Ukrainian
HI-TECH
INITIATIVE

EXPLORING UKRAINE

IT Outsourcing Industry

2012

Introduction

Since the year 2000 Ukraine has been a leading player in the software development space, and has been ranked at the top of IT outsourcing service providers in the global market. More and more companies come to Ukraine selecting it as a preferred destination for their R&D offices. Strong engineering education, popularity of engineering professions among the youth, and rich history of the software development industry make Ukraine one of the most attractive Europe destinations for the IT outsourcing and software development businesses.

The history of Ukraine's software development industry is deeply rooted. Officially, December 25th, 1951 is considered as the beginning of the computer science era when the Ukrainian academician from Kyiv, Sergey Lebedev, introduced the first computer in the entire Continental Europe. A rapid growth of the industry was recorded in the middle of 1990s, when a large number of independent software development companies emerged.

Based on a 60 plus year history of the extensive network of educational and scientific institutions, the Ukrainian software development and IT outsourcing services industry is rapidly developing into one of the most important sectors of the Ukrainian economy.

The Ukrainian government actively supports industry growth through tax exemptions, and provides public financing for development of IT and innovation parks. Governmental support will promote industry growth and further expansion of the software development and IT outsourcing service ecosystem in 2012–2013.

SoftServe
Ability. Agility. Advantage.

Sales Office
Newport Beach, CA

Sales Office
Burlington, MA

European Headquarters
Lviv, Ukraine

Development Centers
Lviv, Dnipropetrovsk, Sevastopol,
Rivne, Ivano-Frankivsk, Chernivtsi

US Headquarters
Fort Myers, FL

Development Center
Manila, Philippines

SoftServe is a leading global provider of proven high quality software development, testing and consulting services.

Cloud Solutions

Our experience and expertise in developing custom SaaS/Cloud solutions will improve your business operations, whether you are creating a new on-demand application, reengineering an existing one or migrating to SaaS/Cloud.

Mobility Solutions

Leverage our mobile technology solutions to differentiate your business. We will help you to establish your mobility strategy and align with the right partner to drive your mobility vision

SDLC Solutions

We provide reduction in development cycle time through strategic planning, streamlined project management and transparency in communications. There is always a better way to develop software with SoftServe's industry-first SDLC Playbook.

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Executive Summary

The primary objective of this report is to gather all relevant information on the software development and IT outsourcing service market in Ukraine and provide a general economic analysis of the main characteristics of software development business.

The report is intended for the current and potential software development and IT outsourcing services clients who are looking for opportunities of setting up their business in Ukraine.

The following are main trends of the Ukraine's software development and IT outsourcing service industry in 2011:

- During the last decade Ukraine has been the leading provider of software development and IT outsourcing services in the Central and Eastern European region (excluding Russia). Ukraine is ranked first in the volume of IT outsourcing and software development services provided, in the number of IT specialists working in the industry, and in the number of IT graduates;

- The post crisis effects have been overcome, the industry is developing at a rapid pace of 20 %-25 % growth a year while new companies are opening their R&D offices in Ukraine. After the recent tax exemption legislation for software development companies has been accepted, such global vendors as Google, Microsoft, Samsung, and Huawei expressed interest in establishing R&D centers in Ukraine;

- The trend of consolidation is still observed in the market today. Prior to recession market consolidation was mainly based on mergers and acquisitions. The post-crisis consolidation, however is based on the rapid growth of large companies, which pressure the labor market by means of increasing salaries for IT specialists;

- The industry actively penetrates into different regions. All leading companies are extending their office networks to the main regional centers. A range of new companies appeared in so called "unpopular" regions. These are fairly large industrial and cultural centers such as Chernigiv, Kirovograd, Ivano-Frankivsk, Sumy, Ternopil, Zhitomyr, Luhansk, Lutsk, Poltava, Khmelnitskiy, where there were no appreciable companies until recently;

- Ukraine still boasts the most impressive gap in Europe between GDP per capita in the country and GDP per capita in the software development industry. This could be an important economic incentive for specialists and businessmen to enter the profitable and well-paid market of software development and IT outsourcing services.

Ukrainian HI-TECH INITIATIVE

Country Profile

Ukraine Snapshot	
Size of the country	603,700 sq. kms.
Population	45,706 Million
Capital	Kyiv, or Kiev
Currency	Hryvnia (UAH)
1 USD=UAH (average)	8.00 (2011)
1 Euro=UAH (average)	10.40 (2011)

Main macroeconomic indicators:	
GDP in PPP:	US$ 289.739 Billion
GDP per capita in PPP:	US$ 6,339.1
CPI:	9.1 percent (2010)
Unemployment rate:	8.4 percent (2010)
Inflation rate:	9.8 percent (2010)

Quick Facts:

- **Time Zone:** EET (UTC +2)
- **Summer (DST):** EEST (UTC +3)
- **Literacy Rate:** 99.4 percent
- **Labor Force:** 22.15 M

Political Review

Ukraine is a democracy with a parliamentary-presidential system of government consisting of separate executive, judicial, and legislative branches. A new constitution was approved by the Verkhovna Rada (Supreme Council, or Parliament) in June 1996. Since 2006, a majority of deputies in the 450-member unicameral parliament have formed a coalition. The coalition elects a prime minister, who in turn nominates other ministers.

The pro-presidential Party of Regions has continued to further consolidate power, having won leading positions in the majority of regional councils. Thus, currently, the Party of Regions has all the resources necessary to carry out an unhindered course of reform adopted previously. In fact, this points to a stabilization of the internal political situation in the next years.

Business and Investment Climate

Foreign Direct Investment (FDI)

Ukraine plays a role of a challenger within Central and Eastern Europe. From 2006 to 2010, Ukraine ranked 10th both in the number of investment projects (178) and the number of jobs created (7,487). In 2010, Ukraine did not improve its FDI position: the country attracted 31 FDI projects and 1,150 jobs. In fact, the total value of FDI inflows in 2010 declined by 9 % to an estimated US$ 4.15 billion. The corresponding figure for 2009 was US$ 3.4 billion and US$ 8.8 billion in 2008. The share of foreign investments in Ukraine is currently estimated at 19 % of GDP, indicating that the Ukrainian economy is critically lacking in investment and has huge growth potential. In contrast, the share of foreign investments in the economies of developed European nations has reached around 28–30 % of GDP.

GDP Growth

The Gross Domestic Product (GDP) in Ukraine expanded by 2.2 % in the third quarter of 2011 over the previous quarter. From 2010 until 2011, Ukraine's average quarterly GDP Growth was 1.68 %, reaching a historical high of 3.9 % in June of 2010 and a record low of 0.1 % in September of 2010.

Ukrainian GDP increased by 5.2 percent in 2011, reported the State Statistics Committee of Ukraine. Amidst the world economic crisis, the Ukrainian GDP growth rate had been one of the highest in Europe. In 2011 GDP growth rate among CIS countries reached 4.2 percent; as for the European Union, its GDP in the third quarter of 2011 increased only by 0.2 percent, according to Eurostat. In addition to high GDP growth, Ukrainian economy boasts a 4.6 percent growth in price and tariffs — country's lowest growth in the last eight years.

The Gross Domestic Product (GDP) in Ukraine expanded by 2.2 % in the third quarter of 2011 over the previous quarter. From 2010 until 2011, Ukraine's average quarterly GDP Growth was 1.68 %, reaching a historical high of 3.9 % in June of 2010 and a record low of 0.1 % in September of 2010.

The economic growth of Ukraine in 2012 is predicted to be higher than that of the EU. For instance, Ukrainian state budget for 2012 expects a 3.9 percent GDP growth.

Inflation Rate

The inflation rate in Ukraine was last reported at 3.7 percent in January of 2012. Consumer prices rose 3 percent from a year earlier compared with a 3.7 percent in January. In February of 2012 inflation rate fell to its lowest level in nine years. The government is targeting a 2012 rate of inflation

of less than 7.9 percent as economic growth in the former Soviet nation slowed to 3.9 percent from 5.2 percent last year.

Doing Business

Ukraine's geographical and cultural proximity to both the European Union countries and Russia, large quantity of its consumers and the physical size of the country make it an excellent location for businesses to expand locally and regionally.

Membership in WTO and a free trade agreement with the EU accelerates trade and provides another layer of protection of investments. A well-developed infrastructure, telecommunications and a legal system allow for the creation of very favorable conditions for business in Ukraine.

Recent implementation of the comprehensive Tax Code and a number of other legislative improvements are very promising steps. All these changes and measures helped to improve Ukraine's rating in the "Ease of Doing Business Index" published by the World Bank. In 2011 Ukraine was ranked 145th, which is two points higher than the previous ranking. At the same time the country has been ranked 118th, rising from 136th (+18) in the category of "Starting a Business". Ukraine is ranked 112th in this category for the year 2012, which shows a very positive trend. Business set up in the country is becoming simpler and easier.

Useful Links

Doing Business in Ukraine 2012

http://www.doingbusiness.org/~/media/fpdkm/doing%20business/documents/profiles/country/ukr.pdf

Ukraine FDI Report 2011

http://www.ey.com/Publication/vwLUAssets/Ukraine-FDI-Report-2011-Eng/$ FILE/Ukraine-FDI-Report-2011-Eng.pdf

Ukraine. Macroeconomic Situation. SigmaBleyzer, November 2011

http://www.sigmableyzer.com/wp-content/uploads/Ukraine_EU_11_01_11.pdf

Human Resources for IT Industry

Highly qualified personnel is at the core of the software development business. The presence of educational institutions for IT personnel training and preparation plays a very important role in the industry development.

Ukraine has a long standing reputation as a major technology region, with a well-developed scientific and educational base:

- *Ukraine was ranked 32nd in Education on the 2009 Legatum Prosperity Index of 104 countries — ahead of India, China, Indonesia, Malaysia, Mexico, Brazil, Chile, and other popular outsourcing destinations.*

- *The literacy rate in Ukraine is almost 100 % while about 70 percent of adult population has secondary or higher education.*

- *Ukraine has more than 800 higher education institutions and in 2010 the number of graduates reached 654,700 people.*

In terms of IT services outsourcing, Ukraine primarily places emphasis on its deep IT talent pool. With 16,000 IT specialists graduating from Ukrainian universities each year, the country holds the fourth position in the world in the number of certified IT specialists, following the USA, India, and Russia. On top of that, the experts recognize both quantitative and qualitative potential of the Ukrainian specialists.

In 2011 the number of IT specialists working in the industry reached 25,000 people with 20 % growth. The successful development of IT outsourcing services industry in the country depends a lot on its deep IT talent pool. The presence of strong science schools, universities mainly focused on engineering specialties fuels the industry.

In Ukraine, of 16,000 IT specialists graduating each year from universities only 4,000–5,000 are employed in companies that provide professional IT services. This number might easily double because of the initiatives

Quick Facts:

- Number of Educational Institutions

  - Schools — **20047**

  - Colleges — **990**

  - Higher education institutions — **861**

- Number of graduates: **654,700** (2010 year)

- Number of graduates per 1000 people: **14**

- Number of graduates of IT specialties with bachelor degree — **16,000**

of Ukrainian government aimed at the creation of favorable conditions for IT outsourcing business development.

In order to improve the quality of IT professionals and to strengthen cooperation between businesses and educational institutions to sustain further development of IT outsourcing industry in Ukraine, a working group under the leadership of Deputy Prime Minister, Sergey Tigipko, and an IT Committee partnered together with IT associations, IT companies, leading technical universities and the Ministry of Education. Their work led to a decree intended for the improvement of IT education, attraction of youth to the IT industry and bringing of education to the needs of IT labor pool. A decree of the Cabinet of Ministers "On approval of the agenda to identify the priority areas in the IT education development for the years 2011–2013" aimed to support IT education in Ukraine, was signed by a Prime Minister Nikolay Azarov on September 21st, 2011.

History of Ukraine's Software Development Market:

1952-1970: Formation of computer calculations

- *1951 – first computer in Continental Europe. Computer codes.*

1960-1980: Use in science, military technologies.

FORTRAN, PL1, COBOL, C

16 years of experience in software engineering

Expert in wide range of technologies

Quality management system is cerified ISO 9001:2008

Successful experience in Agile development methodologies

Headquarter in Kyiv, Ukraine

Outsourcing software development
Development centers establishment & support

softengi

inspired software engineering

.Net

Java

Mobile - iOS / Android / MS Mobile

Web-development

Test automation

Business solutions on MS SharePoint

Finance

Banking

Insurance

Environment

Health & Safety

Government

Custom sofware development

Reengineering and migration

Testing and QA

Support and integration

3D / Stereo

IT Business-process outsourcing

Infrastructure

The main infrastructure resources that are used in the business processes of the software development and IT outsourcing service industry are Internet services, office space, fixed and mobile services, and computer equipment.

Telecom Infrastructure

There are about 8 million Internet users in Ukraine. Internet penetration rate is about 21 %, less than in Central and West Europe. About 90 % of Internet users are centered in Kyiv and other large cities.

The mobile services in Ukraine are the cheapest in Europe and even in the world.

Table #1. Share of Internet Users by Main Regions

City	Share of Users
Kyiv and Kyiv region	55.56%
Odesa	6.48%
Dnipropetrovsk	5.84%
Kharkiv	5.16%
Lviv	3.74%
Crimea cluster*	3.02%

Mobile penetration:
119.7 percent (55.91 million activated SIM cards)

Internet penetration:
21 percent (8 million people)

* including Kherson, Mykolaiv, Simferopol, Sevastopol

Cost of Internet

By the end of 2011 there was a good coverage of high-speed Internet access in Ukraine. Five national providers of fixed (DSL, ADSL, XDSL) internet access — Ukrtelecom, Vega Telecom, Datagroup, Ukrnet, Volia, and 5 national operators of mobile internet — MTS, Kyivstar, PEOPLEnet, Utel, and Intertelecom are currently operating in Ukraine. Every regional center and large district center has a number of local providers and home networks.

Typically, new internet access setup takes 3-5 business days.

Table #2. Average Cost for ADSL Services

City	Connection Speed	Cost (US$)/month
Kyiv	up to 4 Mbps	6,8–12,5
Kharkiv	up to 4 Mbps	7,3–12,5
Lviv	up to 4 Mbps	11,2–22,5
Dnipropetrovsk	up to 4 Mbps	4,3–12,5
Odesa	up to 4 Mbps	8–18,75
Crimea cluster	up to 4 Mbps	9,3–15

Average cost of corporative optical Internet connection — US$ 100–200

Office Space

Most software companies in Ukraine use B class office space. A part of small-sized companies rent C class office space. A class offices are used by some large companies and R&D departments of large foreign companies.

During the recession rental rates decreased by 30–50 % and remained at this level until the end of 2009. Since 2009 there has been a slight increase of rental rates, which follows the rate of inflation.

In 2011 the rental rates for office premises increased by 4.5–5 %. The average rates for A class business centers were US$ 32 per 1m², B class — US$ 20 per 1m², and C class — US$ 15.5 per 1m². The rates differ in each class depending on prestige, location, vacancy, date of opening, and the owner's loyalty to the leaseholders.

Table #3. Average Minimum and Maximum Rental Rates

City	Rental Rate (US$ per 1m²)	
	min	max
Kyiv	10	50
Odesa	9	35
Lviv	8	40
Crimea cluster	8	30
Kharkiv	8	30
Dnipropetrovsk	7	25

In class A buildings rates can reach up to US$ 50 per 1m² per month, while the rates in B class buildings can range from US$ 18 to US$ 45, in C class — from US$ 8 to US$ 25 per 1m².

Table #4. Rental Rates for Kyiv Office Premises

Class	1 July 2009	1 January 2010	1 July 2010	1 January 2011
Class A	$ 30–35	$ 28–35	$ 30–38	$ 32–38
Class B	$ 18–23	$ 13–20	$ 15–26	$ 17–26
Class C	$ 10–15	$ 8–13	$ 8–15	$ 10–15

Source: Colliers International, December 2010

Computer Equipment

All of the world's leading computer equipment manufacturers are represented in Ukraine. The cost of a typical workspace for a software developer ranges between 800–900 USD.

