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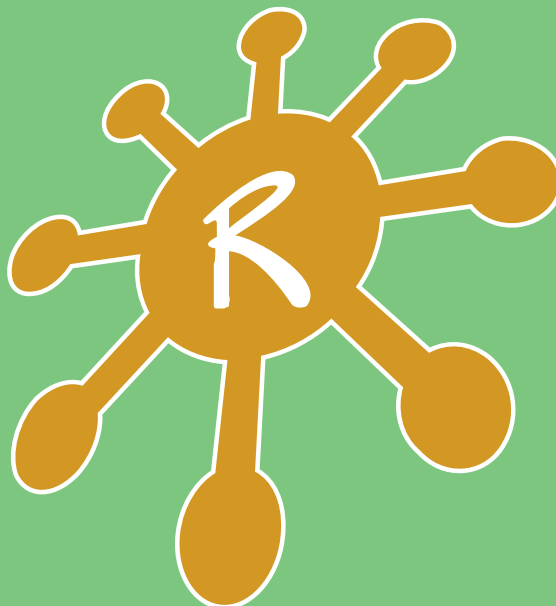
FOURTH ANNUAL SURVEY

on Russian export market
of software products, services and solutions

With support from the Ministry
of IT and Communications of the Russian Federation
APKIT Association

OUTSOURCING·RUSSIA
discover the Russian IT-potential

RUSSOFT Association

2007

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RUSSOFT Association, a Nation wide amalgamation of software developing companies which includes the major part of software businesses from Russia, Ukraine and Byelorussia presents results of its forth annual Survey of the Russian Software Export Industry.

The full-scale in-depth survey of the software export industry has been done for the forth consecutive year. The reliability of the results obtained from this survey is guaranteed by the continuity of analytical methodology and by use of RUSSOFT's regularly updated database on companies working in the software development industry - 1200 altogether.

Polling and processing of the survey's results has been carried out by RUSSOFT analytical department (Mr. Anton Chupira) with support of the Internet portal Outsourcing-Russia.com (Mr. Pavel Odnoletkov). Analytical work and copy-writing have been done by Mr. Dmitry Zhelvitsky from Computer World. Ministry of IT&Communications of Russian Federation and APKIT Association have also contributed to the financing of the study.

The report contains 35 pages of text with 60+ figures presenting the industry situation from different aspects. It covers general conditions and estimates the total software export from Russia. Factual data obtained from the survey is combined with views of the main market players which makes the report extremely practical and representative. All segments of providers' market (ODC of foreign companies, local OSP and Russian producers of software products) have been analyzed. Pyramid of Russian software development industry has also been analyzed with an accent on tendencies in each sector (small, medium and big businesses).

Geography of software companies across the country and that of international clients have been also put under consideration. Particular attention has been paid to the image of the Russian software industry in the Global market. Views of leading international analysts on the Russian software industry have been considered as well as positioning of Russia in the Global context and the situation in the state support to the industry.

Labor market in dynamics and in geographical aspect has been studied. Present problems and future challenges have been enumerated and analyzed.

Detailed data on the operating systems, technologies and programming languages mastered by Russian companies are presented.

We express sincere gratitude to those who have actively participated in the survey and thus contributed to its results. Thanks to their active participation, the report has obtained that practical and serious content which makes it indispensable source of valuable and trustful information for both foreign customers and for Russian software developers.

The report is intended to help better understand trends and realities, opportunities and challenges that one may meet in Russia while looking for software development and engineering services or for new solutions and products.

Valentin Makarov

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Methodology

The main source of information for the 2007 survey is a poll of companies and organizations representing the Russian software export industry, conducted by RUSSOFT Association on a yearly basis. Questionnaires were sent out to the companies in the Association's contact database covering about 80% of all legal entities currently involved in exports of software products and software development services.

The majority of questions in the questionnaire remain unchanged throughout all previous years of the poll, which allows revealing trends typical to the industry. In terms of data comparison and dynamics indication it is crucial that the methodology does not suffer significant changes from one poll to another. It is improved and developed but mainly due to the introduction of new questions into the questionnaire.

