<ul style="list-style-type: none"> <li>Neighboring countries have a head start</li> </ul>	Low	Low	<ul style="list-style-type: none"> <li>Build up labor pool</li> <li>Develop niche markets for sustenance</li> <li>Integrate with regional economy</li> </ul>
<b>Brazil</b>	<ul style="list-style-type: none"> <li>Large labor pool</li> <li>Compatible time zone</li> <li>Vibrant domestic ITO and BPO markets</li> </ul>	<ul style="list-style-type: none"> <li>Lacks English proficiency</li> <li>Low service maturity</li> </ul>	<ul style="list-style-type: none"> <li>Spanish language projects in US and Europe</li> </ul>	<ul style="list-style-type: none"> <li>Other emerging Latin American destinations</li> </ul>	Moderate	Moderate	<ul style="list-style-type: none"> <li>Develop English proficiency</li> <li>Develop export orientation</li> </ul>
<b>South Africa</b>	<ul style="list-style-type: none"> <li>Superior English language proficiency</li> <li>Time zone compatibility with WE</li> </ul>	<ul style="list-style-type: none"> <li>High wage rates</li> <li>Education system incompatible with ITO</li> <li>Low maturity</li> </ul>	<ul style="list-style-type: none"> <li>UK market</li> </ul>	<ul style="list-style-type: none"> <li>High cost structure</li> </ul>	Low	Moderate	<ul style="list-style-type: none"> <li>Improve education system for better supply of human resources</li> </ul>

Nearshore destinations in Eastern Europe are gaining in popularity among EU companies that want to outsource their software and IT services. These nearshore destinations have certain advantages over offshore destinations like Asian countries. Especially German and French companies mention the cultural and language aspects in Eastern Europe as important factors for choosing these countries as a destination for their outsourcing projects. What's more, the centralisation of many kinds of services in a rather small area is an advantage that can be found in Eastern European nearshore destinations. According to experts, nearshore destinations are also especially interesting for SME companies. They feel more comfortable with these nearshore destinations because of the geographical closeness and a better understanding of the EU culture. Nearshore destinations for French companies are often found in Northern Africa.

## TRENDS

- Nearshore destinations are appealing to EU (SME) companies.
- In some developing countries (e.g. India) the labour pool starts to dry up.

## OPPORTUNITIES (+) AND THREATS (-)

± The trend towards nearshoring can be a good opportunity for nearshore destinations. However, for developing countries in offshore destinations this can be a threat.

The labour pool drying up can be an opportunity for countries that do not have these problems. It is a threat for countries like India that face the problem of a shortage in professionals.

## 8 Distribution Channels

In general, the best possibilities for Ukrainian exporters in software and IT services definitely lie in offshore and nearshore outsourcing. Supplying software products on the EU market would demand such a huge investment of resources and marketing costs that no company or group of companies could afford it. It is very difficult to build distribution and support channels. Niche products are an exception. A specialist firm that can supply a specific piece of software for a key sector could have a chance of success. But even then, marketing costs will be huge. Some important success factors would include:

- Specialised software for a niche market.
- A solid and proven global client base.
- High-level support services.
- Competing (price, features, quality, reliability, etc.) against global market leaders in their own category.

In practice it becomes very clear that multinationals, like banking company ABN AMRO and other large companies perform their outsourcing processes on their own. They set up their own offices (captive offshoring) or make agreements with other major outsourcing providers. The trend towards multi-sourcing as a way to spread risk, does make exceptions to this rule more and more common. However, for Ukrainian exporters, the SMEs in the EU still form the best target group.

A distinction in the distribution channels in software offshoring / nearshoring and IT services offshoring / nearshoring should be made. First, the level of education differs. Developing software requires advanced technical knowledge, while only basic training is needed for IT services. Second, language proficiency is a requirement in IT services and not so much in software. Although English is the primary language in demand, the demand for outsourcing

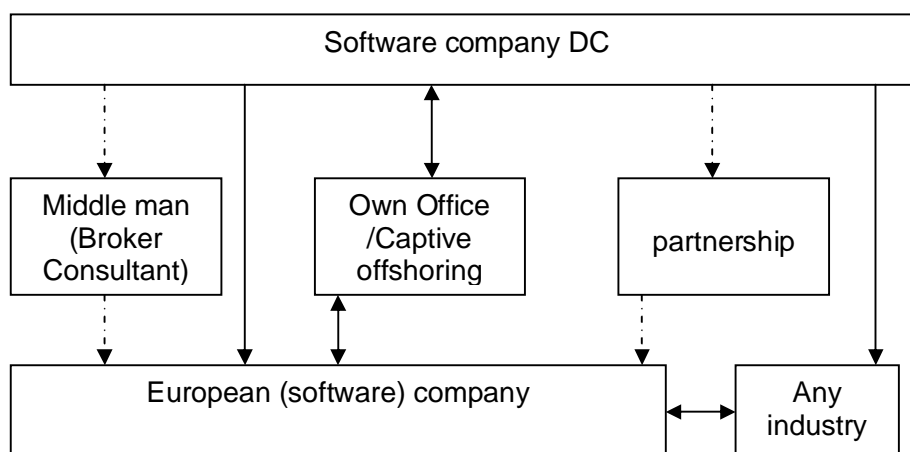
services in languages such as German and French is increasing (again especially in IT services). An example of the need for language proficiency is on-line support.