Cost of an entry-level server is ~US$ 1000–1200.

History of Ukraine's Software Development Market:

1980-1990: Use of software in business

- *1980: Emergence of PC*

- *1980-1990 – automation of the largest industrial enterprises of the Soviet economy. COBOL, FORTRAN, PASCAL, Palma.*

1990-1999: Emergence of market society in the SOFTWARE DEVELOPMENT industry.

- *1989 - establishment of company Mirasoft.*

- *1990 – Emergence of the first independent software development companies. Accounting. Automated workstations for industrial enterprises. Clipper, DBase, FoxPro, C/C++.*

- *Year 2000 problem. Company Tessart employs 120 people in 1999.*

Traveling to Ukraine

Ukraine border upon European Union and has overlapping work hours with United States, which makes it attractive location for doing business.

Convenient traveling to the country is very important to those who would like to work in Ukraine or with Ukrainian companies.

Entering Ukraine/Visa

The rule is valid for short term visits, up to 90 days. Anyone staying in the country longer than 90 days requires a visa. One cannot get a Ukrainian visa at the airport or at the border.

Citizens of the European Union, United States, Canada, Japan, South Korea, Switzerland, Liechtenstein, Andorra, Vatican City, Monaco, Iceland, Norway, San Marino, Mongolia, Serbia, Montenegro, Georgia, Hong Kong, Israel, Paraguay and the countries of the Commonwealth of Independent States (except Turkmenistan) do NOT need visas for entering Ukraine.

Since September 10th, 2011, all foreigners who would like to stay in Ukraine for more than 90 days are subject to new visa and residency permit rules. All visas issued prior to September 10th, 2011 are no longer valid for entry into Ukraine after September 10th. If you obtained your visa before September 10, 2011 and entered Ukraine, you may stay in the country for as long as your registration is valid. In order to extend your stay, you would need to leave the country and obtain a new visa abroad, or if you left Ukraine for any reason, you would have to get a new visa before you could return.

If you need a visa or would like to reconfirm the information about entering Ukraine, please contact the Ukrainian Consulate or Embassy in your country.

When entering the country you will no longer be required to complete an immigration form. It is prohibited to bring large amounts of Ukrainian currency (hryvnia) into the country unless it was declared upon leaving Ukraine. Always check the customs regulations in advance.

National and International Connectivity

When it comes to local or international trips, Ukraine is well connected. There are many ways to travel to Ukraine — by plane, by train, by car — all depends on the person and the distance. There are numerous airports in Ukraine operating in an international or/and domestic capacity. Most international flights to Kyiv land at Boryspil International Airport, but there are several other

international airports scattered throughout Ukraine. Kyiv, Kharkiv, Lviv, Dnipropetrovsk, Donetsk, and Odessa are the main country airports with direct links to most countries of the world.

Together with Poland, Ukraine is a co-host to UEFA EURO 2012. This event has brought about numerous improvements to Ukraine's infrastructure. The main airports have been modernized, and new terminals have already been opened in Kyiv, Odesa and Kharkiv airports. New terminals are also expected to be opened in the airports of other largest cities like Lviv, Dnipropetrovsk and Donetsk.

Kyiv, Kharkiv, Lviv, Dnipropetrovsk, Donetsk, Odessa are the main country airports with direct links to most countries of the world.

Traveling to Ukraine by plane is the fastest and most comfortable way of transportation. A number of airports in Ukraine are operating either in an international or domestic capacity. Among them is Boryspil International Airport, which is the busiest and largest airport in Ukraine. Boryspil is the hub for many international flights from across the world.

Boryspil International Airport, located just 29 km from Kyiv, receives most of the international flights. There are a number airlines operating here — Adria Airways, Air France, Air Baltic, AlItalia, British Airways, Bulgaria Air, Czech Airlines, El Al, Finnair, Iberia, KLM Royal Dutch Airlines, LOT Polish Airlines, Scandinavian Airlines System, Wizz Air, Austrian Airlines, Aerosvit Airlines, Aeroflot, Lufthansa, Ukraine International Airlines and many others.

Zhulyany Airport, operating mainly in domestic capacity, is another Kyiv airport. Zhulyany Airport, located in the south of Kyiv is home to a fascinating aviation museum as well as an aircraft repair company.

There are several other important international airports located in Ukraine's largest cities, which facilitate connectivity to various destinations in Ukraine and abroad.

Dnipropetrovsk International Airport is located 15 km from Dnipropetrovsk city center. A number of airlines are operating here — Aerosvit Airlines, Austrian Airlines, Aeroflot, El Al, Georgian National Airlines, Turkish Airlines, Ukraine International Airlines, and others.

Next on the list is Kharkiv International Airport, located in the city of Kharkiv, where the following airlines are operating: Austrian Airlines, Aerosvit Airlines, Armavia, Dnepravia, Georgian Airways, UTair, and others.

Odesa International Airport "Odesa Central" operates both domestic and international flights and is also used by the Ukrainian Air Force. The airlines operating here are Air Baltic, Austrian Airlines,

El Al, Georgian National Airlines, LOT Polish Airlines, Aerosvit Airlines, Ukraine International Airlines, Malev Hungarian Airlines, Turkish Airlines, Czech Airlines, and others.

Lviv International Airport is one of the major airports in Ukraine. The following airlines, connecting Ukrainian cities as well as to other parts of the world can be found here: Aerosvit Airlines, Austrian Airlines, Lufthansa, LOT Polish Airlines, UTair, Turkish Airlines, Ukraine International Airlines, Wizz Air.

> *It takes on average of 3 hours to fly from any destination in Europe to Ukraine, and 8 hours to fly from New York to Ukraine.*

Domestic air travel, the fastest and easiest way of transportation, covers quite a few destinations in Ukraine. There are permanent flights from/to Kyiv with Dnipropetrovsk, Donetsk, Kharkiv, Lugansk, Lviv, Mariupol, Zaporizhzhya, Odesa, Simferopol, Sevastopol, Ivano-Frankivsk and Uzhgorod. Other cities are connected by railway.

The prices for international flights are similar to the ones in the west, but the prices for domestic flights used to be higher compared to western standards. The average cost of airplane tickets is US$ 30 per 100 km. There is one low cost carrier operating in Ukraine, Wizz Air Ukraine, which flies mainly to European destinations and allows for cheaper travels to and from Ukraine.

Table #5. Airports and the Number of Air Services

City	Airports	Air Services
Kyiv	4	95 (100*)
Kharkiv	2	16 (28*)
Lviv	1	16
Dnipropetrovsk	1	19 (20*)
Odesa	1	28
Crimea cluster	6	20

* Including the flights that will soon be opened

Useful Tips

List of Ukrainian Embassies and Consulates

http://hi-tech.org.ua/ukrainian-embassy-and-consulates/

You can book air tickets online

http://kbp.aero/en/flights/booking/

You can find information about low cost carrier Wizz Air or book low cost air tickets

http://wizzair.com/

Boryspil International Airport

http://kbp.aero/

International Airport Kyiv

www.airport.kiev.ua/en/

Donetsk International Airport

http://www.airport.dn.ua/en/index.php

Dnipropetrovsk International Airport

http://www.dniproavia.com/index.php?lang=en

Kharkiv International Airport

http://hrk.aero/en/

Lviv International Airport

http://lwo.aero/

Odesa International Airport

http://airport.od.ua/eng/

International Airport Simferopol

http://www.airport.crimea.ua/en/home.htm

Railway Service

Table #6. The Number of Train Stations and Railway Services

City	Stations	Railway Services
Kyiv	7	429
Kharkiv	4	228
Dnipropetrovsk	2	137
Lviv	1	253
Odesa	1	101
Crimea cluster	4	189

Train travel within Ukraine is a convenient and inexpensive way to get around the country. Ukraine railway travel is much cheaper than flying. The average cost of train tickets is US$ 17,5 (140 UAH).

Availability of Hotels

Table #7. Availability of Hotels

City	Hotels
Kyiv	105
Kharkiv	31
Dnipropetrovsk	55
Odesa	98
Lviv	28

There are many comfortable hotels in Ukraine. Currently 5 stars hotels can only be found in Kiev and in Donetsk. 20 five stars hotels and 48 four stars hotels were expected to have been built in preparation for EURO 2012.

Quick Facts:

- Average cost of the airplane tickets — US$ 30 per 100 kms
- Average cost of the train tickets — US$ 17,5 (140 UAH)

Table #8. Average Cost for the Hotel Room

City	*** Hotel (US$)	**** Hotel (US$)	***** Hotel (US$)
Kyiv	104	257	575
Kharkiv	59	110	–
Dnipropetrovsk	73	117	220
Odesa	66	135	240
Lviv	62	112	–
Crimea cluster	68	107	–

Apartment rent in Ukraine is about 50 % cheaper than hotels.

Table #9. Business Class Apartments Located in the City Center — Rental Rates

City	Average Cost per Day (US$)	Average Minimum – Maximum Cost per Day (US$)
Kyiv	137	40–285
Kharkiv	75	20–250
Dnipropetrovsk	81	40–150
Odesa	72	27–175
Lviv	69	25–120
Crimea cluster	70	25–210
Crimea cluster	70	25–210

Culture and Public Holidays

Ukrainian culture refers to the culture associated with the country of Ukraine, and sometimes with ethnic Ukrainians across the globe. It embodies elements of other Eastern European cultures as well as some Western European influences.

As a European nation, with centuries of trade and historic roots in Northern and Western Europe, Ukraine possesses the cross-cultural ties that make it a culturally compatible and an extremely attractive destination for IT outsourcing.

Public holidays in Ukraine

Religious holidays are observed in accordance with the Julian calendar (but here the Gregorian date of Christmas is written).

When a public holiday falls on a day off (for example, Sunday), the following working day (often Monday) turns into an official day off too. For the most of Ukrainian employees weekly days off are Saturday and Sunday.

If only one or two working days occur between a public holiday and another day off, the Ukrainian Government usually releases a recommendation to avoid this gap by moving these working days to a Saturday (this is done to have uninterrupted vacations, but to also compensate this by work on another day, which would be a day off). Usually such recommendations apply to only those employees whose weekly days off are Saturday and Sunday.

The list of Ukraine's public holidays:

January 1 — New Year's Day

January 7 — Orthodox Christmas

March 8 — International Women's Day

Orthodox Easter

Holy Trinity Day (Triytsya) — Orthodox Pentecost

May 1 & 2 — Labour Days

May 9 — Victory Day (Memorial Day in Lviv Oblast)

June 28 — Constitution Day

August 24 — Independence Day

"Smartling, Inc. has been working with Archer Soft for more than two years started with a team of 2 people: me and Archer's leading architect. Now Smartling is a Company with **over $4M** investments having ODC on Archer's side […] with a team of 25 people including sophisticated back-end server development as well as front-end development. Archer's PM and NetOp work on-site with us contributing a lot to smooth and efficient communication between both: NYC and Dnepropetrovsk teams.

Now among our clients are: **Drop.io, SurveyMonkey, Foursquare, IMVU, Eventbrite, Scribd. 100k hits per day are** handled by Smartling servers' clusters in Amazon & Rackspace clouds. […]

Archer's slogan **"we develop success"** isn't just lip-service – Archer has truly been an instrumental part of our success. The team is excellent, and I would recommend Archer as a software partner, especially for projects with any significant scale and complexity."

Jack Welde *Founder and CEO Smartling, Inc.* NY, USA
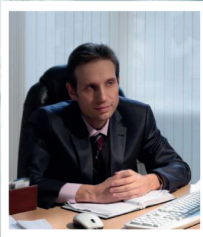
Success of your outsourced projects or TOP-5 mistakes to avoid

1. **U**nderstanding of the **strategic goals is unnecessary** for outsourcing teams. There is no *synergy w*here people do not understand reasons of what they do. Make it transparent to your offshore team and keep them up to date– it will increase their efficiency dramatically.

2. **B**iggest suppliers are **most efficient**. Huge suppliers with thousands of employees are often scattered all over the world, which adds bureaucracy to their processes. This is not good when high-integrity is required and speed of decision making is important. Besides, the size of overheads with bigger suppliers is bigger too.

3. **R**equirements and their **details are evident**. Things that are so evident to you may be not that evident to developers or project lead due to different background, mindset etc. Talk and write – share your vision – it will only save your time and money.

4. **R**isks do not happen **to me**. There are always issues in the project, and issues are risks that became reality. It's better to manage risks than eliminate their consequences – ask your supplier for risk management plan.

5. **F**ixed Price (FP) model **will save** my money. Budget defined upfront is good, but there are *always* changes. FP model includes all the possible risks into the project's estimation (with some/all of them never to happen). Time&Material model makes you pay only for the work done. Thus, you should aim at building *trust* with your supplier and rely on him.

WE DEVELOP SUCCESS

Areas of expertise:

- **C**ontent Management
- **B**usiness Intelligence/Analysis
- **M**anufacturing systems
- **B**usiness Automation
- **B**usiness Network integration and Security
- **M**obile, Wireless and Embedded Systems
- **I**nternet/Intranet Solutions
- **R**emote Network Administration
- **M**ultimedia
- **S**ervers Development

Technologies:

C#, PHP, Java, iPhone, Android, Embedded, CMS (Drupal, WordPress, Joomla, DotNetNuke and more), web APIs: Google, Salesforce, Facebook, Amazon.

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Regional Structure of Ukraine's IT Outsourcing Industry

Table #10. Main Outsourcing Centers

City	Population, million Permanent (temporary)	Part of outsourcing industry resources, number of IT specialists	Average salary relative to Kyiv, %	Property price level relative to Kyiv, %
Kyiv	2.8 (4.0)	10 000	100	100
Kharkiv	1.7 (2.5)	4 750	85	80
Lviv	0.9 (1.3)	4 000	85	70
Dnipropetrovsk	1.2 (2.0)	1 750	80	75
Odesa	1.1 (1.8)	1 000	80	75
Crimea cluster	1.5 (2.5)	750	70	70
Other	–	2 750	70	65

*Crimea cluster includes cities Kherson, Mykolayiv, Simferopol, and Sevastopol.

Main outsourcing centers in Ukraine

IT outsourcing industry in Ukraine is rapidly developing. More than 25,000 IT specialists are involved in the software development and IT outsourcing industry in Ukraine, and this figure is likely to increase over the coming years.

The following are six major outsourcing centers: Kyiv, Kharkiv, Lviv, Dnipropetrovsk, Odesa, and a Crimea cluster which includes four cities: Kherson, Mykolaiv, Simferopol and Sevastopol.

All major software development centers are located in large cities with populations of millions. The capital city, Kyiv, is the largest in Ukraine. The city is located in the north central part of the country with the population of almost 3 million people.