Thus, 2007 questionnaire contains new questions relating to the estimation of the internal market share for Russian companies engaged in the development of software for export, as well as questions allowing ranking institutions and universities by the quality of education they provide and professional level of their graduates.

Some sections in the present survey were enlarged. This year the focus is concentrated on the positioning of Russia in the Global software development market and on the most prominent achievements of the industry players.

Besides, the number of questions dealing with one of the main problems of software companies - personnel supply - was significantly increased. Answers to these questions enabled to study in detail the situation on the labor market and in the professional education and training in the industry.

Apart from questionnaires, the following additional information was used in the survey: real data on the used technological platforms and programming languages received from the regularly updated database of the companies involved in software development on the portal www.outsourcing-russia.com as well as other additional sources of information and methods were used to check the consistency of the data received from respondents.

This year we received 86 completed questionnaires with much better content.

The questionnaires were filled in by the senior managers possessing all the information needed to answer the questions.

At the preparation of the present survey we used other surveys and studies which were at the disposal of the RUSSOFT analytical department; we also used assessments of the acknowledged industry experts and opinion and comments of the companies' managers and directors.

In terms of geographical location of respondents this year the share of participants from Moscow decreased slightly while the share of Novosibirsk respondents grew. However, there's no reason to think that this change significantly influenced the results of the survey. The only conclusion which can be reached at the assessment of this change is that there can be an additional (no more than 1-2%) growth in exports of software products as this segment in Novosibirsk prevails over the provision of the software development services.

The said differences in geography of respondents are obviously connected with the shift in the survey participation activity demonstrated by the companies from different Russian regions.

Table 01	Location of exporting companies which participated in the survey			
	Moscow	**St. Petersburg**	**Novosibirsk**	**Others**
2006	36%	19%	7%	38%
2007	27%	20%	13%	40%

As compared to the previous survey in the present research we changed the parameters used for the classification of companies by gross turnover. There remained only one category - up to 0,5 MUSD. The share of companies who generated the said turnover decreased from 55% to 43%, which reflects the trends inherent to the industry in present: smaller companies experience difficulties at the entry to the market, they demonstrate lower levels of growth and very often are taken over by larger competitors.

Table 02	Respondents by gross turnover			
Up to 0,5 MUSD	**Up to 2 MUSD**	**From 2 to 4 MUSD**	**Over 4 MUSD**	
43%	28%	8%	21%	

The concentration of companies is even more noticeable at the grouping by the number of employees. The share of companies employing less than 35 people is dropping, while the share of middle and large companies is growing.

Table 03	Respondents by the number of employees			
	Up to 35	**From 35 to 120**	**Over 120**	**N/A**
2006	62%	19%	15%	4%
2007	46%	23%	25%	6%

As compared to the previous survey, the share of companies whose core business (over 75% in revenues) is software export dramatically grew.

Table 04	Respondents by the share of export revenues in gross earnings					
	Less than 10%	**from 11% to 25%**	**from 26% to 50%**	**From 51% to 75%**	**Over 75%**	**N/A**
2006	18%	10%	16%	16%	29%	12%
2007	13%	9%	10%	12%	42%	14%
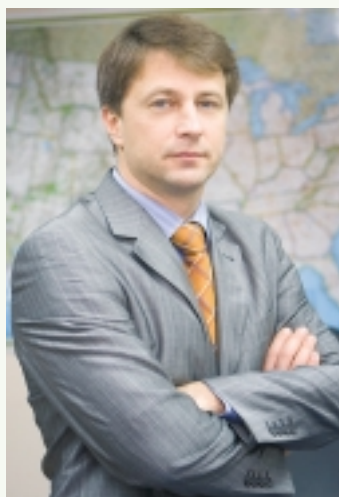
«In today's multi-sourcing environment, Russia is ideally positioned as a destination for high-end software development. Strong educational system with focus on science and math, paired with solid analytical skills of Russian programmers and low attrition rate, allow Russia to successfully compete in the areas of application development, product engineering and embedded systems design.»