Third, the nature of both areas of outsourcing differs. Software offshoring / nearshoring is a communication intensive business, in which some programmers spend about 50% of their time interacting with others. It involves an interactive process of building, checking, revising and testing. Almost every project is unique, requiring the same time-intensive attention. This differs from IT services. For IT services, the complexity is in the start-up process. Once the process is established, there is far less need for communication. Furthermore, the “end consumers” for software are mostly EU software companies, while for IT services end users can be both EU IT services companies but also other EU companies in need of IT services. The level of education, language proficiency and communication that is needed will influence the trade structure of software and IT services.

## SOFTWARE OUTSOURCING

Figure 7.1 shows the most common distribution channels for developing country offshoring / nearshoring service providers in the EU software industry.

**Figure 8.1** Distribution channel software offshoring / nearshoring



Source: Facts Figures Future (2007)

Offshore and nearshore service providers in Ukraine that are considering entering the EU market generally have five options:

- Partnership with an EU (software) company.
- Your own sales office in the EU.
- Middle man.
- Direct to EU company.
- Captive offshoring.

### ***Partnership with an EU (software) company***

This trade channel is considered as the best for SMEs from Ukraine. Since entering a market in the EU is very difficult for SMEs from developing countries, having a joint venture (or any other partnership with an EU company) can make the entrance on a market much easier. A joint

venture is the establishment of a cooperation with a software provider in an EU country. This provider then offshores work to an SME from Ukraine. This is a good way to enter an EU country. Once you can prove that you already do work for a company from the EU country it is much easier to get other offshoring projects. In the case of a joint venture it is the SME from Ukraine that actively needs to search for possibilities to cooperate.

### ***Sales office in the EU***

Establishing a sales office in an EU member country is another option. It could be wise to do this in a joint effort. For example, the government or the industry association might contribute to such a presence, allowing several companies at a time to profit from the office and facilities.

### ***Cooperation with a middleman***

Another possibility is to cooperate with a middleman, a specialised broker and/or outsourcing consultant. In practice, there are differences between these two, as brokers more or less focus on matchmaking. They typically establish relationships with multiple offshore providers, and then channel work to these firms as they acquire business. A disadvantage of a broker is that results are not guaranteed and in the case of no results the broker still has to be paid.

Outsourcing consultants have in-depth knowledge of the outsourcing business, as well as extensive business networks that they utilise to secure new contracts. Beside matchmaking, consultants advise and provide a wide range of support services on the whole outsourcing process as well.

An interesting example of a broker is the European Information Technology exchange (EuroITX). It is a European one-stop-shop that provides information for both buyers and suppliers of offshore / nearshore software and IT (enabled) services outsourcing. Their website <http://www.euroitx.com> has three units: Intelligence, Marketing and Supply-Demand. The Intelligence unit contains, creates and maintains all the information, papers, external resources and news. The Marketing unit promotes the associated service providers from developing countries. The Supply-Demand unit manages and develops the database of company profiles. This database contains both suppliers and buyers. It focuses on suppliers from developing countries and buyers from Europe.

### ***Working with an EU company directly***

Although almost any industry could be a potential outsourcer of software development projects, in direct outsourcing, European software companies themselves are the most interesting target group for the exporter from Ukraine. Industries in Europe do not turn directly to service providers in developing countries very often. Usually, EU industries contact an EU software company that sometimes outsources the project partially or fully to developing countries.

### ***Captive offshoring***

Especially larger European software companies set up businesses in developing countries themselves. This is called captive offshoring. In this model, European companies establish subsidiaries abroad. This is useful if large amounts of software need to be created. For this purpose, enterprises such as Philips, Vanenburg and Invensys/Baan have set up subsidiaries in India. The ABN Amro Bank (recently taken over by Banco Santander/Fortis/Royal bank of Scotland) operates a software facility in Lahore (Pakistan). Another IT-firm recently set up an office in Kathmandu (Nepal).