Kyiv

Figure #1. IT Outsourcing Resources in Kyiv

IT Outsourcing Resources in Kyiv

Kyiv

Permanent **population** = **2.8** million

Temporary **population** = **4.0** million

10 000 IT specialists — **40%**[*]

Salary — **100%**

Property price level — **100%**

Universities — **68**

* of all IT resources in Ukraine

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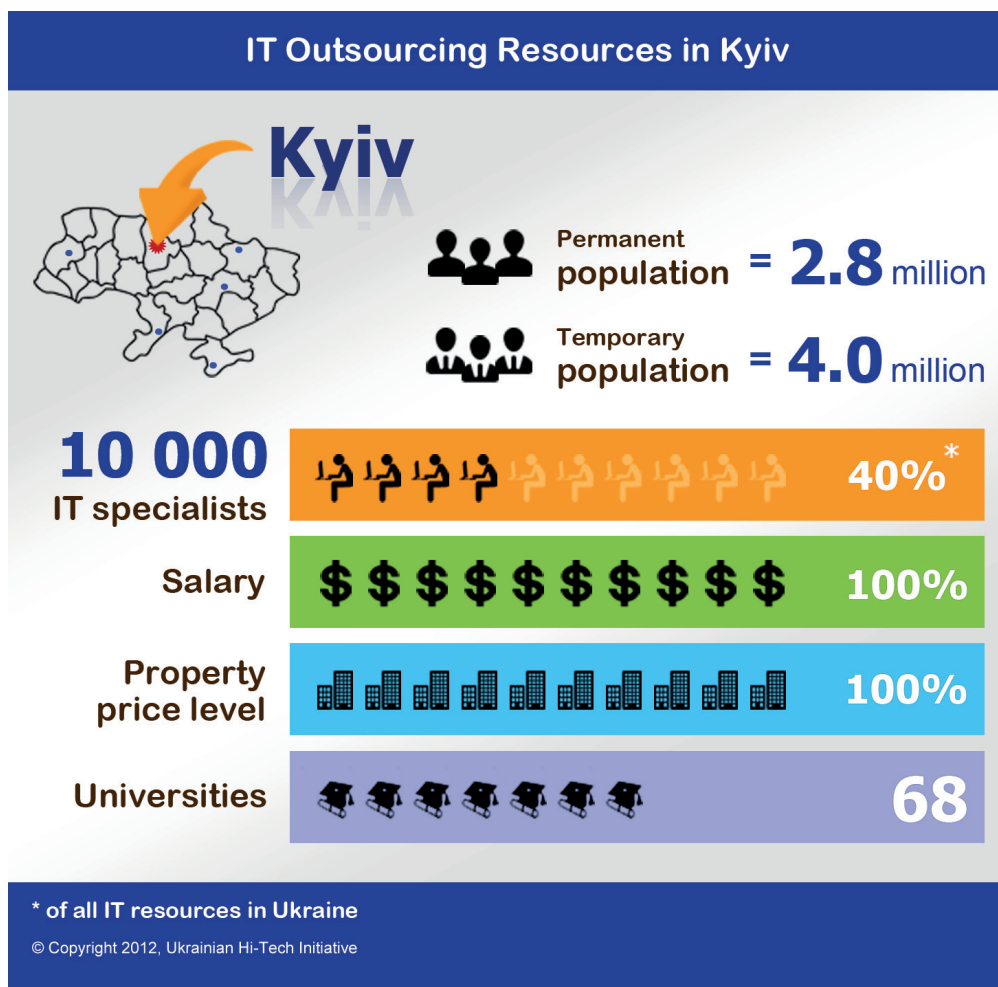
Kyiv region is the largest outsourcing and software development center in Ukraine. A great number of outsourcing companies operate here, while 40 % of all ITO resources in Ukraine are centered here. Kyiv boasts Ukraine's largest IT talent pool. Currently, more than 10,000 highly qualified IT specialists are involved in the IT outsourcing sector. The city has 68 universities that prepare skilled IT personnel to provide outsourcing services. Moreover, four top-rated technical universities are located in Kyiv (NTUU "Kyiv Polytechnic Institute", Taras Shevchenko National University of Kyiv, National University of "Kyiv-Mohyla Academy", and National Aviation University).

As a capital city, Kyiv attracts specialists from all over Ukraine with promises of many more opportunities.

Together with the largest IT talent pool, Kyiv is the most expensive region in terms of salaries and the cost of living comparatively to other outsourcing centers in Ukraine. However, it is still cheaper than many other outsourcing destinations in Central and Eastern European countries.

Kyiv is a large region with high level of economic development, offering great opportunities and favorable conditions for conducting business. It is also convenient for businesses due to the rich choice of office premises, Internet providers, finance and legal institutions, great hotels and availability of all types of business services. The city has an extensive infrastructure and a highly developed system of public transit.

Being the main R&D destination in Ukraine, Kyiv has a favorable geographical location and two modern airports with convenient airline connections, connecting the city with the rest of the world. It takes on average 3 hours to reach Kyiv from any destination in Europe, and 8 hours to reach it from New York.

Kyiv region is one of most promising and well-developed regions in Ukraine. In 2009 it was ranked among the TOP 50 Emerging Global Outsourcing Destinations by Global Services and Tholons, based on the analysis of the following categories: Scale and Quality of Workforce, Business Catalyst, Cost, Infrastructure, Risk Profile, Quality of Life.

Kharkiv

The second largest outsourcing center in Ukraine is the Kharkiv region. Kharkiv is a key region with great competitive advantages and a growth potential. It has been historically and geographically established, that each region in Ukraine is distinguished by its own specifics and its own strengths. The South-Eastern and Eastern regions of Ukraine are the most developed in industrial, intellectual and technological spheres. The Kharkiv region used to be a scientific and industrial center of USSR, and is known worldwide for its work in machinery — aerospace, nuclear electronics, turbines, arms, etc.

Figure #2. IT Outsourcing Resources in Kharkiv
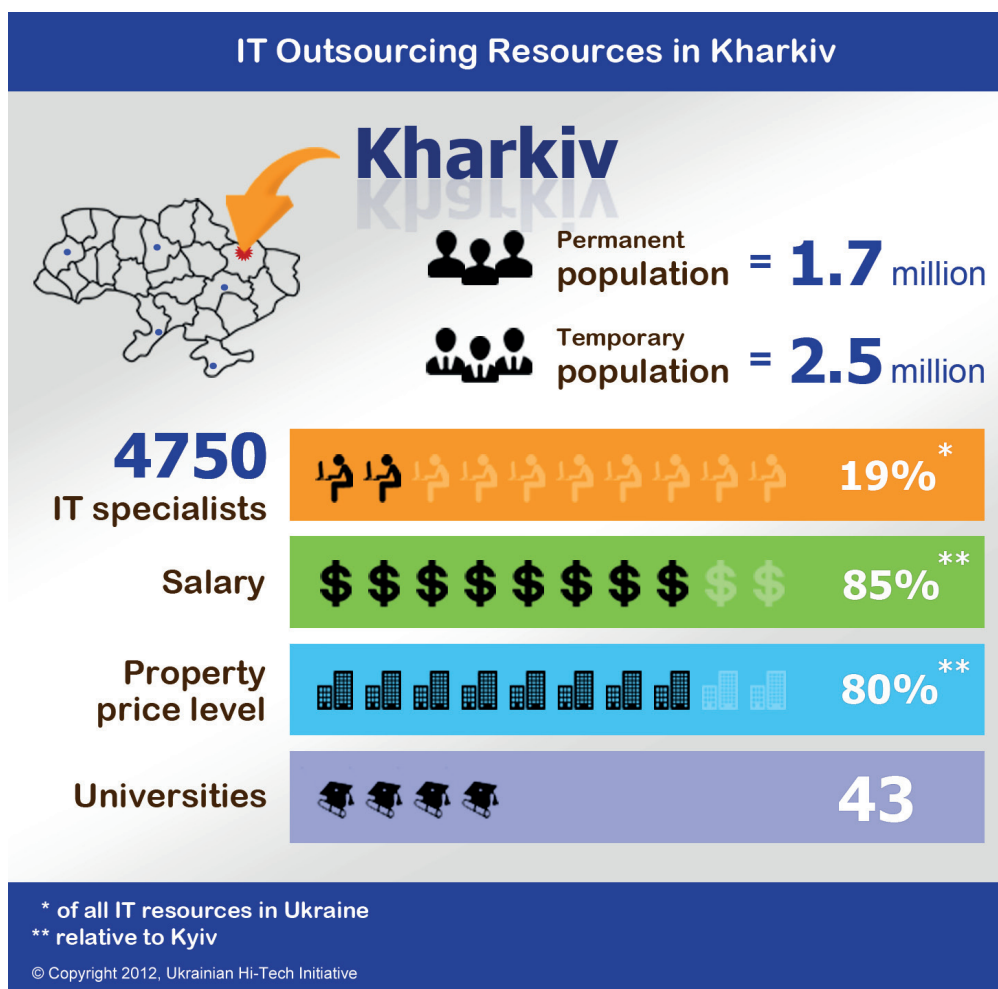
With the permanent population of almost 2 million people, Kharkiv is considered to be one of 3 primary R&D outsourcing destinations in Ukraine. About 200 IT companies of various sizes and service offerings operate here.

Human capital is a main indicator of the region's competitiveness, and the region has many highly skilled laborers, because of the country's most extensive educational networks. 43 universities graduate thousands of specialists each year. Four major Ukrainian technical universities are located in Kharkiv. Each year about 3,000 IT specialists graduate from the higher educational institutions and 25–30 % of them join software development companies.

About 5,000 highly qualified IT specialists are engaged in delivering outsourcing services, that is 20 % of all IT outsourcing resources in Ukraine.

With well-developed infrastructure and communications, Kharkiv also offers cheaper prices and a lower cost of living. A large pool of the talented but cost-effective IT workforce makes the region very attractive for outsourcing, as salaries and infrastructure costs here are about 15 % lower than in the Kyiv region.

Another strong point of the IT outsourcing market in Kharkiv is the presence of extensive professional IT communities. The Kharkiv QA community — QAClub (http://qaclub.com.ua) and the Kharkiv community of developers — Dev Time (http://dev-time.org) are just some examples. These IT communities unite IT specialists and hold different meetings and IT events in order to exchange valuable knowledge and gain new skills and competence.

Located in Eastern Ukraine, Kharkiv has convenient airline and train connections. There are daily direct flights from/to Kyiv (about 1 hour) and from/to Vienna (about 2 hours), as well as daily trains from/to Kyiv (about 6–8 hours).

Together with relatively inexpensive cost of living, Kharkiv offers great cost savings and many other advantages. In 2009, Focus Magazine included the city of Kharkiv into the ranking of European Cities and Regions of the Future 2010/2011, and ranked it 3rd in the TOP 5 Major Cities in the Cost Effectiveness category.

Lviv

Lviv is the sixth largest city in Ukraine with population of almost 1 million, and is next to Kharkiv on the list of Ukraine's major outsourcing centers. In 2009 KPMG ranked Lviv among the TOP 30 promising outsourcing destinations in their report "Exploring Global Frontiers".

Figure #3. IT Outsourcing Resources in Lviv
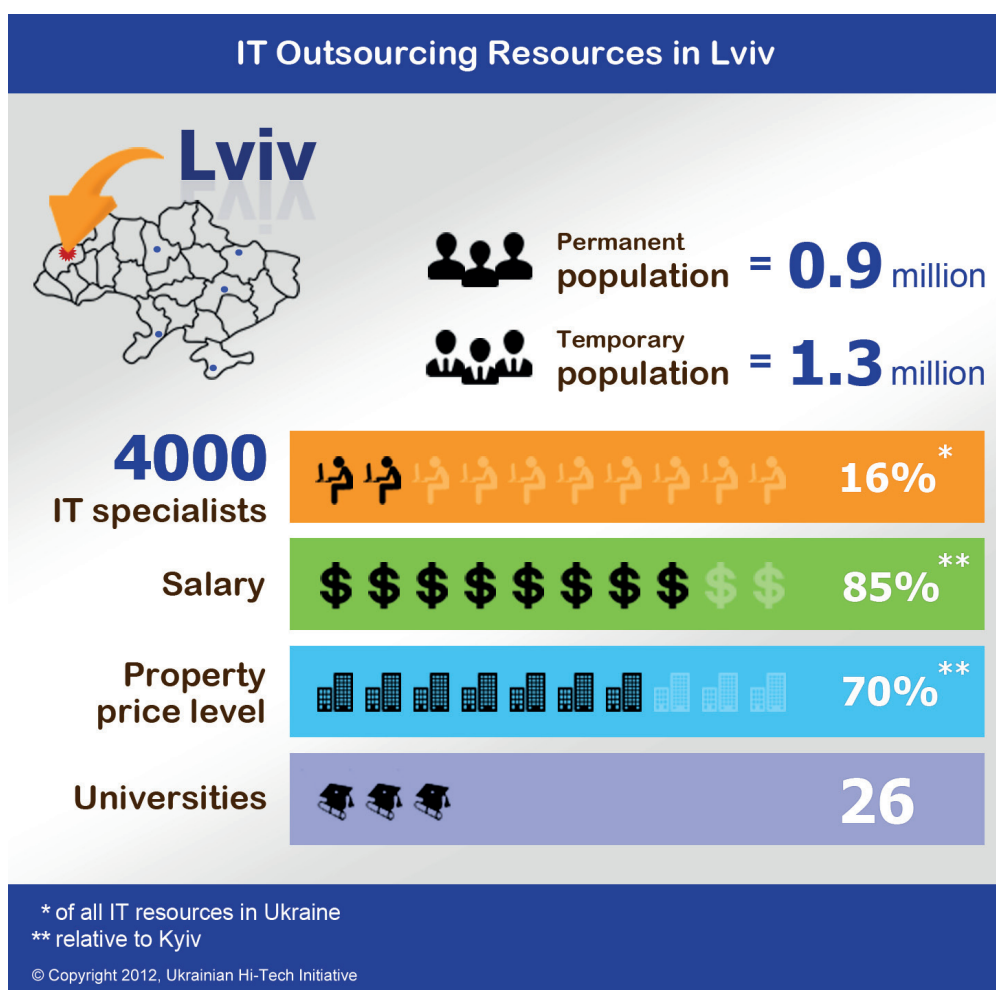
With over 30 IT outsourcing companies operating in Lviv, the market is still quite consolidated. Actually, it is divided between several big companies; the smaller companies do not significantly influence the major tendencies of IT outsourcing market development.

The city of Lviv is a leading educational center in Ukraine and one of the largest in Central and Eastern Europe with almost 40 higher education institutions, which teach roughly 130,000 students. There are 26 top level universities, 5 of which prepare highly skilled specialists

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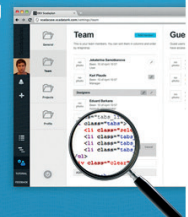- HPC / NVIDIA® CUDA™
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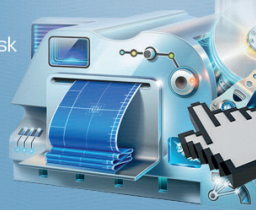
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in computer technologies. Over 1,000 IT graduates are supplied by local universities to the market annually. Currently, over 4,000 IT specialists are involved in the Lviv's IT outsourcing sector. According to the experts, this number is expected to grow by at least 20 % annually, until 2015.

Lviv boasts a highly qualified, cost-effective workforce. The market entry costs and the salaries of IT specialists are 25 % lower as compared to the Kyiv region.

Outsourcing companies that operate in the Lviv market are mainly focusing on their internal growth by increasing the professional level of their employees. While anticipating the need for growth in the IT talent pool, leading local companies (Eleks, SoftServe, Iohika, N-iX, SymphonySolutions) in collaboration with local universities and the city council, were the first in Ukraine to establish an IT-BPO Cluster.

Lviv has a strong place in the IT services sector in Ukraine, while its cultural and geographical proximity with Western Europe, time-zone advantage, and convenient airline connections (ex. Munich — 2 hours, Vienna — 1.5 hours, Warsaw — 1 hour) make it a very attractive destination for nearshoring.