Dmitry Loschinin
President and CEO, LUXOFT

Position of Russia on the global software outsourcing market. Overview of analytical studies and ratings

Position of Russian software developers on the global market became notably stronger for the previous year. There are enough grounds for such a univocal statement as quite a large number of independent sources bear evidence of the present progress. The progress is reflected not in all reports and ratings, but the expressed skepticism in relation to the positive changes in Russian IT sphere, as a rule, is an exception, and in most cases is caused by usage of outdated information.

The most important improvement noticed from the previous year is that Western European and American partners of Russian outsourcing companies ceased to refer to some problems which were often mentioned by them several years ago, namely: inadequate infrastructure, lack of English language skills, poor quality management. This change is confirmed by the research released by IDC (Russia as Offshore Software Development Location: Should You Consider This Your Next Move? White Paper, March 2007) in Spring 2007.

Within the framework of this research managers of 20 Western European and American companies who already have experience of cooperation with the Russian developers were interviewed.

For the sake of objectivity of information the names of these companies are not disclosed under the preliminary agreement with them. However, it is known that 7 of them have annual turnover over 500 M USD, while one corporation has annual income over 100 billion USD.

Thus the success of cooperation with Russian developers was evaluated mainly by managers of big companies which either place or placed orders for development of software in other countries. According to the interviews, the companies were chosen for

development of outsourcing tasks by the level of confidence and by their capability to fulfill the task. The next in line are the cost of services and then location, although the latter was less crucial among other parameters.

According to the results of the IDC research Western European and American companies are satisfied with the quality of work demonstrated by the Russian outsourcing: 14 out of 20 respondents estimated their work as done on a high professional level. It is their opinion that the main advantages of software companies with which they cooperate in Russia are as follows: low level of staff turnover, availability of well-trained technical specialists who are able to adapt to the changing requirements of customer. They made emphasis on abilities and skills of the Russian developers in the sphere of designing and developing complex systems, in particular in the sphere of engineering of application software.

The mentioned advantages of the Russian outsourcing companies were known before, but in the IDC report they are once again confirmed by research results and described more distinctly. It is surprising that none of the respondents complained about the Russian infrastructure neither about problems related to the intellectual property rights protection.

The conclusions made by IDC experts are contradicted by the data of Global Services Location Index (2005) rating which was prepared by A.T. Kearney. The declared purpose of this rating — which is to help customers to choose the right country-supplier of outsourcing services — is obviously inconsistent with the process of choosing a partner by Western European and American managers who took part in the IDC research. Location of company which services they plan to use of is a secondary concern for them.

It is quite possible that there are some customers who first choose a country, and then a partner which is a resident of this country. Thus IDC and A.T. Kearney's researches can be oriented to different audience. However the authors of Global Services Location Index pretend to influence all existing and potential consumers of outsourcing services, which seams to be not that evident.

Besides, the relevance of use of synthetic indicators for country attractiveness assessment completely ignoring the real data on the volume of offered services is quite doubtful.

Thus, the IDC and A.T. Kearney researches are most likely aimed at different target groups, that is why claims of Global Services Location Index on universality and comprehensiveness of its conclusions seem unjustified. It is natural that Russia's 27th place out of 40 countries involved in A.T. Kearney's rating is bewildering.

IDC respondents noted the ability of the Russian software developers to solve complex challenging problems. The president of Intel Russia Steve Chase vividly described the specialization of Russia on the world market of software outsourcing services: «We commit difficult problems to engineers in the USA. If the task is very labor-intensive we assign it to the Indian specialists. If the problem can not be solved, we offer it to Russians». In recent years this quotation circulates through different publications in Russia and other countries. Not long ago Steve Chase repeated it for the Fortune magazine. The corresponding article appeared in that publication in March 2007. In this article Russia is ranked third following India and China in the world market of software development.

To tell the truth, research companies, as a rule, abstain from such a ranking. The leadership of India is not disputed in their reports. From time to time its annual income from export of outsourcing services is indicated. It is generally acknowledged that this figure in other countries is much lower. However if we divide the global market into segments and form a single category of complex technologically-intensive services, the leadership of India will not seem so overwhelming now and in the next few years. Particularly if we take into account a fast growth of export of the Russian software companies. Unfortunately such segmentation is for the time being uncommon in such researches.