## **IT SERVICES OUTSOURCING**



Figure 7.2 shows the most common distribution channels within the IT services outsourcing industry. It has the same options as software, although there are some differences in extra possibilities. For outsourcing IT services -as in software-, local presence by having a sales office, a partnership with an EU IT services company or using an intermediary (brokers/consultants) are the three most common channels as well. For example, Tata Consultancy Services, one of the large Indian firms, has offices in many European cities.

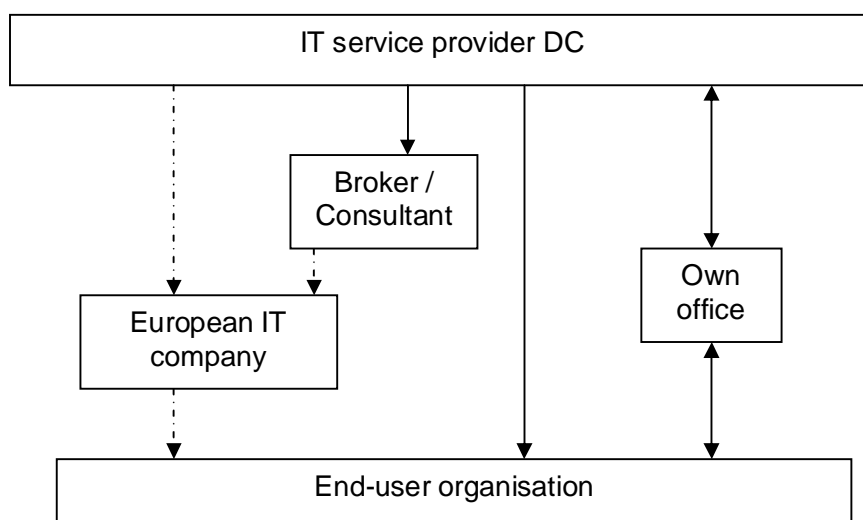
In general, it has been difficult for companies in developing countries to enter into partnerships with large service providers (system integrators) in Europe directly, such as CMG and Cap Gemini or other large professional services companies like Accenture, Ernst & Young, Dimension Data, EDS, IBM, PWC Consulting, Unisys and Xansa. Although these companies may not actively promote their offshore capabilities, they will make use of DC suppliers in order to reduce project costs and shorten delivery time scales.

Contrary to the software outsourcing industry, exporters of IT services from Ukraine could contact the end-user organisations, such as banks and financial institutions, directly. Some of these already use services from developing countries. These include, for example, companies that outsource data entry (BPO). They also tend to be larger and are frequently multinational corporations. However, this is probably not a viable model for new entrants into the outsourcing field since most European companies enter into their outsourcing relationships through a European-based company. This is especially true for smaller companies.

The following pattern can be distinguished in the purchasing strategy of European companies divided by size:

- The Fortune 1000 do business directly with offshore suppliers or have their own company.
- The large caps (companies with a turnover of over €300 million) do business with offshore suppliers, local intermediaries or local suppliers.
- Large companies and medium sized companies do business with local intermediaries and local suppliers.

**Figure 8.2** Distribution channel outsourcing IT services



Source: Facts Figures Future(2007)

Over the last decade, frontline IT services firms have relied on growth from the inside of the company. Through the 1990s, the IT services firms set up global delivery centres bit-by-bit, on their own, across the world. Over the last four years, the IT services firms have changed tack and are scaling up these centres to provide customers with a blended model: an on-shore, near shore and off-shore capability, depending on what customers want.

As an addition, outsourcing service providers of software and IT services could use the following model as well. Local offices of multinationals in the home country of the service provider could be used as a bridge to get into contact with its other offices spread all over the world. For example: once an Ukrainian service provider has worked for Shell in Ukraine, it could do the same job for Shell in EU country.

## 9 Prices

As it is quite difficult for suppliers of software and IT services to give exact prices, it is also hard to obtain information about current price levels. Software products can be broken down into licence prices per module and number of current or named users. The licence prices are usually found on the websites of the software suppliers. Information on implementation costs can be found in reports concerning business software, also giving ranges of costs for software and implementations. Outsourcers / exporters have access to this information by using several sources. The main ones are:

- CIO magazine- [http://www.cio.com/archive/071506/2006\\_global\\_outsourcing\\_guide.pdf](http://www.cio.com/archive/071506/2006_global_outsourcing_guide.pdf)
- Everest Research Institute - <http://www.everestresearchinstitute.com>
- Industry associations.
- NeoIT - Offshore and Nearshore ITO and BPO Salary Report – <http://www.neoit.com>
- Offices for statistics (per country).
- Salary expert – <http://www.salaryexpert.com> - Choose the job position and the country to see the salary level for that position in the country.
- Trade press.
- Visiting trade fairs.
- Websites of competitors.