Means of transportation are very convenient: roads, railways, airways, there are direct flights to all corners of the globe.
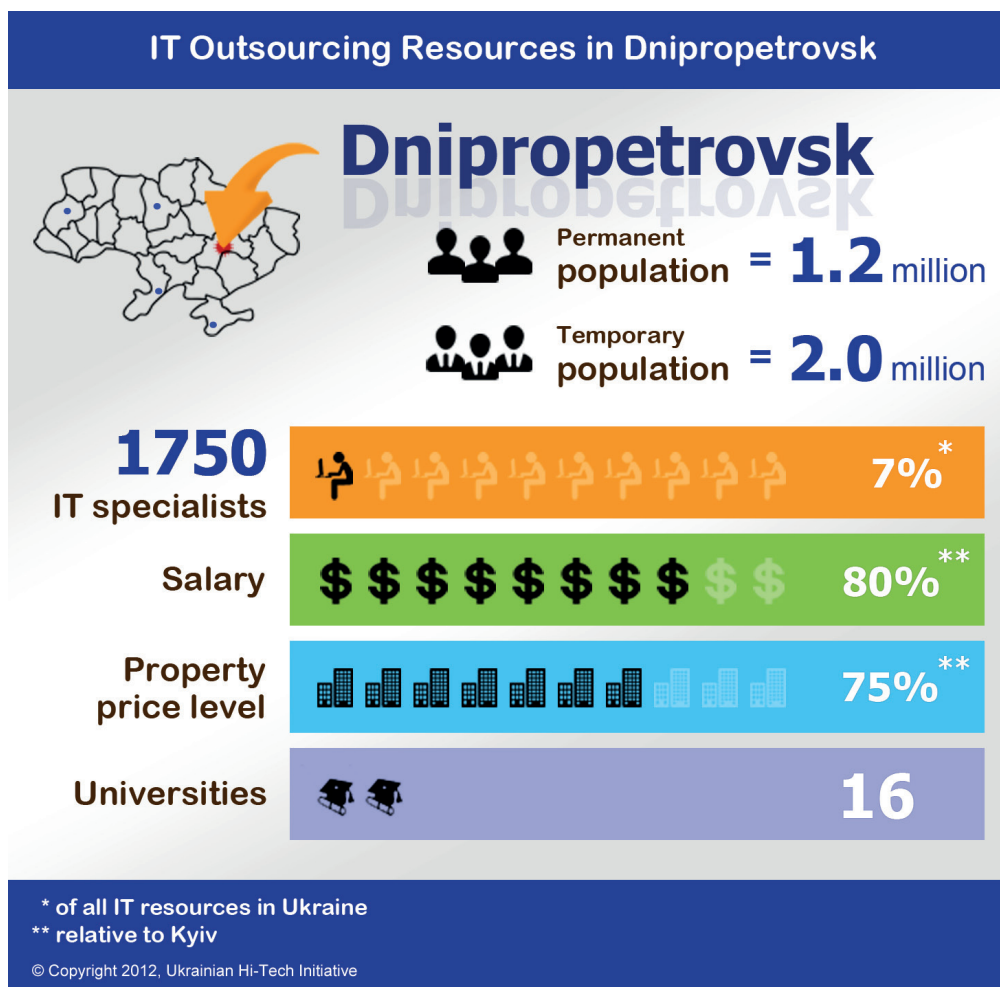
In 2009, Focus Magazine named Lviv the "Best Ukrainian City to Live In". FDI Magazine also included the city of Lviv into the ranking of European Cities and Regions of the Future 2010/2011, and ranked it the 3rd in TOP 5 Large Cities in the Cost Effectiveness category, and the 4th in TOP 5 Large Cities in the Human Resources category. The Lviv Region was also ranked 3rd in TOP 5 Eastern regions the most preferable for strategic foreign investments.

Possessing a large pool of IT talent that is 16 % of all Ukrainian IT specialists, providing significant cost savings, including labor and real estate costs, and a well-developed infrastructure, the city of Lviv has a great potential of becoming a number one outsourcing destination for both Western European companies and North American businesses.

Dnipropetrovsk

The next on the list of the largest outsourcing centers in Ukraine is the Dnipropetrovsk region. This city with population of over a million people is located in East-Central Ukraine and is one of the largest industrial centers.

Figure #4. IT Outsourcing Resources in Dnipropetrovsk

IT Outsourcing Resources in Dnipropetrovsk

Dnipropetrovsk

Permanent **population** = **1.2** million

Temporary **population** = **2.0** million

1750 IT specialists — 7% *

Salary — 80% **

Property price level — 75% **

Universities — 16

* of all IT resources in Ukraine
** relative to Kyiv
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About 10 % of all Ukraine's IT outsourcing resources are centered in Dnipropetrovsk; about 2,000 IT specialists are involved in delivery of IT outsourcing services here.

The city is also a major educational center in Ukraine. There are 16 universities in Dnipropetrovsk, which prepare about 1,500 IT graduates annually. In 2006 Dnipropetrovsk hosted the All-Ukrainian Olympiad in Information Technology, in 2008 the city hosted one for Mathematics, and in 2009 the semi-final of the All-Ukrainian Olympiad in Programming for Eastern Region.
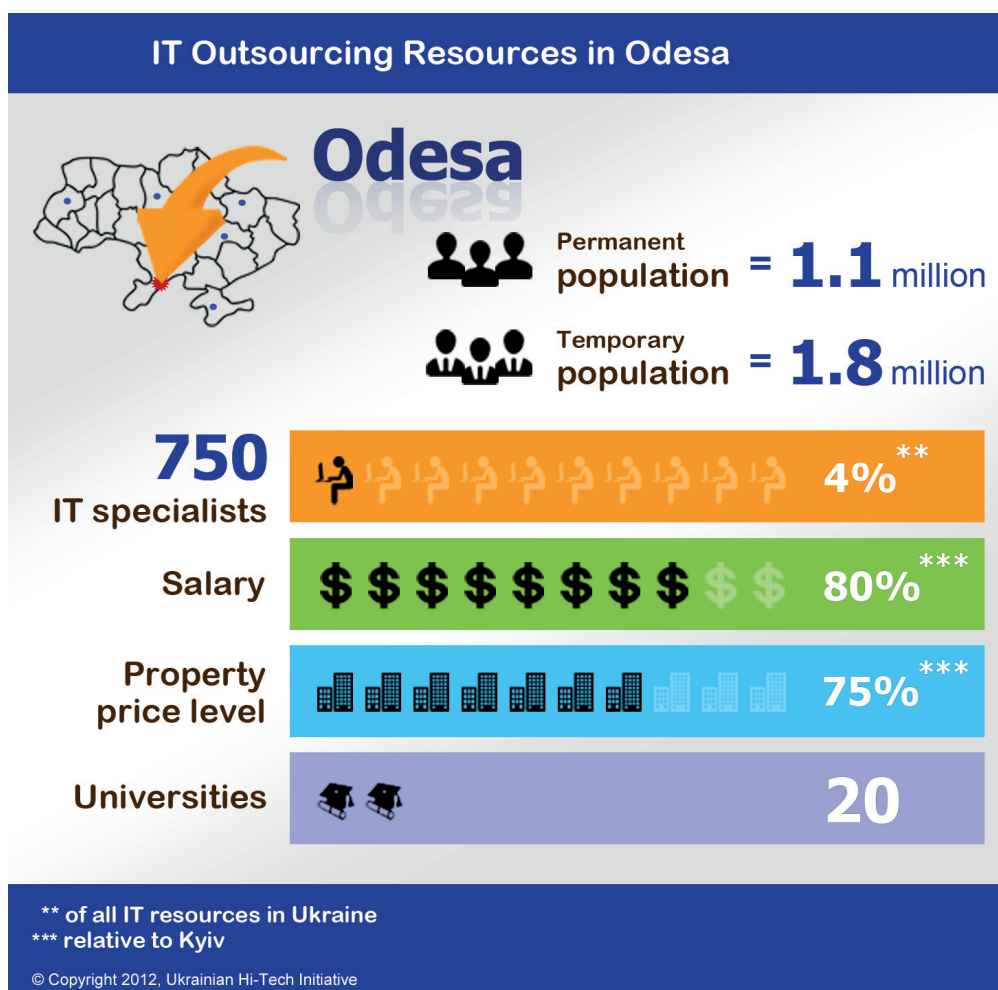
The region is an attractive outsourcing and R&D destination due to a cost-effective and highly qualified IT talent pool and low market entry costs.

In 2009, Focus Magazine included city Dnipropetrovsk into the ranking of European Cities and Regions of the Future 2010/2011, and ranked it 5th in the TOP 5 Major Cities in the Cost Effectiveness category.

Odesa

Odesa is the fourth largest city in Ukraine with population of more than 1 million. The city is a major seaport located on the North West shore of the Black Sea and is a popular destination for tourism. Hosting two important ports, Odesa is the intersection of the European and Middle Easters economic centers.

Figure #5. IT Outsourcing Resources in Odesa

IT Outsourcing Resources in Odesa

Odesa

Permanent population = **1.1** million

Temporary population = **1.8** million

750 IT specialists — 4%**

Salary — 80%***

Property price level — 75%***

Universities — 20

** of all IT resources in Ukraine
*** relative to Kyiv

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Odesa region is one of the largest software development centers in Ukraine. Many outsourcing companies operate and have their R&D offices in Odesa.

Being home for a number of higher education institutions, the city is considered to be a large educational center. There are 20 universities here, 5 of which prepare highly skilled specialists in computer technologies. Currently, more than 1,000 IT specialists are working in the Odesa's IT outsourcing sector.

If compared to other outsourcing centers (Kyiv, Kharkiv, or Lviv), Odesa has a smaller pool of IT workforce, but the salaries and the cost of living are lower here as well. The prices and the cost of living in the city are 20–25 % lower than in Kyiv.

Odesa has convenient and well-developed airline and train connections. Odesa's airport operates both domestic and international flights, and offers transit flights from the Americas, Africa, Asia, Europe and the Middle East.

The city is a popular tourist center and a promising region with a high level of economic development offering a lot of business opportunities.

In 2009, Focus Magazine included the city of Odesa into the ranking of European Cities and Regions of the Future 2010/2011, and ranked it 4th in the TOP 5 Large Cities in the Cost Effectiveness category and 4th in the TOP 5 Large Cities in the Business Friendly category.

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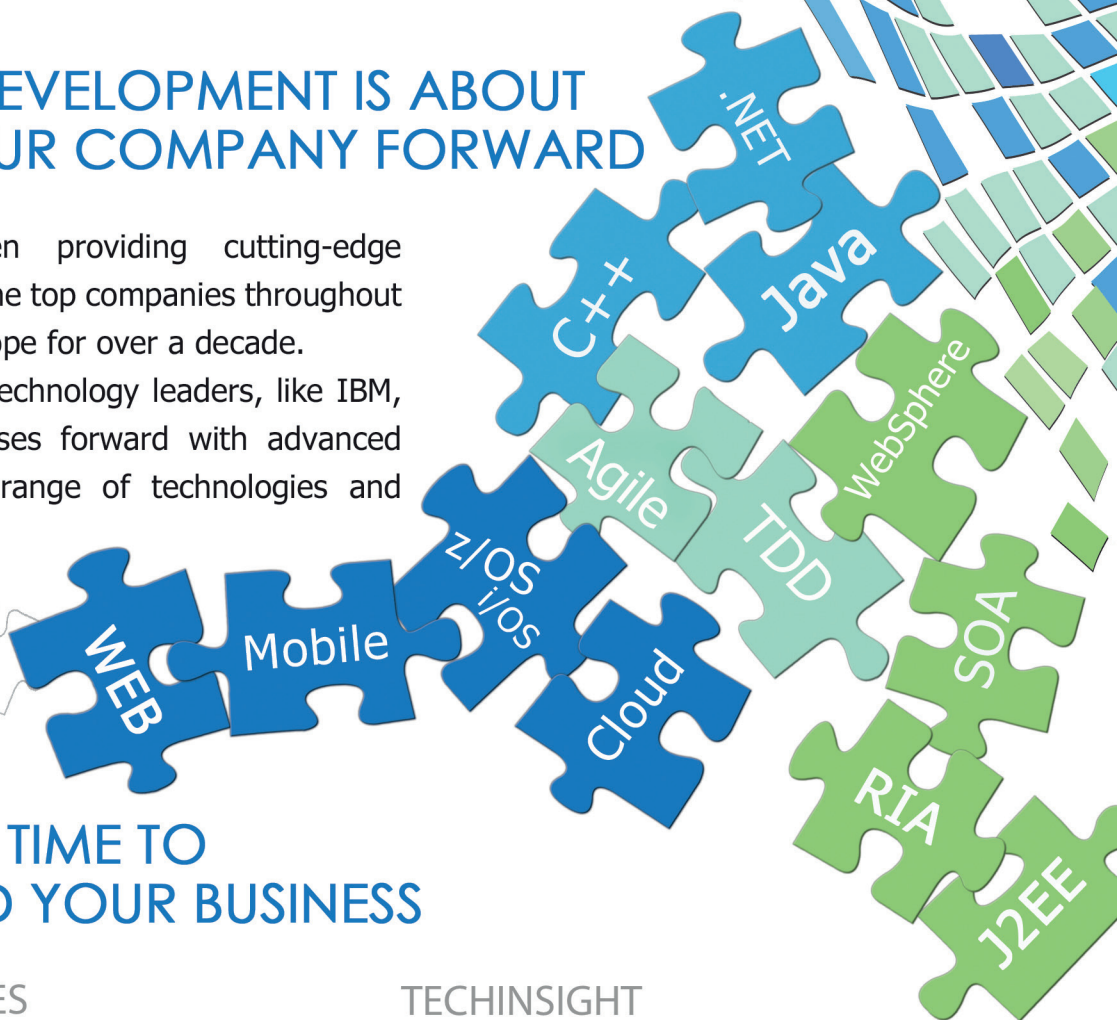
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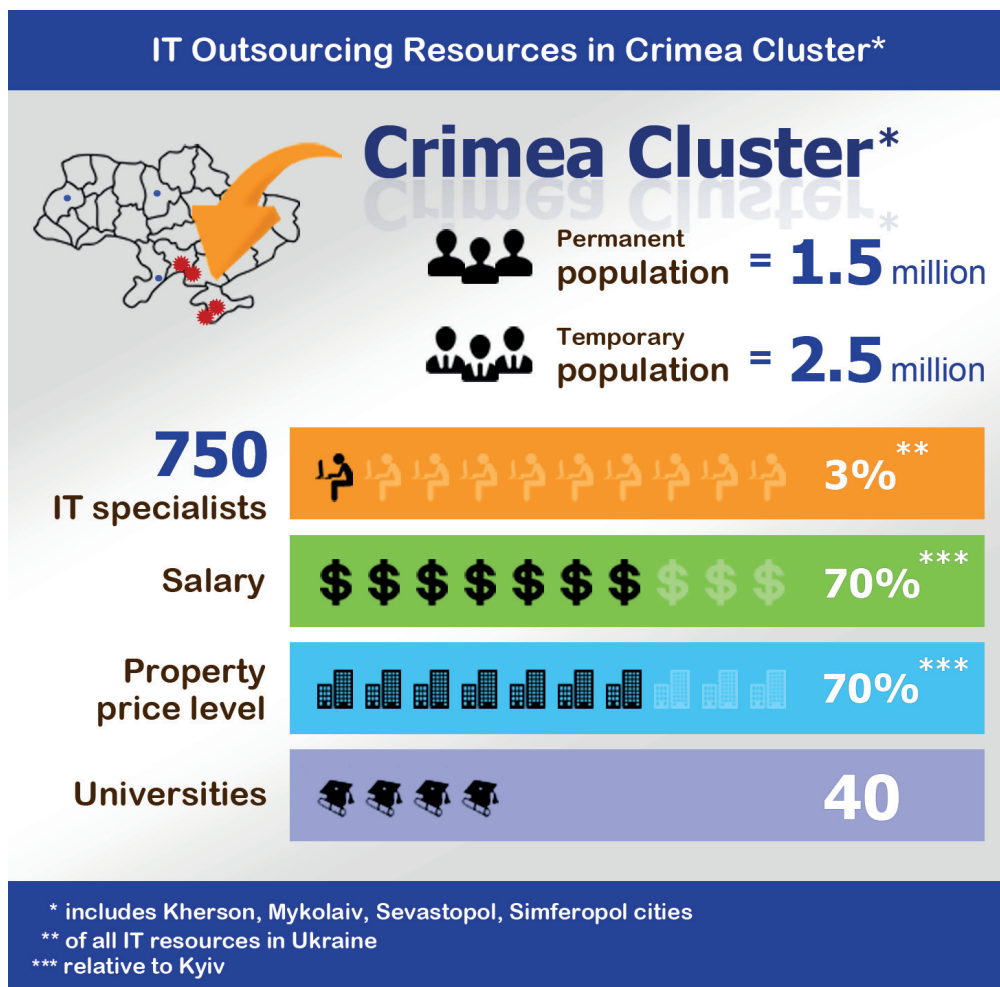http://www.techinsight.ua

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The Crimea Cluster

The Crimea cluster should be also mentioned among the main outsourcing centers in Ukraine. The Crimea cluster comprises four cities of the South Ukraine and the Crimea. They are Kherson, Mykolaiv, Sevastopol and Simferopol. These cities are smaller than those previously mentioned, but combined they have a large IT workforce. A lot of outsourcing companies operate or base their R&D offices in the cities of the Crimea cluster.