In A.T. Kearney's ratings estimation the existing income from export of outsourcing services is not considered at all.

In this rating the ranking of countries is done on the basis of sum of three indexes, each of them reflects the cost of rendered services, business conditions and number and level of training of specialists in a country. Such an approach gives a free hand to experts who at their own discretion rank the countries.

It is noteworthy that India, despite the recognition of quite poor business conditions, still is ranked first, though according to these three indexes its advantage over Russia is more then questionable. Taking into account that a rapid growth of export generated by Russian companies was mainly reached as a result of shift of customers from the Indian developers, then at this moment and on these indicators there can't be any advantage at all.

Russia in A.T. Kearney's rating has 27th place mostly because of one of the worst index of business conditions among 40 countries in the list. In a short commentary to such a decision the authors point out unpredictable policy of the Russian government with respect to foreign investors. It is likely that A.T. Kearney experts' conclusions can be explained by the lack of information on the business terms existing in Russia. The volume of FDI into the Russian economy has more than doubled on a yearly basis.

According to UNCTAD information (the U.N. conference on trade and development) by the end of 2005 it constituted 28 billion USD. Deutsche UFG analysts counted up that in 2006 investment climate of Russia improved. They made such a conclusion on the basis of the fact that inflow of FDI (difference in direct investment and capital outflow) by the end of 2006 doubled and constituted almost 29 billion USD. According to the data of commercial bank «Rosbank» FDI has grown by 140% last year.

The improvement of investment attractiveness is reflected on the pages of business newspaper «Vedomosti», which is published in Russia in cooperation with Financial Times and The Wall Street Journal: «In 2006 the share of market capitalization of GDP increased amounted to 92, 7% against 61, 5% in the previous year. This year Russia became one of the world leaders in called-up foreign direct investment». (#62 as of 09.04.2007).

Direct investment in the Russian economy, as a rule, has a long-term nature. For example, in 2006 10 automobile concerns concluded with Russian government agreements on the construction of assembling plants on the territory of Russia. Volkswagen, Nissan, Toyota and General Motors have already started the construction of plants.

Big global IT companies also make direct investment in Russia expecting return in several years.

Vendors invest in the development of the network of its representative offices in Russian regions, in training of potential buyers and users, in the implementation of large scale marketing programs and in localization of their own solutions. Russian market of information technologies, being already one of the biggest in Europe, is growing by 20-30% a year and that fact didn't pass unnoticed by the leading world producers. Having such figures their representatives even refuse to discuss the problems of business conditions in Russia, though they are present in any country.

It is worth to emphasize the indicator for Microsoft operations. For the previous financial year its revenues in Russia increased by 72%, while desk-top applications grew by 76%. This achievement was not

possible without an active struggle with piracy. The problem of usage of unlicensed software cannot be solved quickly, but great progress was achieved in this sphere only for one year. It is still can not be compared with the level of Western European countries, but in the countries of South-East Asia the situation is certainly not better.

Investment attractiveness of the Russian economy is supported by the establishment of new development centers by the foreign companies. In the beginning of 2007 EMC Corporation announced its plans to invest in the development of its business in Russia. For 4 years investments will constitute 100 MUSD. The most part of this sum is designated for The Software Development Center (EMC Excellence Center) which was opened in Saint-Petersburg last year.

Also in the beginning of 2007 Hewlett-Packard started recruitment of scientists for its Saint-Petersburg laboratory dealing with fundamental problems, related to the new developments (e.g. management of relational databases and unstructured data). Such problems can be solved only by specialists with excellent mathematic abilities. Google is also planning to make use of Russian developers' skills. The company has already opened its development centers in Moscow and Saint-Petersburg and is now engaged in the active search of talented programmers for work in these centers. Entry to the market of these companies is surprising due to the fact that for the last several years many big foreign companies established its development centers in Russia. Among them are Alcatel-Lucent, Allied Testing, AVIcode, Borland, Cadence Design Systems, Chrysler, Columbus IT, Dell, EGAR Technology, EMS, Ericsson, Huawei, Intel, InterSystems, Jensen Technologies, LG Softlab, Motorola, NetCracker, Nival Interactive, Quest Software, RD-Software, Samsung Research Center, Scala CIS, Siemens, SmartPhoneLabs, Sun Microsystems, Tagrem Studio, T-Systems etc. It seemed that human resources were exhausted and time was needed for their recovery. However Google, Hewlett-Packard and EMC certain, that they came to Russia not in vain.