NeoIT predicts that prices for offshore / nearshore software and IT services will appreciate slightly. Offshore / nearshore service providers have demonstrated the ability to offer more than cost savings to clients; business transformation opportunities are provided as well. As a result, established providers will be able to ask premium pricing.

But there is also a price pressure in the offshore / nearshore market. The price pressure seems to be particularly strong for IT services with low requirements on skills and experience. In addition, the consulting company Meta Group expects declining prices in the traditional software market (supply of standard software) of up to 35% by 2008 and another 15% by 2010. Therefore, IT service providers face a challenge to either find new ways of avoiding the competitive pressure on prices, or deal with it by lowering costs. New developments in the field of IT and e-business may help meet these challenges. The integration of open source components or the outsourcing of development tasks to offshore providers, for example, are frequently discussed strategies for focusing on core competencies and lowering costs.

Wages for IT outsourcing service providers in key offshore markets, including India, China and Poland, are increasing by an average 8 to 11% per year, which is nearly half of what has been

commonly reported, according to findings in 2006 by Everest Research Institute –an outsourcing research institution. The lower figures reflect in part the efforts that offshore outsourcing suppliers have been making to control rising labour costs, including the expansion of their operations into second-tier, lower-cost cities and countries, as well as exchange rate movements and other factors. Despite salary increases in key offshore markets, the idea that India and other key markets will price themselves out of the outsourcing business in the short run is unfounded.

According to experts, the EU market will tolerate a small price increase as price is no longer the only focal point for EU companies that want to offshore / nearshore their software or IT services. The emphasis is also on quality and security of the projects.

In Table 8.1 it can be seen that the countries in Asia are in fact the least expensive outsource destinations. Popular destinations like India and the Philippines are still among the least expensive outsourcing countries. However, as the industries in those destinations mature, labour costs will also rise. But, as stated before, these countries will not be priced out of the market. Although the countries in Eastern and Central Europe are more expensive, they still offer a lot of cost-saving opportunities. Other advantages that companies in these countries have are the language abilities and cultural compatibilities that are often better than in countries in Asia. With one or two exceptions, growth figures for 2005 until 2010 are below 8% and therefore on a moderate level.

**Table 9.1** IT Salary levels in outsourcing countries, 2005

	Average salary	Entry Level	Team Leader	Project Manager	Growth Percentage '05-'10*
Vietnam	6,131	3,440	5,782	9,171	7.3%
India	9,896	5,715	9,374	14,597	8.7%
China	10,095	5,678	9,609	14,997	7.2%
Thailand	11,340	5,951	10,632	17,438	3.9%
Philippines	12,522	7,277	11,887	18,402	6.8%
Romania	15,743	9,085	14,606	23,536	4.8%
Brazil	15,935	9,410	15,068	23,326	5.4%
Slovakia	17,395	9,285	15,050	27,850	4.2%
Russia	21,018	12,131	19,690	31,235	7.2%
Costa Rica	21,083	11,794	19,995	31,460	7.2%
Malaysia	21,823	12,953	20,712	31,803	4.4%
Mexico	22,484	13,176	21,029	33,246	4.8%
Czech Republic	22,500	12,010	19,500	36,096	6.5%
Hungary	25,174	14,606	23,322	37,595	5.8%
Poland	29,393	16,536	27,567	44,076	5.3%
South Africa	39,696	20,357	34,694	55,036	4.0%
Singapore	41,512	24,003	38,873	61,660	3.3%
Canada	43,841	25,845	41,894	63,785	3.9%
Ireland	57,072	32,130	53,002	86,085	3.2%
Israel	39,880	23,038	38,294	58,307	3.1%
US	79,107	46,194	75,166	115,962	3.6%

\*forecast

Source: Neolit (2006)

## **Margins in main trade channels**

To give an indication of how prices are built up and to give an indication of the use of margins within the most important trade channels, these will be discussed below.

### ***Partnership with an EU company***

The investment needed here is not very high. The partner's network in the EU can be used to find customers and to get acquainted with the EU market. This is a real advantage over the other entry strategies. However the problem with a partnership is in finding the right partner and if a partner has been found to make sure that the price that is paid for your services is fair.

### ***Intermediaries***

Generally speaking, the contracts that brokers and especially consultants negotiate could have tight pricing and somewhat lower margins than the current industry levels. These brokers/consultants have a clear understanding of the detailed cost structure of the provider and, moreover, have relationships with several service providers. As a result, they are in a position to negotiate the best deal for the client in the EU. In most cases, service providers are asked to work out their breakeven costs (even excluding the sales and marketing overheads), and offer a 20-25% mark-up on these costs, meaning a net margin of 17-20% on sales. The number of contracts being negotiated through such brokers is expanding.