Figure #6. IT Outsourcing Resources in Crimea Cluster

IT Outsourcing Resources in Crimea Cluster*

Crimea Cluster*

Permanent **population** = **1.5** million

Temporary **population** = **2.5** million

750 IT specialists — 3%**

Salary — 70%***

Property price level — 70%***

Universities — 40

* includes Kherson, Mykolaiv, Sevastopol, Simferopol cities
** of all IT resources in Ukraine
*** relative to Kyiv

These four cities are home to 40 universities, which feed the outsourcing sector a steady stream of skilled specialists. There are seven universities in Mykolaiv, the main ship building center of the Black Sea; eight universities in Kherson, an important port on the Black Sea and Dnieper River; eight universities in Sevastopol, one of two cities with special status in Ukraine (the other is Kyiv); and 17 universities in Simferopol, the capital of the Autonomous Republic of Crimea.

About 1,000 IT specialists are involved in the IT outsourcing sector of the Crimea cluster. The cities in the Crimea cluster are the smallest compared to the other cities mentioned. Thus, they have the smallest available IT talent pool but are cheaper to employ. For example, the salaries of IT specialists in these cities are 30 % lower than those in Kyiv.

The availability of a sizable, talented IT workforce, combined with lower salaries and market entry costs, make this region very attractive for outsourcing and setting up R&D offices.

Six outsourcing centers: Kyiv, Kharkiv, Lviv, Dnipropetrovsk, Odesa, and the Crimea cluster together represent 85 % of all IT outsourcing resources in Ukraine. The remaining 15 % of resources are concentrated in other smaller Ukrainian cities. Outsourcing companies are located all over Ukraine. Almost every city has technical universities or higher educational institutions that prepare highly qualified IT specialists for the Ukraine's IT outsourcing industry.

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Overview of Ukraine's IT Outsourcing Service Industry

> "As long as software is in demand there will always be room for excellent IT services companies to grow, and Ukraine is a great place to thrive. Services companies that provide specific value to their customers will always be prized. Buyers of services like working with Ukraine because they want active participation in the development of their new applications. They do not want to just tell developers exactly what to do, they want ideas. They want to hear, "You may not want to do it that way, but this way would work much better." "Or sometimes they just want to hear an up front "no""; "No we are not experts in that, or no, that date won't be met unless we take something out, or rearrange priorities, etc." This level of collaboration and directness can be expected when working with Ukraine; it helps build trust in both the country and the provider."
>
> *Emmy Gengler,*
> *CEO,*
> *Softjourn, Inc.*

Ukraine's software development and IT outsourcing service industry is the largest in Central and Eastern Europe. Ninety-percent of the industry is oriented towards external markets. The large number of highly skilled IT professionals fuels a robust industry focused on delivering quality, reliable IT services to global markets.

Strong experience and qualifications, and a client-oriented approach, coupled with their relatively low cost, have created high demand for Ukrainian programmers. The deep involvement of Ukrainian developers in a client's projects allows the client to more easily and cost-effectively achieve the results desired.

Ukraine's IT outsourcing services industry boasts numerous advantages over competitors. An abundance of stories exist about foreign companies that successfully set up their R&D centers in Ukraine after unsuccessfully attempting to work with Indian companies. A majority of our clients note that the main differences between working with Ukrainian developers, as compared to those in India, are the results-oriented approach of Ukrainian developers, the depth of their involvement in projects, and their strong mathematics and technical backgrounds. In terms of cost-to-quality, these competitive advantages make Ukrainian programmers the most effective in the outsourcing industry.

Due to the strength and depth of our IT talent, the Ukrainian outsourcing industry has enjoyed exceptional growth. During last 2–3 years, many Ukrainian IT outsourcing companies set up corporate training centers to train, prepare and better use the pool of 16,000 IT professionals

that graduate annually from area universities. Most companies have more than 10 years of experience, smooth, efficient production processes, solid marketing and training programs for staff. Over the last eight years, the volume of software development and IT outsourcing services the Ukraine has provided has grown by a factor of ten.

Experts agree that the industry will continue to grow rapidly for the foreseeable future. In fact, according to the optimistic estimates of experts, the Ukrainian market will grow tenfold, and the volume of software development and IT outsourcing services may reach US$10 billion by 2020.

Snapshot of Ukraine's IT Outsourcing Industry

- Ukraine represents the largest IT outsourcing industry in Eastern Europe

- IT outsourcing industry growth rate for 2011 — 20%

- More than 1,000 IT outsourcing companies

- 25,000+ specialists involved in the IT outsourcing industry

- Ukraine has more than 800 universities and colleges

- Majority of Ukrainian IT specialists (est. 70%) work for American or European customers

- A number of government initiatives introduced to support and promote the Ukrainian IT industry

History of Ukraine's Software Development Market:

1999-2002: Dot-com bubble and the industry growth

- *The active use of Internet*

- *Projects for Dot-com startups*

- *The volume of offshore projects exceeds the volume of onshore projects*

2002-2003: The period of uncertainty

- *Global recession and orientation of software development market towards offshore customers caused the market slowdown and separate bankruptcies (Novatek, Tessart, UkrSoft).*

Industry Acknowledgement

Many experts agree that Ukraine's many competitive advantages such as its unique geographical location, the availability of an extensive pool of IT talent, its strong scientific legacy, and lower costs make Ukraine a natural choice for outsourcing. Ukraine's IT outsourcing service industry, as well as several specific Ukrainian outsourcing companies, have been recognized many times by global research organizations and national industry associations in their reports, listings, rankings and via awards and various nominations. Here are just a handful of the achievements that support Ukraine's reputation as one of the world's best locations for outsourcing:

Central and Eastern Europe IT Outsourcing Review

Ukraine was ranked the first among 16 countries of the CEE region according to volume of IT outsourcing services provided, by the number of IT outsourcing companies operating in the market, and by the number of IT specialists involved in the outsourcing industry in the "CEE IT Outsourcing Review" in 2008, 2009 and 2010. This research is conducted annually by the Central and Eastern European Outsourcing Association (CEEOA). The reports are located at:

"CEE IT Outsourcing Review 2007"

http://itonews.eu/files/f1223022181.pdf

"CEE IT Outsourcing Review 2008"

http://itonews.eu/shared/files/CEE_IT_Outsourcing_Review_2008.zip

"CEE IT Outsourcing Review 2010"

http://ceeoa.org/assets/Uploads/CEEITOReview2010.final.pdf

TOP 30 Outsourcing Destinations

Ukraine has made the list of the TOP 30 Outsourcing Destinations as ranked by Gartner Group since 2007. Every year Gartner, the world's leading research organization, examines 72 offshore locations according to ten criteria and lists the top 30 outsourcing destinations. The criteria used by Gartner are language, government support, infrastructure, political and economic environment, cultural compatibility, educational system, labor pool, cost, global and legal maturity, data and intellectual property security and privacy. See Gartner's 30 Leading Locations for Offshore Services.

TOP 50 Countries for Locating Outsourcing Services — Global Services Location Index

Ukraine is included The Global Services Location Index, a report by global management consulting firm A. T. Kearney that analyzes and ranks the top 50 countries in the world for locating outsourcing activities. This includes IT services and support, contact centers and back-office support. The report has been published since 2003. For more details see the Global Services Location Index reports.

Ranked 49th in the World's TOP 100 Countries

Ukraine was ranked the 49th best country in which to live in the ranking of the world's top 100 countries by Newsweek Magazine. Among low-income countries the Newsweek Magazine Study found Ukraine has the best quality of life in terms of health, education, economy and politics. For more details see World's TOP 100 Countries.

> *In 2011, Ukraine was recognized by several outsourcing experts as the top destination for IT outsourcing, and was also nominated as the "Outsourcing Destination of the Year" by the European Outsourcing Excellence Awards*

Outsourcing Destination of the Year

In 2011, Ukraine was recognized by outsourcing experts as the top destination for IT outsourcing, and was also nominated as the "Outsourcing Destination of the Year" by the European Outsourcing Excellence Awards at the European Outsourcing Association Summit. More information about the awards can be found on the EOA Summit website.

City of Lviv a TOP 30 Emerging Destination for Outsourcing

In 2009, the Ukrainian city of Lviv was named a TOP 30 emerging destination for outsourcing in the report "Exploring Global Frontiers" by KPMG. The 30 cities in its analysis are "emerging," in that they are lesser known alternatives to more established cities for IT-BPO operations in three regions: South and North America, Asia, India, Japan and Australia (ASPAC), Europe, the Middle East and Africa (EMA). For more details see Exploring Global Frontiers.

TOP 50 Emerging Global Outsourcing Destinations

Ukraine's capital Kyiv was ranked among the TOP 50 Emerging Global Outsourcing Destinations by Global Services and Tholons in 2009. The rankings were based on an analysis of

the following categories: Scale and Quality of Workforce, Business Catalyst, Cost, Infrastructure, Risk Profile and Quality of Life. For more details see the TOP 50 Emerging Global Outsourcing Cities listing.

TOP 20 Leading Countries in the area of IT Outsourcing and High-Tech Services

According to the 2010 Global Services 100 list, Ukraine is 11th among 20 leading countries in the area of IT Outsourcing and High Tech Services. The GS 100 list is compiled annually by Global Services in association with NeoAdvisory, a consulting and advisory company. The 2010 Global Services 100 list can be accessed online at http://www.globalservicesmedia.com.

TOP 10 countries with the Most Certified IT Professionals

Ukraine was ranked among the 10 TOP countries with the most certified IT professionals, coming in just after the United States, India and the Russian Federation. For more information see the Global IT IQ Report.

Gaming Industry's TOP 12 European Countries

Ukraine was ranked 8th in the Gaming Industry's TOP 12 European Countries by The Global Gaming Industry Network in 2009.

Ukraine was among the 10 TOP countries with the most certified IT professionals ranking just after the United States, India and the Russian Federation. For details see the Global IT IQ Report.

Market Volume

One of the primary unbiased indicators of growth in the IT outsourcing market is the volume of the services provided. The volume of the services provided in the software development and IT outsourcing service market is growing at a rapid pace. The most significant leap was recorded in 2004–2005 when Ukraine underwent an extensive liberalization of foreign economic relations and visa-free travel was introduced. The growth in the volume of the services provided jumped 51 % in 2005 and 56 % in 2006, respectively.

In 2011, the volume of the IT outsourcing services provided in Ukraine reached US$1.1 billion.

In 2008, the market growth slowed and market volume decreased by 2–3 % due to the global recession. But in the post-crisis year 2009, the market rebounded to turn in 25 % growth. This proves the resilience of Ukrainian software companies and their ability to weather adverse global economic factors. The significant growth in 2009 confirms that the management of Ukrainian companies can successfully navigate a contracting market situation and actively grow demand.

By 2011, the volume of the software development and IT outsourcing services provided in Ukraine reached a healthy US$1.1 billion. The software development and IT outsourcing service industry is the most rapidly developing sector in the export oriented economy of Ukraine.

Figure #7. The Volume of Provided IT Outsourcing Services from 2003–2011
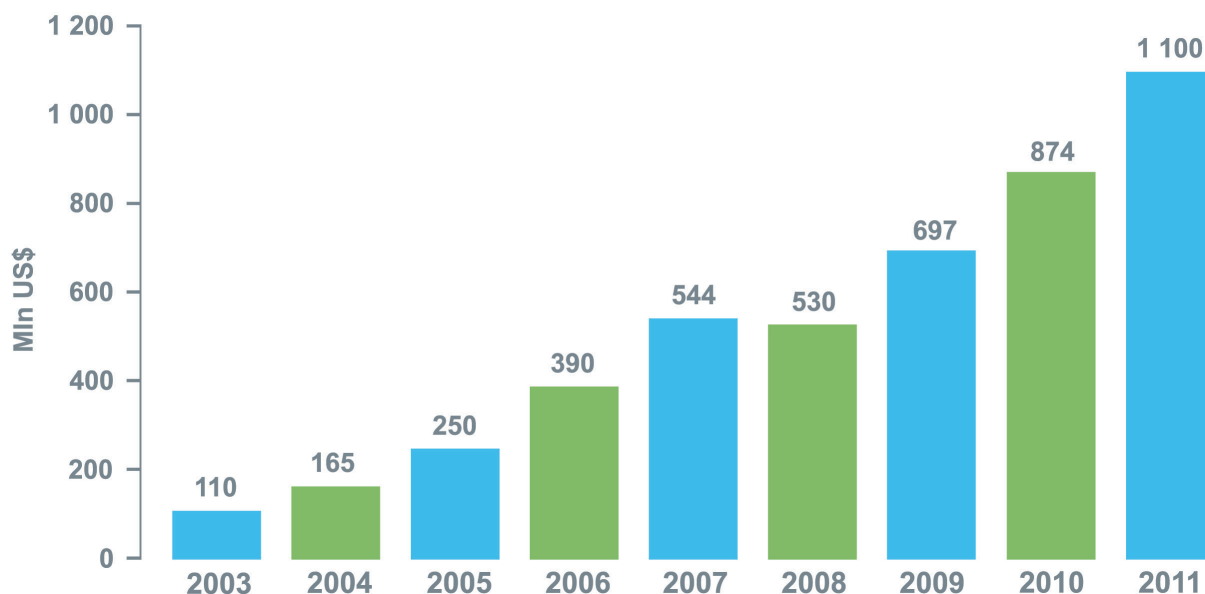
Source: "Exploring Ukraine. IT Outsourcing Industry", Ukrainian Hi-Tech Initiative

Number of IT Specialists

The industry of software development and IT outsourcing services is service-oriented, therefore the volume of the IT outsourcing services provided is closely related to the number of the personnel working in the industry. The number of the employed IT specialists is the second important indicator of the state of the industry.

The quantitative estimation of the industry was first made in 2007 when the Ukrainian Hi-Tech Initiative issued the "CEE IT Outsourcing Review 2007." The data on the number of personnel working in the market for 2008–2011 was taken from the research report "CEE IT Outsourcing Review."

The growth in the number of IT specialists engaged in delivering the software development and IT outsourcing services recorded in 2011 was more than 4,000 people. This figure shows that the industry has completely recovered from a temporary dip caused by the financial recession and resumed its growth.

Each year 16,000 IT specialists graduate from Ukrainian universities, providing the human capital and expertise for further industry growth and development.

Graduates from Ukrainian universities were the main source of personnel for the IT outsourcing and software development industry. Each year, roughly 16,000 IT specialists graduate from area universities. Such a high number of annual IT graduates gives the Ukraine a strong foundation for the further potential industry growth and development.

Figure #8. Number of IT Specialists in 2007–2011
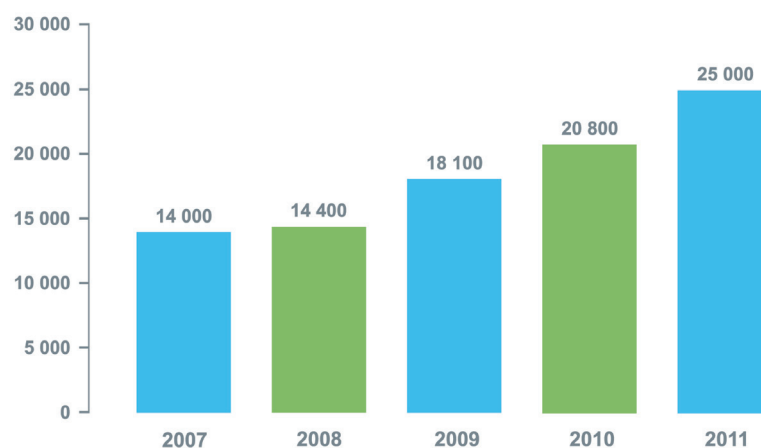
Source: "'Exploring Ukraine. IT Outsourcing Industry", Ukrainian Hi-Tech Initiative

Number of Companies

In 2011 there were 1,050 companies, each with over 15 employees, in the Ukrainian software development and IT outsourcing services industry. This figure does not include companies with staffs of less than 15 people, unorganized groups and those providing services to local consumers only.