According to them, creation of Russian development and research centers was not accompanied by the necessity to solve any difficult problems, for example, related to undeveloped infrastructure. 2 or 3 years ago representatives of other companies did mention analogous problems in their interviews to local magazines and newspapers.

Other well-known companies which also plan to develop software in Russian cities are Nokia and Cisco.

There are also serious questions concerning the ranking of «human resources» index in the Global Services Location Index rating. They recognize achi-

evements of the Russian scientists in aerospace and defense industries in their commentary. It is impossible not to admit that fact as it is Russia who supplies India and China with sophisticated armaments, and not vice versa. It is also stated that Russia is third in the world by number of scientists per capita and has excellent technical universities. However, this index is again lower then that of India and China. To all appearances, A.T. Kearney experts do not know about results of Russian programmers on the world programming championships among universities (ACM Programming Collegiate Contests) and other programmers' contests where the share of Russian participants exceed 30%.

Table 05	Global outsourcing directions rating according to A.T. Kearney				
Rating	Country	Financial structure	Human resources	Business conditions	Total
1	India	3.47	2.14	1.26	6.87
2	China	3.21	1.76	1.17	6.14
3	Malaysia	2.95	1.12	2.00	6.07
4	Philippines	3.58	1.16	1.05	5.78
5	Singapore	1.62	1.44	2.67	5.73
6	Thailand	3.27	0.94	1.51	5.72
7	Czech Republic	2.57	1.12	1.90	5.58
8	Chile	2.73	0.97	1.87	5.58
9	Canada	1.10	2.03	2.40	5.52
10	Brazil	2.91	1.36	1.23	5.50
11	United States	0.54	2.74	2.22	5.49
12	Egypt	3.55	0.95	0.98	5.47
13	Indonesia	3.51	1.06	0.89	5.47
14	Jordan	3.02	0.91	1.43	5.35
15	Bulgaria	3.29	0.86	1.11	5.27
16	Slovakia	2.72	0.96	1.55	5.24
17	Mexico	2.87	1.16	1.19	5.22
18	Poland	2.67	1.06	1.44	5.16
19	Hungary	2.61	0.88	1.63	5.13
20	United Arab Emirates	2.66	0.61	1.85	5.12
21	Costa Rica	2.96	0.79	1.34	5.09
22	Ghana	3.57	0.58	0.93	5.08
23	Argentina	3.14	0.93	0.98	5.05
24	Romania	3.07	0.92	1.05	5.03
25	Jamaica	2.92	1.01	1.10	5.03
26	Vietnam	3.55	0.69	0.76	5.00
27	Russia	2.83	1.31	0.85	4.99
28	United Kingdom	0.46	2.12	2.41	4.99
29	Australia	0.97	1.66	2.29	4.91
30	Tunisia	2.97	0.69	1.20	4.86
31	Germany	0.50	2.10	2.23	4.84
32	South Africa	2.76	0.81	1.24	4.81
33	Israel	1.86	1.22	1.67	4.75
34	New Zealand	1.28	1.19	2.28	4.74
35	France	0.40	2.24	2.05	4.69
36	Panama	2.90	0.65	1.10	4.65
37	Portugal	1.60	0.88	1.80	4.28
38	Spain	0.96	1.50	1.67	4.12
39	Ireland	0.42	1.41	2.25	4.07
40	Turkey	2.14	0.91	0.92	3.97

Source: A.T. Kearney Global Services Location Index 2005

Fewer questions arise concerning the third index which to all appearances reflects direct costs in connection with the placement of orders for software

development in different countries. Indeed, cost of labor in Russia is higher then in India and China.