Some practical examples: in general, consultant NeoIT (<http://www.neoit.com>) is known as price aggressive and will negotiate the lowest possible price for its clients. On the other hand, consultants such as McKinsey (<http://www.mckinsey.com>) and Gartner (<http://www.gartner.com>) are more likely to emphasise the qualitative aspects of the service providers. Brokers/consultants often recommend clients to adopt a multi-vendor strategy to have at least one leading customer and one mid-size vendor, in order to put pressure on the prices of both service providers.

### ***Local sales office***

In general, margins will be higher when a middle man is not needed. But, once again, price is not the only issue to consider, as credibility and trust play an important role as well. The first start-up of your own sales office is a very large investment that cannot be made by the majority of the SMEs in Ukraine.

## **Adaptive Sourcing**

Forrester (2006) proposes a new outsourcing business model — Adaptive Sourcing. It contains flexible contracts, pricing, and service delivery that adapts over time to customer needs and expectations.

## **10 Conclusions on the EU Market Opportunities for Ukrainian SME**

There are many Ukrainian software and IT services companies posed to play a role in the global IT industry. Ukrainian outsourcing providers have the ability to compete significantly on a cost basis, which is considerably lower than in more developed countries, and also in its Eastern European neighbours. Therefore nearshore/offshore clients can expect up to 50-60% cost-saving. In the past, most nearshore/offshore work performed by Ukrainian providers has been software development and web design. With market maturation in recent years, these providers

are now competing for more sophisticated project involving software engineering, application engineering, ERP systems and IT consulting. Experts described Ukraine is needing to “go for broke” due to the high economic barriers to entry and several already established IT industry players, although it has higher perceived geopolitical risks and major (often foreign) infrastructure investment in certain parts of the country<sup>11</sup>.

### **Market opportunities - the most promising services**

#### ***Trend analysis to identify market threats and opportunities***

The number of different services in the software and IT services market is very large. Within one service, every contract is different and company specific. Beside the large range of services in the software and IT services market, the market is also very dynamic. This causes trends, conditions and requirements for software and IT services to change very quickly. As a result, opportunities and threats in the market often change. Therefore it is important for the exporter to continuously analyse the market and country that the company is active in, in order to be able to react to the changes in that market.

A trend may be an opportunity for one company but at the same time represents a threat to another company. A good example of this can be given by analysing the current trend towards better quality, added value and expertise. SMEs that can offer these high quality services have good opportunities in the EU, while SMEs that only rely on offering services against low costs, without looking at quality requirements, will face the threat of being left out.

Every opportunity becomes a threat if the company is not able to respond to this trend and the company is losing terrain to others that can respond to the trend successfully. By doing thorough and continuous market research the company will be able to discover the trends in a certain country or market.

Based on analysis of current trends in the EU market as well as analysis of export potential of Ukrainian software and IT services industry we can conclude that the best opportunity for Ukrainian SMEs that want to establish commercial relationship with the EU companies is nearshore outsourcing.

Software application nearshore outsourcing has a high potential, in particular in relation to development projects with a small need for end-user interaction. However it is very sensitive to IIP and Ukrainian legislation in this area is not regarded as strong enough. Software application outsourcing is expected to be one of the quickest growing categories of IT services. In particular ERP, BMP, collaborative applications, SCM and CRM may provide good opportunities for the SMEs in Ukraine.

Although the potential for nearshoring of system software services is high, however for Ukrainian companies, as well as for companies from other outsourcing locations, it may be difficult to be

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<sup>11</sup> Vichniakova A.; (2005) *Outsourcing Opportunities in Central and Eastern Europe*, Presentation to Glassmeyer/McNamee Center for Digital Strategies, April 20<sup>th</sup>, Dartmouth University, USA;

Dr. D’Cruz B.; (2007), *Offshore IT Outsourcing and Transition Economies: A Critical Comparison of Poland, Hungary and Ukraine*, 5<sup>th</sup> International Critical Management Studies Conference, July 11-13.

able to provide these services. The main problem is the need for domain knowledge and most systems still come from the USA. System software security, IT simplification and optimization, data protection and business intelligence tools can provide opportunities for Ukrainian SMEs that want to be active in the EU market for these services.

Within the IT services outsourcing the best chances are for professional IT services, in particular implementation services, including configuration, development, testing and management.

### **The most promising EU partners**

EU companies prefer nearshoring due to cultural and geographical advantages and a greater sense of control which is very important for them. Many large companies already nearshore. Demand is the largest in the UK and the Nordic countries.

Nearshoring is becoming an area of growing interest also for small and medium companies from such countries like Sweden, the Netherlands, Denmark and Germany.