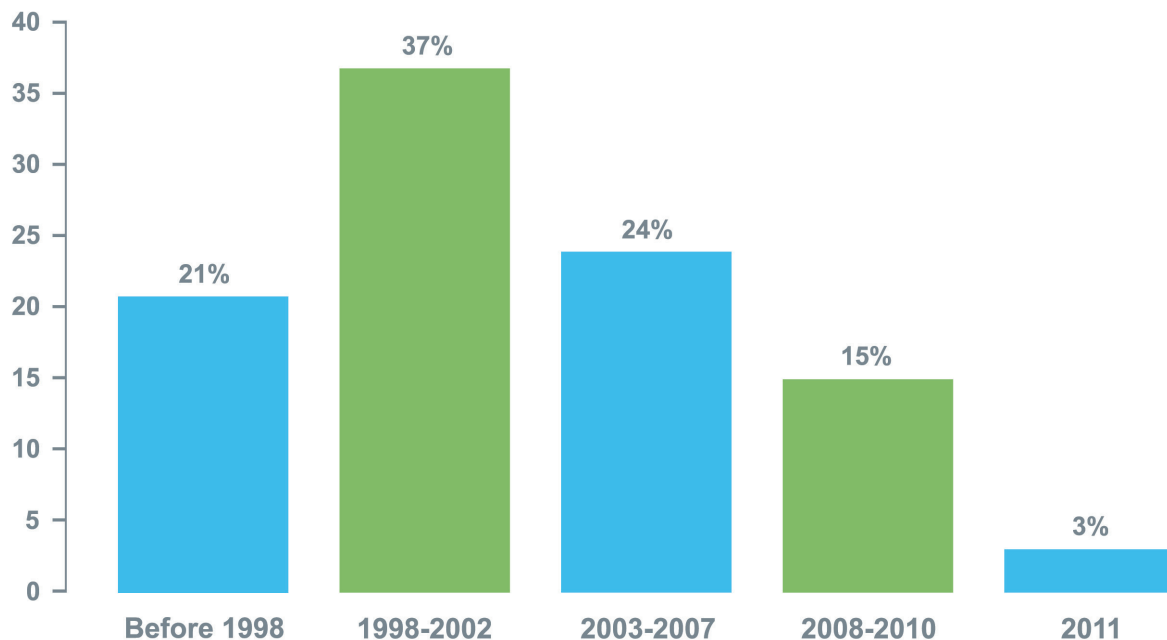Figure #9. Number of IT Outsourcing Companies in 2007–2011
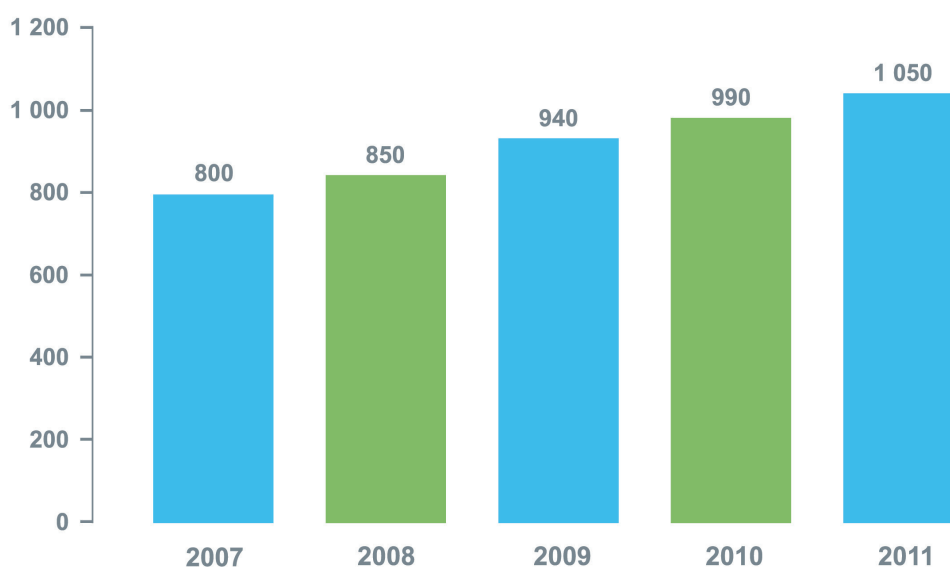
Source: "Exploring Ukraine. IT Outsourcing Industry", Ukrainian Hi-Tech Initiative

Structure of companies

According to the percentage of companies by the year they were founded, the Ukrainian market has an established, stable structure. During last 5 years less than 20 % of new companies have been established in the market. The insignificant number of new companies indicates that the market is quite mature and barriers to entry have grown. Newly established companies can be divided into three categories:

- R&D offices of foreign companies
- Strategic investments
- New regional companies with private investment

Figure #10. Share of Companies by Year of Founding

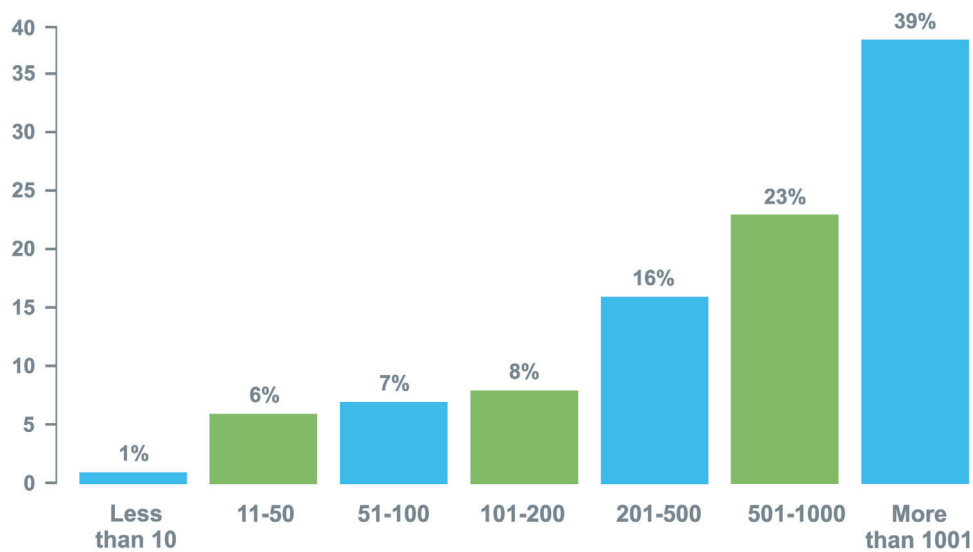*Source: "Exploring Ukraine. IT Outsourcing Industry", Ukrainian Hi-Tech Initiative*

The share of companies by number of employees (Figure #11) and the share of IT specialists by company size (Figure #12) indicate that the Ukrainian market is balanced. About 80 % of IT specialists in the market are working for the 20 % of large companies (those with more than 200 people). The large number of small-and mid-sized companies (those with less than 100 people) represent 70 % of all companies in the market. This high percentage is an important and essential part of a healthy market ecosystem. These smaller companies are developing new market segments creating attractive conditions for larger and more powerful competitors to enter these market segments. Thus, the market is based on the solid foundation laid by smaller companies that are more mobile and nimble and enable the market to explore, discover and fine tune the best strategies for further development.

Paths for penetrating the markets in specific regions is an example of small companies exploring new market segments. Many mid-and small-sized companies are located in second tier regional centers such as Chernigiv, Lugansk, Sumy, Rivne, Cherkassy, Ivano-Frankivsk, Kirovograd, Ternopil, Kremenchug, Zhitomyr, Donetsk, and Lutsk. The number of large companies operating in these cities is insignificant, but most large Ukrainian companies intend to move into these second level regional centers to take advantage of market opportunities that were developed by smaller companies.

The product adoption of mobile development services offers an excellent illustration of the role of smaller companies in a healthy market ecosystem. In 2009–2010, only small-sized companies actively offered mobile development services. Large companies started offering mobile development services in 2011 after smaller companies paved the way for them first.

Figure #11. Share of Outsourcing Companies by the Number of Employees
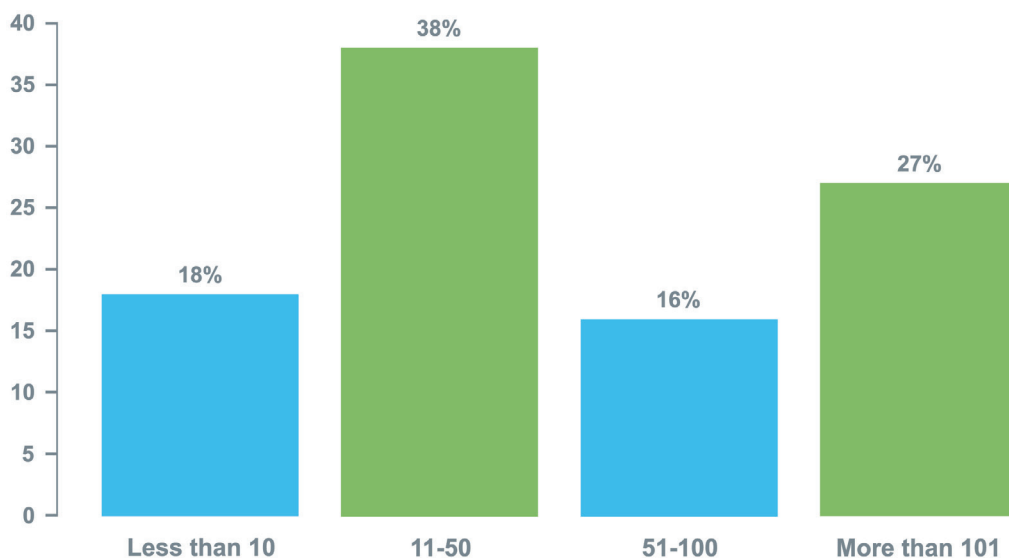
Source: "Exploring Ukraine. IT Outsourcing Industry", Ukrainian Hi-Tech Initiative

Figure #12. Share of the Employed IT Specialists by the Company Size
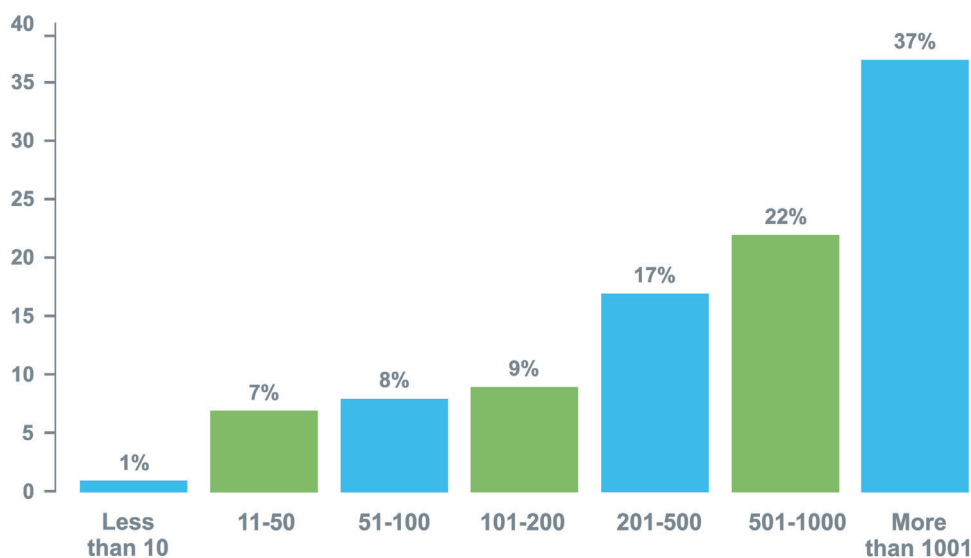
Source: "Exploring Ukraine. IT Outsourcing Industry", Ukrainian Hi-Tech Initiative

The percentage of provided IT outsourcing services volume by company size (Figure #13) and the share of IT specialists by company size (Figure #12) illustrate that 37 % of all IT specialists working in the industry are employed by large companies with more than 1000 employees and these companies generate 39 % of the total volume of IT outsourcing services in terms of money. This shows that large companies sell their services at higher rates.

Figure #13. Share of Provided IT Outsourcing Services Volume by Company Size

Source: "Exploring Ukraine. IT Outsourcing Industry", Ukrainian Hi-Tech Initiative