Still Global Services Location Index rating' authors decided that neighborhood to Western Europe is just a drawback of Eastern European developers as integration process contributes to leveling of salaries all over Europe. So there is no service cost advantage any more. But A.T. Kearney's researchers probably didn't take into account that geographical neighborhood allows customers to save considerable money as it is by far cheaper and quicker to reach neighboring countries, then India and China. Disparity in time zones also matters for them very much.

Besides, specialization of different countries should be taken into account while comparing salary levels. If the majority of the Russian programmers are engaged in complicated, high-end and creative projects we should compare their salaries with salaries of programmers of the same rank in India and China. There are no traces of such segmentation in Global Services Location Index raring.

A.T. Kearney's research made «suffer» not only Russia, but other Eastern European countries as well. According to authors of this research agency India is still the best country for placement of orders for software development. China is urged to supplement it, and alternatives to these countries should be searched in South East Asia.

Generally speaking A.T. Kearney's rating could be neglected due to its serious drawbacks. However it perfectly suits for the destroying of several widespread myths about situation in Russia. These myths most likely prevent adequate assessment of the level of development of info-com technologies on the Russian market. In some ratings Russia is in the eighth ten according to that indicator. They also use mysterious synthetic indexes which can not be challenged due to non-transparent procedure of their definition.

In the mid-90s technological novelties appeared in Russia 5 years later than in economically developed countries. In the beginning of the current decade the gap slumped to up to 2-3 years, and now the majority of vendors launch new developments on the Russian market simultaneously with their global releases.

By the number of PC and Internet users per capita Russia is still falling behind most Western countries and some Eastern European countries, but this gap is rapidly shrinking.

According to comScore Networks, during 2006 Internet users audience increased by 10%. In Russia the growth rate for connectivity to the Global Network is much higher — 21%. By this indicator Russia is raked second right after India. On the third place is China with the growth rate of 20%. At the same time by the number of Internet users per capita Russia outstrips these two countries.

According to Russian Public Opinion Research Center data, about 1/4 of Russians use Internet. It is by far fewer then in economically developed countries. But in Moscow this indicator reached approxima-

tely 40% which is comparable to some countries of Western Europe. Experts think that other Russian cities are lagging behind the capital by 2-3 years.

According to «Public opinion» Foundation data, there are 52% Internet users among young men under 24. Besides, not so long ago the government launched the national program «A computer to each home» which shall increase the number of PC users and that of the Global Network. Besides, within the framework of the national project «Education» all Russian schools shall be connected to the Internet by the end of 2007. However even without state support a computer connected to the web became a commodity of primary necessity in all big Russian cities.

By the number of connections to high-speed leased lines Russia also has high growth rates. They constitute from 50% to 100% a year according to different estimations. In Moscow the boom of connection to the Internet by leased lines is over and most users already have a high-speed Internet access. In Saint-Petersburg this boom will be over in 2007. In other cities it is predicted for the next year, though it may be considered to have already begun.

It is worth mentioning that such changes were not predicted 2 or 3 years ago even by those experts who are interested in them themselves. In Russia it is not customary to speak of future success even if there are all chances for its achievement. Often Russian commentators frankly underestimate abilities of their compatriots. This trait is not an evidence of uncertainty as it doesn't prevent from winning in different competitions, and most likely reflects the peculiarities of the Russian mentality.

Russian students successfully perform on different contests on information sciences and world championships in programming. They dominate on the majority of international programming competitions. On the prestigious programming championship among students organized on a yearly basis by Association for Computing Machinery — «ACM Programming Collegiate Contest» — the teams of Russian universities have been taking the leading positions since the end of the last decade. Since then results only improved (see Table 06). At the same time not only the number of winners increased, but also the number of university teams from Russia which entered into world elite grew. Since 1999 10 Russian universities took top places on these competitions. It is by far more then in any other country.

We can also mention world competition in programming which is conducted annually by Google. On the last competition 33 of 100 finalists were from Russia.