It is expected that within the software application outsourcing the major part of spending will be made by financial service companies in UK, Scandinavian countries and the Netherlands.

Ukraine may become for the German and Swiss IT services sector an integrated part of their cross-boarder value chain. These delivery models combine nearshore and onshore service components and go along with a high organizational maturity level.

### **Main areas of focus to improve competitive position**

According to the global ranking by AT Kearney (2007), Ukraine occupies the 47<sup>th</sup> place on the list of top 50 IT outsourcing locations. In terms of three major categories that reflect important drivers for near/offshore decisions, Ukraine is ranged as follows:

- Cost (financial attractiveness) – the 27<sup>th</sup>, but the 4<sup>th</sup> in Europe (after Bulgaria, Slovakia and Romania);
- People and skills availability – the 34<sup>th</sup> (and the 12<sup>th</sup> in Europe);
- Business environment – the 48<sup>th</sup> (only Indonesia and Senegal fare worse).

It should be underlined, that Ukraine belongs to ten countries that were added to the AT Kearney Index in 2007, which reflects the growing number of countries competing to become viable remote services locations, and companies' interest in finding near/offshore locations outside the established locations. The Index highlights the major strengths and weaknesses of Ukraine' as an outsourcing destination.

To occupy the market niches and successfully compete on the EU market the Ukrainian IT companies need to improve their weaknesses (see annex III to this survey). The following major recommendations have been formulated based on the results of IT industry surveys:

- For IT companies in Ukraine the main area of concentration should be on developing business and project management skills. No doubt Ukrainian companies have the required technical expertise, but lack of understanding of appropriate business culture. Successful near/offshore outsourcing depends on achieving expected objectives, hence supplier-client relationships become imperative for operational effectiveness.
- For firms involved in IT services outsourcing CMM/ISO certification is important. The highest levels of relevant certification from recognized international certification bodies is necessary to successfully compete within the global market.

- The Ukrainian government needs to establish a coherent support strategy for the whole IT industry, and have more responsibility for its technology policy. In particular it would benefit the IT industry if the government paid more attention to the area of IT governance and accounting standards in order to establish more transparent financial and reporting systems, as well as legal forms for ensuring strong IPP. The government needs to put more effort into developing the awareness of its IT industry and companies as credible outsourcing suppliers in the global world. Marketing campaigns, exhibitions and outsourcing conferences organized by government agencies will draw attention to the IT industry in the global arena and potentially bring new customers.

## **Annex I Useful Sources of Information on the EU market for IT software and services**

### **Market and trends**

- EUROITX – <http://www.euroitx.com> 'market and trends' for more information)
- European Information & Communications Technology Industry Association (EICTA) - <http://www.eicta.org>
- European Information Technology Observatory (EITO) – <http://www.eito.com>

### **Supply and trends**

- Ebusinesswatch – [http://www.ebusiness-watch.org/resources/ict\\_itservices/SR10a\\_ITS\\_2005\\_web.pdf](http://www.ebusiness-watch.org/resources/ict_itservices/SR10a_ITS_2005_web.pdf)
- E-commerce and Development Report 2003, Unctad: open source software: Implications for ICT policy and development – [http://www.unctad.org/en/docs/ecdr2003ch4\\_en.pdf](http://www.unctad.org/en/docs/ecdr2003ch4_en.pdf)
- European Information & Communications Technology Industry Association (EICTA) - <http://www.eicta.org>
- European Software Association - <http://www.europeansoftware.org>
- MIMOS Open Source - <http://opensource.mimos.my>
- Open source initiative - <http://www.opensource.org>
- Outsourcing center - <http://www.outsourcing-center.com>

### **The EU Offshore / Nearshore Outsourcing Market**

- CIO magazine - <http://www.cio.com/topic/1521/Offshoring> - offers an aggregation of articles focused on offshoring.
- EUROITX – <http://www.euroitx.com> - EUROITX offers a section for technology specifically with useful sources and information.
- Forrester – <http://www.forrester.com> - mostly paid reports, but interesting information in summary that is freely available.
- Gartner – <http://www.gartner.com> - both paid and free reports on information technology
- NeoIT – <http://www.neoit.com> - go to "knowledge and research" to view the free "white papers".
- Offshore Outsourcing Best Practices - <http://www.oobp.org/default.aspx>
- Outsourcing center - <http://www.outsourcing-center.com>
- Ventoro – <http://www.ventoro.com/Offshore2005ResearchFindings.pdf>

### **Offshore / Neashore Locations**

- AT Kearney - <http://www.atkearney.com>
- CIO magazine - [http://www.cio.com/archive/071506/2006\\_global\\_outsourcing\\_guide.pdf](http://www.cio.com/archive/071506/2006_global_outsourcing_guide.pdf)
- EIU - [http://graphics.eiu.com/files/ad\\_pdfs/eiuOffshoringWP.pdf](http://graphics.eiu.com/files/ad_pdfs/eiuOffshoringWP.pdf)
- NeoIT – <http://www.neoit.com>

### **China**

- China Software Industry Association (CSIA) – <http://www.csia.org.cn>
- China's software industry – <http://zlin.ba.ttu.edu/papers/Outgoing/GITM-ITC-3.pdf> - current status and development (PDF file).