Service Rates

Information on the average rates companies in the Ukrainian market charge for specific expertise help provide an impartial assessment of the volume of projects and the overall expense of outsourced IT projects. The figure below shows the rates for the following specialists: Project Manager, Senior Developer, Middle Developer and Junior Developer, QA Tester, Application Architect, Business System Analyst.
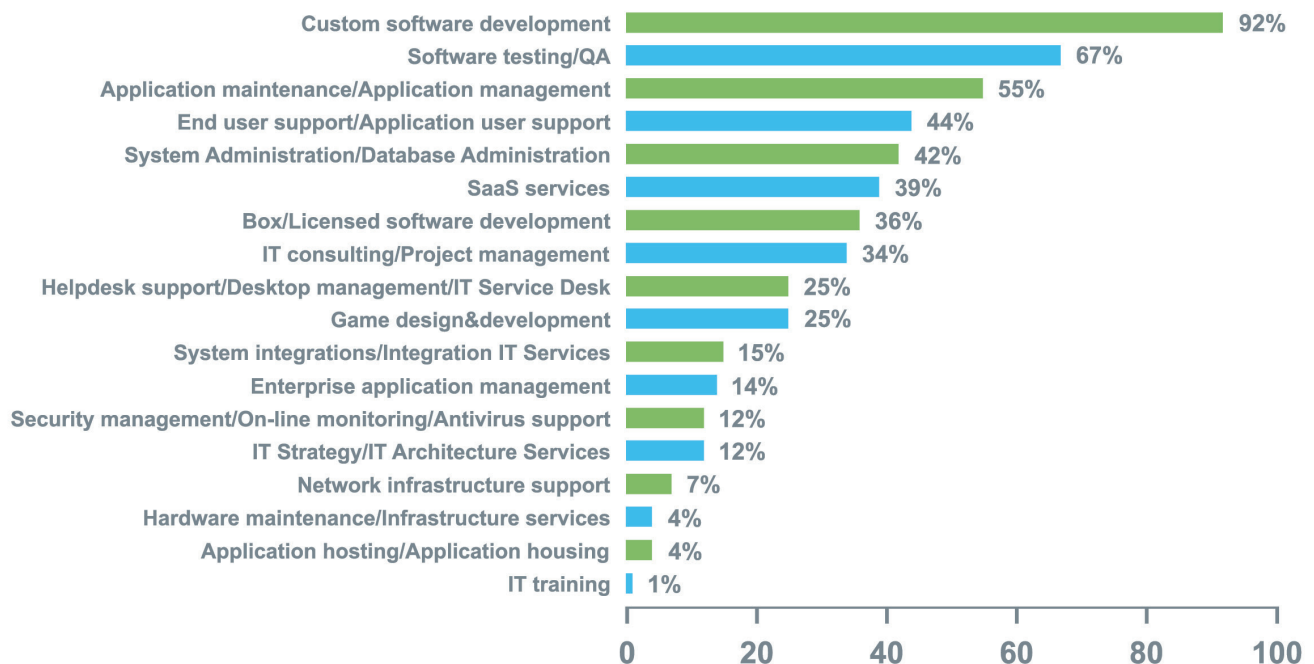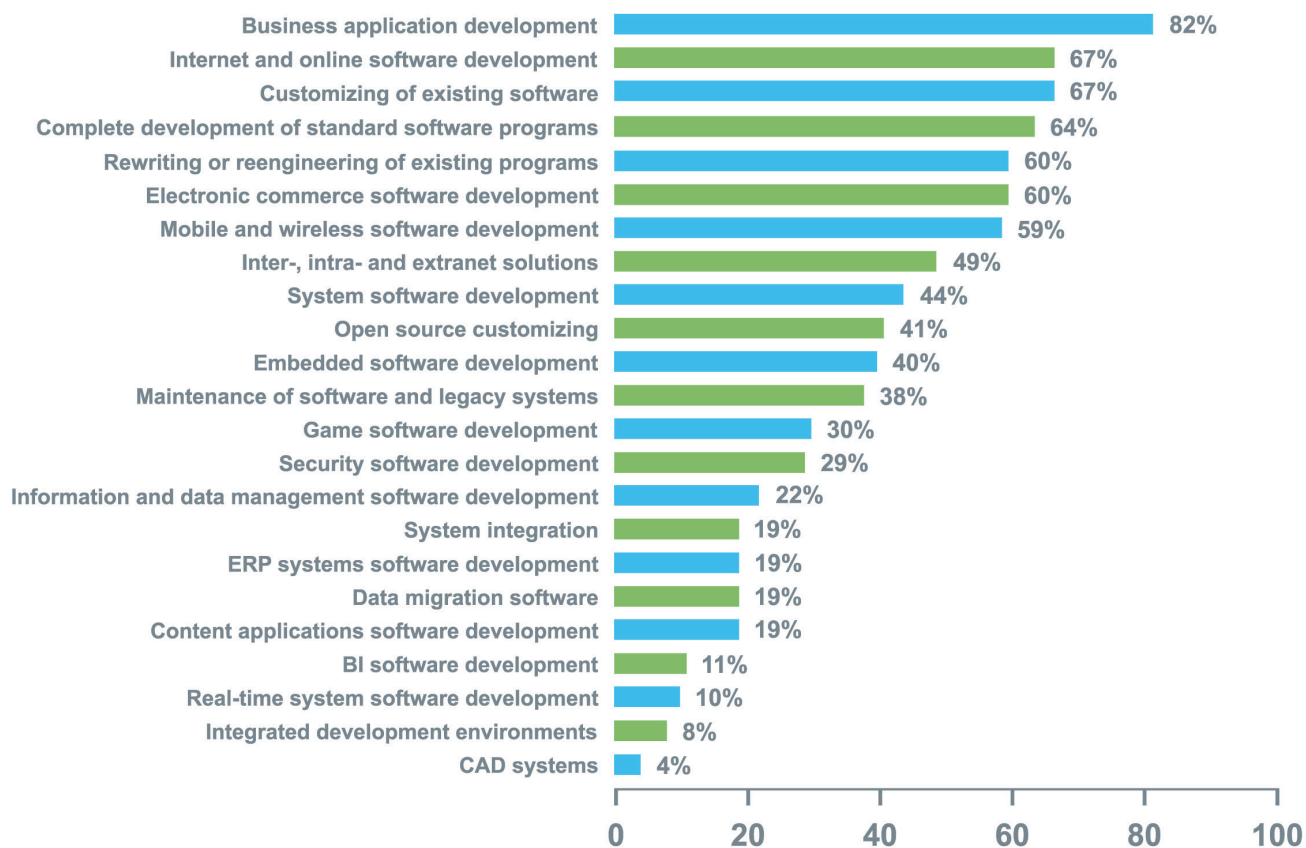
Rates are calculated based on the amount the end customer pays for the services of an IT specialist per hour, inclusive of salary, taxes, facilities, etc.

To calculate the maximum average rates, the average value of 15 % of a maximum rate for a Project Manager was used. To calculate minimum average rates by country, the average value of 15 % of minimum rates for a Junior Developer was used.

To calculate the average market rates, sources used included data on average rates by position. The average rates were calculated using the following formula: 10 % of average rates for a Project Manager in the country; + 20 % of the average rates for a Senior Developer in the country; + 50 % of average rates for a Middle Developer in the country; + 20 % of average rates for a Junior Developer in the country. Ten developers was the average number of members in a typical team used for this formula.

Figure #14. Service Rates

Service Rates	US$/hour
Average Market Rates (maximum - minimum)	42 (max) – 14 (min)
Average Market Rates	25-26
Project Manager	34
Senior Developer	29
Middle Developer	25
Junior Developer	20
QA Tester	22
Application Architect	36
Business System Analyst	37

Source: "Exploring Ukraine. IT Outsourcing Industry", Ukrainian Hi-Tech Initiative

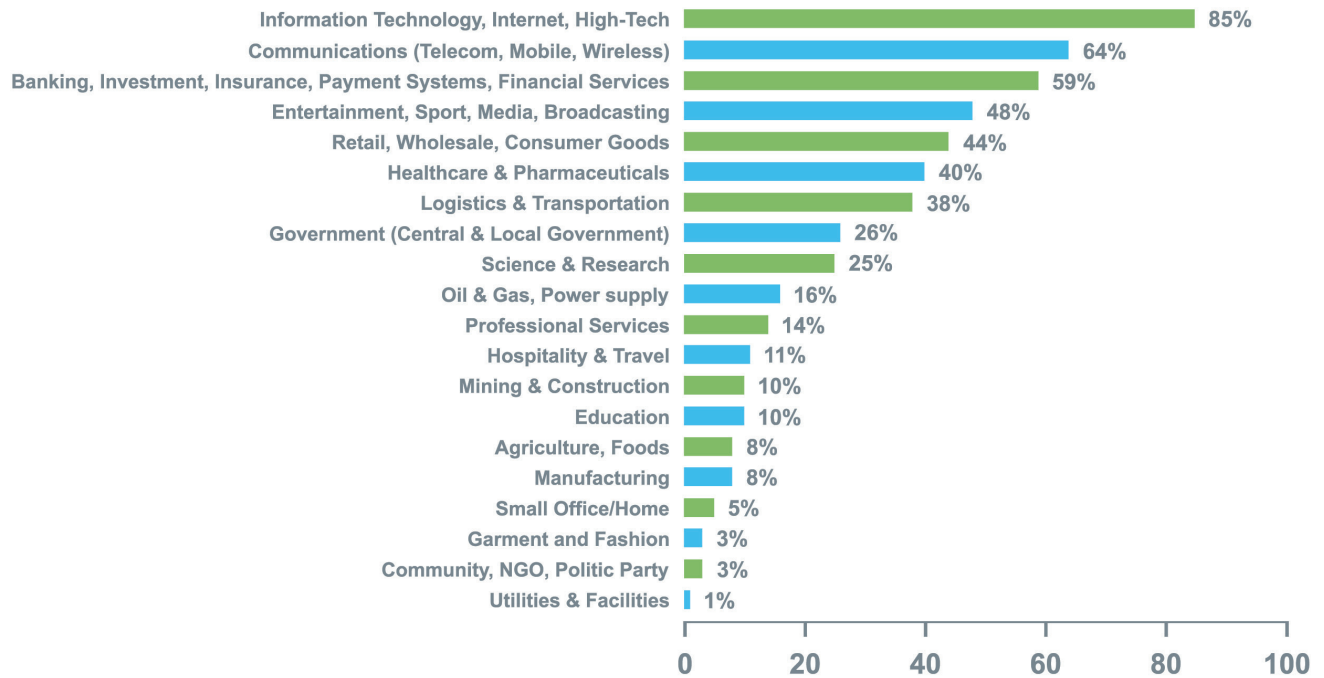## Main IT Outsourcing Services Provided by Ukrainian Companies

According to figures #15 and #16, the foundation of the export of Ukrainian IT outsourcing services is services related to the complex software development. IT support and BPO services account for a minor part of the market.

Considering that IT support and BPO services are closely related to offshore software development services, there is great potential for further developing these segments. In addition, the recent strengthening of Ukrainian legislation to meet European standards for the protection of personal data is a strong, positive step for the development of IT support and BPO services in Ukraine.

Figure #15. Main IT Outsourcing Services Provided by Ukrainian Companies

Service	Percentage
Custom software development	92%
Software testing/QA	67%
Application maintenance/Application management	55%
End user support/Application user support	44%
System Administration/Database Administration	42%
SaaS services	39%
Box/Licensed software development	36%
IT consulting/Project management	34%
Helpdesk support/Desktop management/IT Service Desk	25%
Game design&development	25%
System integrations/Integration IT Services	15%
Enterprise application management	14%
Security management/On-line monitoring/Antivirus support	12%
IT Strategy/IT Architecture Services	12%
Network infrastructure support	7%
Hardware maintenance/Infrastructure services	4%
Application hosting/Application housing	4%
IT training	1%

Source: "Exploring Ukraine. IT Outsourcing Industry", Ukrainian Hi-Tech Initiative

Types of Software Development Services Provided by Ukrainian Companies

Figure #16. Types of Software Development Services Provided by Ukrainian Companies

Service	%
Business application development	82%
Internet and online software development	67%
Customizing of existing software	67%
Complete development of standard software programs	64%
Rewriting or reengineering of existing programs	60%
Electronic commerce software development	60%
Mobile and wireless software development	59%
Inter-, intra- and extranet solutions	49%
System software development	44%
Open source customizing	41%
Embedded software development	40%
Maintenance of software and legacy systems	38%
Game software development	30%
Security software development	29%
Information and data management software development	22%
System integration	19%
ERP systems software development	19%
Data migration software	19%
Content applications software development	19%
BI software development	11%
Real-time system software development	10%
Integrated development environments	8%
CAD systems	4%

Source: "Exploring Ukraine. IT Outsourcing Industry", Ukrainian Hi-Tech Initiative

Top Vertical Markets

Figure #17. Top Vertical Markets

Vertical Market	%
Information Technology, Internet, High-Tech	85%
Communications (Telecom, Mobile, Wireless)	64%
Banking, Investment, Insurance, Payment Systems, Financial Services	59%
Entertainment, Sport, Media, Broadcasting	48%
Retail, Wholesale, Consumer Goods	44%
Healthcare & Pharmaceuticals	40%
Logistics & Transportation	38%
Government (Central & Local Government)	26%
Science & Research	25%
Oil & Gas, Power supply	16%
Professional Services	14%
Hospitality & Travel	11%
Mining & Construction	10%
Education	10%
Agriculture, Foods	8%
Manufacturing	8%
Small Office/Home	5%
Garment and Fashion	3%
Community, NGO, Politic Party	3%
Utilities & Facilities	1%

Source: "Exploring Ukraine. IT Outsourcing Industry", Ukrainian Hi-Tech Initiative

Key Regions for Services Export

Since 2000, the traditional leader among consumers of Ukrainian services is the United States. During the last 2–3 years European consumers have become more active. Currently, the share of service consumption by EU countries is increasing. This is primarily influenced by the geographical and cultural proximity of Ukraine and the European countries, and the potential for more easily developing sales networks in Europe.

Figure #18. Key Regions for Services Export

Country	%
USA	81%
UK	64%
Germany	60%
Netherlands	41%
Canada	41%
Denmark	39%
Norway	36%
Sweden	30%
Finland	28%
Switzerland	27%
France	20%
Austria	20%
Israel	20%
Belgium	18%
Spain	8%
Australia	8%
Italia	7%
Ireland	4%
China	4%
Japan	1%
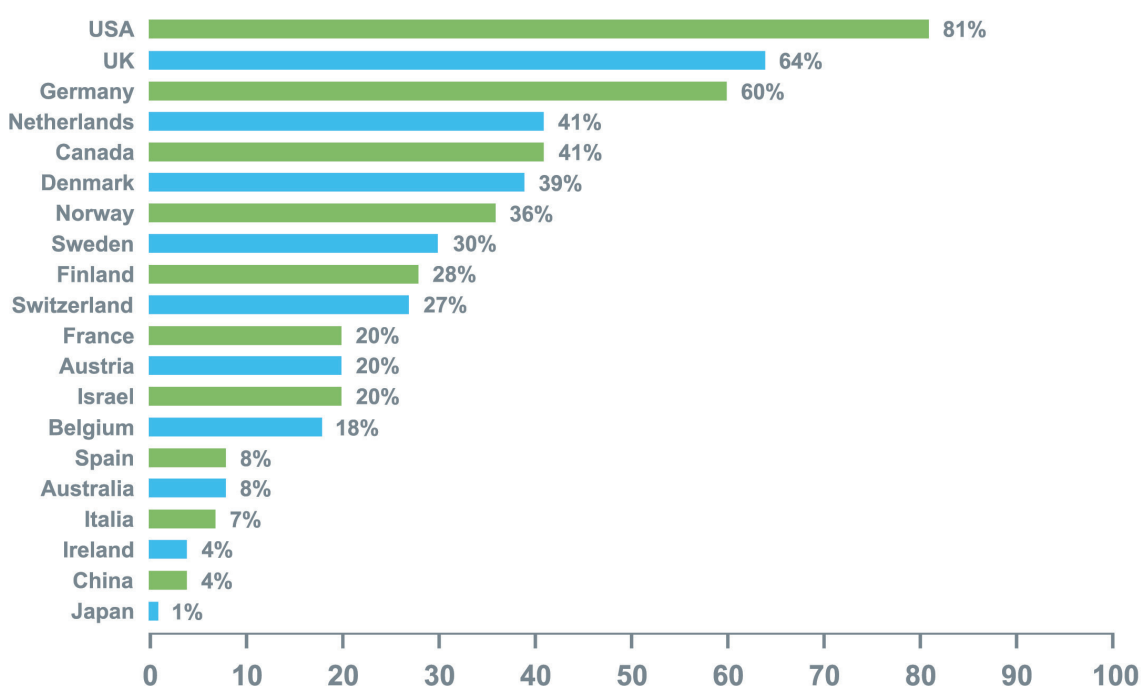
Source: "Exploring Ukraine. IT Outsourcing Industry", Ukrainian Hi-Tech Initiative

Languages of Services Provision

As the number of the European consumers continues to increase (Figure #18), outsourcing companies will keep expanding the range of services they provide in national languages.

Figure #19. Languages Used by Companies for Services Provision
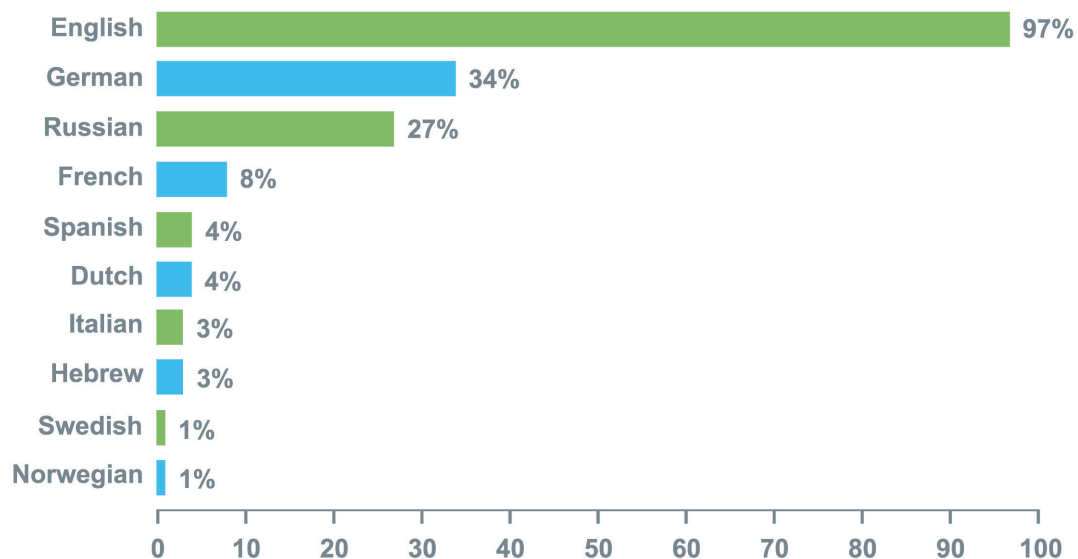
Source: "Exploring Ukraine. IT Outsourcing Industry", Ukrainian Hi-Tech Initiative

Certification

Ukrainian companies devote significant time and resources to improving the technology and business processes of service provision. A large number of companies are ISO certified (ISO 9001 family), and several leading companies have earned CMM\CMMi certificates. One of the primary trends afoot in the market is the development of Agile methodologies, which enable the acceleration of results to the client, make the software development process more flexible and increase the efficiency of service providers. Recently, many workshops, seminars, and conferences devoted to the development of Agile practices have taken place in Ukraine.