### **Czech Republic**

- Asociace pro poradenství v podnikání - <http://www.asocpor.cz>



#### Hungary

- Hungarian Software Alliance (HSA) - <http://www.h-s-a.hu>

#### India

- NASSCOM – <http://www.nasscom.org>
- Outsource2india - <http://www.outsource2india.com>

#### Philippines

- European I.T. Service Center (EITSC) – <http://www.eitsc.com>
- Foundation for Information Technology Education and Development (FIT-ED) - <http://www.fit-ed.org>
- Outsourcephilippines - <http://www.outsourcephilippines.org>

#### Poland

- American Chamber of Commerce in Poland - <http://www.amcham.com.pl>
- Polish Chamber of Information Technology and Telecommunications - <http://www.piit.org.pl>

#### Russia

- Outsourcing-Russia - <http://www.outsourcing-russia.com> - Select 'database of Russian Offshore Software Development companies' for an overview of companies.

#### **Distribution Channels**

- European Information & Communications Technology Industry Association (EICTA) - <http://www.eicta.org>
- Offshore Outsourcing Best Practices - <http://www.oobp.org/default.aspx>
- Ventoro – <http://www.ventoro.com/Offshore2005ResearchFindings.pdf>

## Annex II A.T.Kearney Global Services Location Index Metrix

Category	Sub-category	Metrics
<b>Financial attractiveness</b> (40%)	Compensation costs	<ul style="list-style-type: none"> <li>▪ Average wages</li> <li>▪ Median compensation costs for relevant positions (call-center representatives, BPO analysts, IT programmers and local operations managers)</li> </ul>
	Infrastructure costs	<ul style="list-style-type: none"> <li>▪ Rental costs</li> <li>▪ Commercial electricity rates</li> <li>▪ International telecom costs</li> <li>▪ Travel to major customer destinations</li> </ul>
	Tax and regulatory costs	<ul style="list-style-type: none"> <li>▪ Relative tax burden</li> <li>▪ Corruption perception</li> <li>▪ Currency appreciation or depreciation</li> </ul>
<b>People and skills availability</b> (30%)	Remote services sector experience and quality ratings	<ul style="list-style-type: none"> <li>▪ Size of existing IT and BPO sectors</li> <li>▪ Contact center and IT center quality certifications</li> <li>▪ Quality ratings of management schools and IT training</li> </ul>
	Labor force availability	<ul style="list-style-type: none"> <li>▪ Total work force</li> <li>▪ University-educated work force</li> <li>▪ Work force flexibility</li> </ul>
	Education and language	<ul style="list-style-type: none"> <li>▪ Scores on standardized education and language tests</li> </ul>
	Attrition risk	<ul style="list-style-type: none"> <li>▪ Relative IT and BPO sector growth and unemployment rates</li> </ul>
<b>Business environment</b> (30%)	Country environment	<ul style="list-style-type: none"> <li>▪ Investor and analyst ratings of overall business and political environment</li> <li>▪ A.T. Kearney Foreign Direct Investment Confidence Index™</li> <li>▪ Security risk</li> <li>▪ Regulatory burden and employment rigidity</li> <li>▪ Government support for the information and communications technology (ICT) sector</li> </ul>
	Infrastructure	<ul style="list-style-type: none"> <li>▪ Overall infrastructure quality</li> <li>▪ Quality of telecom, Internet, and electricity infrastructure</li> </ul>
	Cultural exposure	<ul style="list-style-type: none"> <li>▪ Personal interaction score from A.T. Kearney Globalization Index™</li> </ul>
	Security of intellectual property (IP)	<ul style="list-style-type: none"> <li>▪ Investor ratings of IP protection and ICT laws</li> <li>▪ Software piracy rates</li> <li>▪ Information security certifications</li> </ul>