Figure #20. Certification
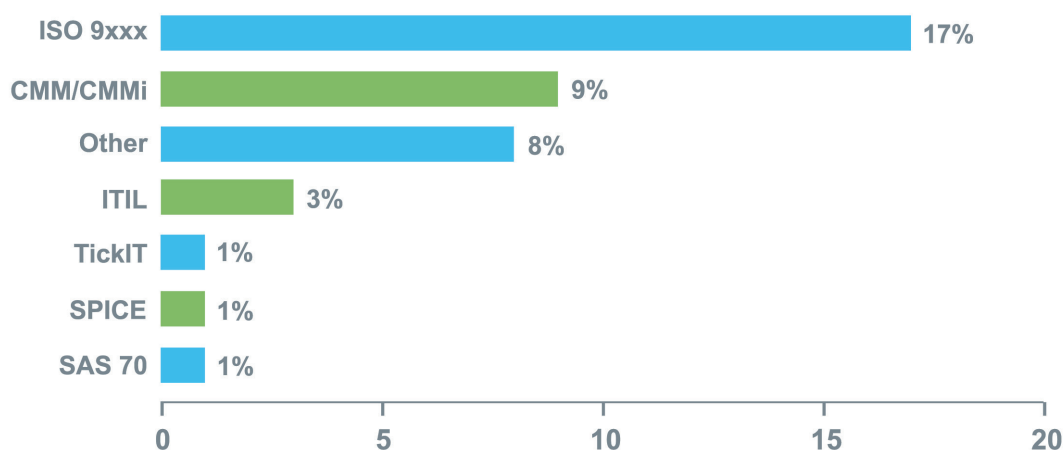
Source: "Exploring Ukraine. IT Outsourcing Industry", Ukrainian Hi-Tech Initiative

Top Clients of Ukrainian Outsourcing Companies

The majority of clients of Ukrainian companies are small-and mid-sized firms. This has been the case historically since times when the market was fragmented and there were no large players who could provide clients with large pools of talent resources.

With the adoption of a range of laws in Ukraine designed to support IT service providers and software developers, global companies began exploring the Ukrainian market and setting up R&D centers here.

Below are numerous examples of name global companies that work with Ukrainian software development providers.

Figure #21. Examples of TOP Clients of Ukrainian Companies

Ciklum

*Ciklum is one of its kind in Eastern Europe in **creating and servicing dedicated nearshore IT development teams** that are 100% owned by the client and are equivalent to clients' in-house development units.*

Rated Best Larger Ukrainian IT Employer 2010 by the Ukrainian Software Development Community, Ciklum services all IT driven industries, with clients mainly from Western Europe and Scandinavia.

Ciklum´s large Community of 1,200+ employees and 125+ clients, 10 development locations, access to literally all technologies and skills, 9 years of experience, and our unique knowledge-sharing environment enable us to offer different value-bringing Business Models to our partners:

- Client Own Development Team
- Fixed Price Projects
- Peak Resources (Freelancers)
- IT Consulting
- Sales of Client's Software in Ukraine and Russia

"We chose Ciklum, our partner in Ukraine because of its unique transparent model that allows us to choose how to run our operations and align it to our business, without silos and disconnects. This is also why we have gone from a team size of 3 in 2007 to 75+ people in 2010, so our team in Ukraine is no longer a department but heart of our business."

John Sotiropoulos, Chief Architect, Director BPM Development of Metastorm part of OpenText (www.metastorm.com)

Ciklum clients list includes Accenture, BAWAG P.S.K., Betsson, Berlingske Media, Dansk Supermarked, ENFO Zipper & Zystems, EPiServer, Deltek, eBuilders, Intranote, Layar, Qualiware, SEB Pension, Symmetrics, Wendia, etc.

For more information visit **www.ciklum.net** or e-mail to **ciklum@ciklum.net**

Main Advantages of Ukraine as the Outsourcing Destination

Ranked among the countries best suited for outsourcing, and offering affordable, top notch IT specialists, Ukraine has already earned solid reputation as a provider of innovative technology skills and ideas.

One of the main things that make Ukraine so attractive as an outsourcing destination is the availability of a highly skilled IT talent pool. The country's strong emphasis on education – especially engineering and sciences – is supported by the fact that it boasts the highest public expenditures on education in the CEE region. This ensures that every industry segment in Ukraine reaps the benefits of highly qualified and trained IT workforce.

Ukraine also has a distinct advantage in software quality. Talented IT specialists with in-depth knowledge and experience, and a creative approach, guarantee an extremely high quality of developed software.

The affordability of the IT workforce is another prime reason why businesses consider outsourcing their IT services to Ukraine. By locating their core IT development in Ukraine, western European and U.S. companies can expect to save 40% to 60% on their total in-house IT spending.

Reasonable cost combined with a reliable and well-developed infrastructure, telecommunications, legal system and simplified tax structures have created extremely favorable conditions for conducting business in Ukraine.

A similar culture and shared business values has led to historically close ties between Europe and Ukraine. These cultural similarities, and a favorable geographical position with insignificant or no time differences, make communication and mutual understanding much easier for foreign companies that do business in Ukraine.

> *Ukraine, with its extensive IT talent pool, reasonably low labor costs and established business infrastructure is attracting Western European and North American companies as the preferred destination for outsourcing IT work.*

Ukraine's IT outsourcing industry demonstrates stable growth over the past several years. Compared to other CEE countries, Ukraine reports the highest rate of market growth. In fact, Ukraine's growth dwarfs that of other CEE countries in exported IT outsourcing services.

Table #11. Advantages of Ukraine as the Outsourcing Destination

1. Mature IT / BPO market that continues to develop rapidly

2. Large pool of highly-skilled specialists, top-notch technology talent

3. Strong educational system, large number of universities, scientific schools and R&D centers

4. Good command of the English language

5. Advanced infrastructure

6. Economic and political transformation oriented towards Western business models

7. Cultural and geographical proximity to Western Europe

8. Significantly lower costs, including labor costs

History of Ukraine's Software Development Market:

2003-2006: Rapid growth of the industry at the cost of offshore projects

- *With the recovery of global economy, the demand for the Ukrainian programmers increased.*

2006-2008: Market Stabilization

- *Large players such as Luxoft, EPAM, Dataart, StarSoft entered the market*

- *In 2008 - 800 IT companies with 14 000 employees.*

2009-till now: Post-crisis growth

Professional Associations and Communities

The Ukrainian software development market has a long, rich history. Several leading professional communities work to further improve the legislative climate and popularize Ukraine as the leading provider of IT outsourcing and software development services globally.

Ukrainian Hi-Tech Initiative (www.hi-tech.org.ua) — the leading Ukrainian association of software development and IT outsourcing companies. It unites more than 70 companies employing approximately 8,500 highly qualified IT specialists.

IT Ukraine (www.itukraine.org.ua) — Ukrainian IT association, which represents 25 software development companies.

DOU (www.dou.ua) — a community of Ukrainian IT professionals with about 20,000 members.

About Ukrainian Hi-Tech Initiative

Established as a non-profit organization over 10 years ago, the Ukrainian Hi-Tech Initiative (http://hi-tech.org.ua) is a leading Ukrainian association of IT outsourcing companies.

One of the main objectives of the association is to promote Ukrainian software development companies and the positive image of Ukraine's IT outsourcing industry in global markets.

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

The Ukrainian Hi-Tech Initiative offers a wide range of services for potential customers of outsourcing services and those interested in outsourcing to Ukraine. The association provides support in selecting technology partners and providers of IT outsourcing services, legal support and professional consulting services on the business and legal specifics of setting up and running an IT business in Ukraine. It also offers comprehensive custom market research services and event management services.

> *In 2008, the Ukrainian Hi-Tech Initiative became one of the founders of the Central and Eastern European Outsourcing Association (CEEOA, http://ceeoa.org).*

Outsourcing provider selection

The Ukrainian Hi-Tech Initiative helps their clients with the selection of software development and IT outsourcing companies and partners according to the client's requirements.

Technology partner selection

The association assists with the selection of a technology partner for setting up an Offshore Development Center (ODC) in Ukraine, which can serve as a technology and software engineering extension of the client's main facility.

IT staff search and selection

The Ukrainian Hi-Tech Initiative offers services for IT staff search and selection, and recruitment consulting. The service includes identifying and recommending candidates whom clients cannot address directly; the selection of candidates according to the provided requirements; and consulting on various aspects of recruitment such salary range, job description and labor law.

Custom research

The association offers competitive market analysis to help businesses track market dynamics, changes and trends and to understand specific aspects of the market that will help them be competitive and thrive in their sector.

Legal support

The legal support services provided by the Ukrainian Hi-Tech Initiative include mergers and acquisitions, dispute resolution, employment law and intellectual property law in Ukraine.

Online event management

The Ukrainian Hi-Tech Initiative provides online event management services that include planning, organization and management of online events. Such events are a great way to meet new prospects, business partners and other associates.

Event management

The association assists with event organization by providing an array of event management services including logistics planning, concept design, contract negotiations, coordination of technical aspects and post-event analysis.

Currently the Ukrainian Hi-Tech Initiative unites 75 companies employing more than 8,000 IT specialists.

By supporting the growth of the Ukrainian software development and IT outsourcing services industry the association has helped Ukraine become one of the most recognized and attractive outsourcing destinations in the world.

List of Ukrainian IT Outsourcing Companies

The companies participating in our surveys include:

ABT Solutions	http://www.abtsolutions.net
Acobby Ltd	http://acobby.com
Ainstainer Group	http://www.ainstainer.com
AKU Tech	http://www.aku-tech.com
Altima	www.altimawebsystems.com
Antara Software	http://www.antarasoft.com
Apriorit	http://www.apriorit.com
Archer Soft	www.archer-soft.com
Binartus Software LLC.	http://binartus.com
Binary Studio	http://binary-studio.com
BMS Service	www.bms-service.com.ua
BMS Soft Ltd	http://www.bms-soft.com.ua
Bridge Ukraine Ltd	http://www.bridge-ukraine.com.ua
Briteam	http://briteam.com
Bugs-Hunters	http://bugs-hunters.com/
BuntarMedia	http://buntarmedia.com/
Ciklum	http://www.ciklum.com
CodeIT	http://www.codeit.com.ua
Codus Software	www.codussoft.com
Cogniance	www.cogniance.com
Company Aelita	http://AelitaSoft.com.ua
DataArt®	http://www.dataart.com/
Daxx Soft B.V.	http://daxx.com.ua
Desna Systems	www.desnasystems.com
Developex	http://developex.com/
Digicode Ltd.	www.digicode.net

DumasLab	http://dumaslab.com
Edgewood Services, LLC.	http://www.edgewoodservices.com
Efisco	http://www.efisco.net
ELEKS Software	http://www.eleks.com
elite Software Products (eSP)	www.elite-sp.com
Evernetica	http://evernetica.com
Frondevo	http://frondevo.com/
FulcrumWeb	http://www.fulcrumweb.com/
GlobalLogic Ukraine	www.globallogic.com
HardPoint	http://hardpoint.eu/
HYS Enterprise	http://www.hys-enterprise.com
iceB	http://iceb.com.ua/
Infopulse Ukraine	www.infopulse.com.ua/eng
Innovecs	http://www.innovecs.com
INP-Software	http://www.inp-software.com/
INSART	http://www.insart.com/
Intellias	http://www.intellias.com
InterLink LLC	www.interlinkua.com
Intetics Co	www.intetics.com
iPark Ventures	http://www.iparkcorp.com
ISD	http://www.isd.dp.ua
Itera Consulting Group	http://www.iteraconsulting.com.ua
ixSoftum	http://www.ixsoftum.com
Kemeo Design	www.kemeodesign.com/en/
Kiev Software Factory, Ltd.	http://ksfltd.com/
KM Ware	www.km-ware.com
Kuadriga	www.kuadriga.com
KV4 Solutions	www.kv4solutions.com
Levi9 Ukraine	www.mirasoft-group.com

Linecore	http://linecore.com
LLC "Smile Ukraine"	http://www.smile-ukraine.com
Logis LLC	www.logis-pro.com
Lohika	http://www.lohika.com
Luxoft	http://www.luxoft.com
Malkos UA	http://malkosua.com/
Marka Software	www.marka-software.com
Master Of Code	http://masterofcode.com
MediaLine	www.MediaLine.com.ua
Mindsfromua	http://mindsfromua.com
MindWorks	http://mindworks.com.ua/
Miratech Corporation	http://www.miratechgroup.com
Mobilex development	http://www.mobilexdevelopment.com
N-iX	http://www.n-ix.com/
NAZAX Consulting	http://www.nazax.com
NET Technology Center "WEB100"	http://web100.com.ua
NexGenDesign	www.nexgendesign.com
NIX Solutions Ltd.	www.nixsolutions.com
oberig.com	www.oberig.com
OCTETIS	http://www.octetis.com
Onix-Systems LLC	http://onix-systems.com
Outsource Partner Studio	http://outsource-partner.com/
Persha Studia LLC	www.pershastudia.com
PRIMA Development Group	http://pdgroup.co/
QA-Testlab	www.qa-testlab.com/
QArea Group	http://www.qarea.com
Qualium Systems Ltd	www.qualium-systems.com
Rozdoum ltd.	www.rozdoum.com
RQL Ukraine	www.rql.com.ua

S&T Ukraine	http://www.snt.ua
Sigma Ukraine	www.sigmaukraine.com
Skelia	http://www.skelia.com
Soft Industry Ltd.	http://soft-industry.com/en
Soft-Loft	http://www.soft-loft.com
Softengi	www.softengi.com
Softheme	www.softheme.com
Softjourn, Inc.	www.softjourn.com
SoftServe, Inc.	www.softserveinc.com
SoftUkraine	http://softukraine.com.ua/
Acceptic	http://www.acceptic.com
Softwarium	http://www.softwarium.net
Sterch LTD	www.sterch.net
Synchron	www.synchron.ua
TEAM International	www.teaminternational.com
TechInsight	www.techinsight.com.ua
TechnoPark Corp.	www.technoparkcorp.com
TechWire	http://www.techwire.dp.ua
Telesens LLC	www.telesens.co.uk
Trembit	www.trembit.com
UkrainianDevelopers	http://www.ukrainiandevelopers.com
Ultima Creative	http://ultimacreative.com
Unicorn Systems UA	http://www.unicornsystems.eu
VIMAS Technologies	www.vimas.com
WDG	http://wdg.com.ua
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Yanpix	www.yanpix.com
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Source ITOlist.eu

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  http://itonews.eu

Country outsourcing profile

http://www.itonews.eu/profile-ukraine/index.html

Catalogue of IT outsourcing companies ITOlist.eu

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Doing business in Ukraine

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http://kbp.aero/en/flights/booking/

Low cost carrier Wizz Air

http://wizzair.com/

Full list of Ukrainian airports

http://en.wikipedia.org/wiki/List_of_airports_in_Ukraine

Full list of airlines operating in Ukraine

http://en.wikipedia.org/wiki/List_of_airlines_of_Ukraine

Boryspil International Airport

http://kbp.aero/

International Airport Kyiv

www.airport.kiev.ua/en/

Donetsk International Airport

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Dnipropetrovsk International Airport

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Kharkiv International Airport

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Lviv International Airport

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Odesa International Airport

http://airport.od.ua/eng/

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Gartner's 30 Leading Locations for Offshore Services

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Global Services Location Index reports

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