Source: A.T. Kearney

### Annex III Evaluation of IT Outsourcing Potential of Ukraine

Factor	Evaluation results: positive (+) negative (-)
<b>Related to Country Infrastructure</b>	
<b>Political and economic stability</b>	(+) Country focuses on fostering closer integration with the rest of the world. (- +) Although Ukraine is considered by some to be more stable country than India or China in geopolitical and economic terms, there are still some political uncertainties (e.g. the country's stability has been constrained by the interest of large Ukrainian financial groups and several parliamentary divisions).
<b>Government and associated support</b>	(+)The Ukrainian near/offshore industry has relatively recently been regarded as a priority sector by the government. (-) No evidence of practical governmental initiatives to support near/offshore industry in Ukraine; officially the government supports "informatization", including software export development, however in practice IT providers in Ukraine have to rely purely on their own capabilities and resources. (+) A few organizations have been established to support software firms in Ukraine (Ukrainian Association of Software developers, Association IT Ukraine, IT Committee of the American Chamber of Commerce). (+) portal by trans-national support organisation Offshore Outsourcing Best Practice (OOBP).
<b>Legal and regulatory environment</b>	(-) Ukraine has unfavourable legal and regulatory environment, in particular in such areas as taxation, visa regulations and import/export regulations.
<b>Communications infrastructure</b>	(-) Ukraine is not adequately prepared in this area due to lack of national investment. The communications infrastructure is adequate in terms of bandwidth and connectivity, but not well prepared for near/offshore outsourcing; majority of firms are well equipped with essential communications technologies (fax facilities, multilingual web sites, groupware platforms are quite common tools), nevertheless Ukraine's telecommunications infrastructure does not allow most of the software providers to have advanced facilities such as video-conferencing and satellite connections.
<b>Related to Human Expertise and Resources</b>	
<b>Quality initiatives</b>	(- +) Majority of Ukrainian firms concentrate their efforts on two major types of certification: ISO and SEI/CMM, however only ¼ software development companies has obtained any form of quality certification (mostly due to financial difficulties and lack of certification bodies within Ukraine). (+) UASWD has already undertaken the first steps towards becoming a formal CMM certification centre in Ukraine.
<b>Availability of skilled labour resources</b>	(+) The Ukrainian labour force has traditionally significant software development skills. The UASWD estimated in 2000 that there were 40,000-60,000 people in IT potentially able to be engaged in IT development activities. A high level of up-to-day technical skills in the labour force was reported by an America Chamber of Commerce survey (2003). Ukrainian companies also have a strong research and development tradition. Both international and local

	<p>recruiting agencies operate on the domestic HR-market, so that the hiring process is rather efficient for companies wishing to avail themselves of IT-resources throughout Ukraine.</p> <p>(+) More stringent visa and work permit regulations seem to be the major inhibiting factor in terms of preventing Ukrainian workers leaving the country, which suggests that the potential for developing and maintaining an IT outsourcing industry through the offshore model in Ukraine could be potentially sustainable in the longer term, assuming economic and other necessary conditions improve.</p>
<b>Labour cost</b>	(+) Ukrainian software developers' wages are still significantly lowered than those in more developed countries.
<b>Educational system</b>	(+) Ukraine has an advantage over competitor countries due to a well established educational system. The Ukrainian education system inherited from the Soviet Union had recognized strengths in engineering and technical disciplines. Many software developers in the country have an applied mathematics and physics background, which has traditionally been as beneficial to the growth of the computing industry. Although the skills of recent IT graduates are not always up-to-date due to rapid technology changes, but still satisfactory to the Ukrainian software companies. The educational system is also well supported by multinational companies like: Motorola, HP and Dell which have provided equipment and support for some of Ukrainian educational institutions.
<b>Foreign language proficiency</b>	(+) Higher education in Ukraine provides foreign language courses for students studying computer disciplines, so that software developers can obtain adequate language skills. The percentage of the foreign language-speaking workforce varies considerably between companies and largely depend on the provider's market orientation. However, on average, more than 50% of a firm's workforce has foreign language proficiency and English is predominant foreign language.
<b>Marketing and other business skills</b>	(-) Ukrainian companies only started to employ western practice following independence, so this area is still developing. Only the bigger, well-established software providers have the resources to employ experienced expatriates, MBA graduates, or other specialists from abroad who are familiar with global business practices – this is necessary to deal with international companies.
<b>Related to cultural issues</b>	
<b>Cultural compatibility</b>	(+ - ) Geographically and historically, Western Ukraine is Eastern Europe and is keen to forge closer links with Western Europe. Other parts of Ukraine are more allied to Russia, and indeed more often Russian speaking with a very different "cultural fit". The overall perception is that the European look of Ukrainians and the desire to embrace western practices are positive factors, although this has to be set within a political and cultural context.

Source: adapted from Dr. D'Cruz B.; (2007), *Offshore IT Outsourcing and Transition Economies: A Critical Comparison of Poland, Hungary and Ukraine*, 5<sup>th</sup> International Critical Management Studies Conference, July 11-13

## Annex IV References

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