Adult programmers' teams also achieve much success but this time competing with programmers on the global market for software development. One of the noticeable achievements is the increase in the number of companies from Russia, Ukraine and Belarus included into the rating of global service-providers prepared by Global Services. In 2005 only 3

Table 06	Prizes won by the Russian university teams on world championship in programming among students. (ACM International Collegiate Programming Contest), 1999 - 2007*								
		1999	2000	2001	2002	2003	2004	2005	2006	2007
1	Saint-Petersburg State University	9 place	1 place	1 place					6 place	
2	Saint-Petersburg State University of informational technologies, mechanics and optics.	3 place	5 place	3 place		3 place	1 place	3 place		3 place
3	Moscow State University				9 place	2 place		2 place	9 place	10 place
4	Saratov State University				6 place	7 place			1 place	6 place
5	Perm State University						4 place			
6	Izhevsk State University						8 place	9 place		
7	Altay State Technical University								3 place	
8	Ufa State Technical university of aviation								10 place	
9	Novosibirsk State University									5 place
10	Petrozavodsk State University									13 place
	Total	2	2	2	2	3	3	3	5	5

– Number of top places varied from 10 to 13 during that period

recent years. Considering separately all developing countries each fifth service-provider will be from Russia. For the last three years 10 Russian and CIS companies were included into Global Services 100. Among them are: Auriga, DataArt, EPAM Systems, IBA Group, Intetics, Luxoft, MERA Networks, StarSoft Development Labs, Reksoft, CTGroup.

In other ratings are mainly mentioned the same companies. For example, in 2006 EPAM and LUXOFT neighbored with Hewlett Packard, IBM Global, and Oracle in the top-50 of the global outsourcing vendors.

This rating is called The Black Book of Outsourcing and it comprises companies which are, according to authors, managed best of all (www.theblackbookofoutsourcing.com).

Apart from the main list The Black Book of Outsourcing has a lot of nominations where top ten global leaders are appraised. Russian developers are also represented there.

EPAM is among top ten in the categories Retail & Consumer Goods Industry, Data warehousing, Data Mining & Business Intelligence, Portals & Enterprise Content Management.

The same company together with IBA Group is in the TOP 10 ITO: Specialty Application Development.

Luxoft and StarSoft are in the list of the best in the category Product Engineering.

DataArt Company is on the first positions in TOP 10 Publishing, Editorial, Print Services.

According to The Black Book Outsourcing 6 Russian companies — EPAM, Luxoft, IBA Group, StarSoft, Artezio, Auriga — are in the top ten providers of Eastern and Central Europe.

Russia is also well presented in the rating The Global Outsourcing 100 (www.outsourcingprofessional.org) which is composed by IAOP (The International Association of Outsourcing Professionals). In 2006 Russian and Belarus six companies were mentioned there: Aplana Software, Mera Networks, DataArt, EPAM Systems, Luxoft and IBA Group. In 2007 methodology of the rating apparently changed, that is why representation of Russia in TOP changed a little. The rating includes Luxoft, Intetics, DataArt, EPAM Systems and StarSoft Development Labs which has recently merged with Exigen Services.

Whichever methodology may be, Russia is always ranked third — forth by the number of companies represented in the rating. At the same time the Russian export of software developing services is booming (40-50% annually), which is faster than the global market altogether and export of countries competing

companies from Russia and CIS were mentioned in it, in 2006 − 5, and in 2007 − 8. According to Global Services in the top-100 of the best service-providers in the world only the USA and India have larger representation. At the same time improvement of indicator for Russia is mainly happens thanks to the decline in the number of Indian companies.

A.T. Kearney's rating has nothing in common with Global Services rating, but a similar title. Global Services methodology is more clear and well-grounded. List 100 comprises the most significant service-providers on the world market. They shall fill in a special questionnaire in order to be included into the rating. It is obligatory that these questionnaires contain references to their clients which are addressed by Global Services directly. If their achievements in the form of qualitative and quantitative indicators prove to be quite significant and are confirmed by customers, then a service-provider enters the List 100.

Besides, there are separate nominations where 5-10 companies from top-100 are appraised. The best by spheres of activity and region are determined in these nominations. For example, there is a category «Central and Eastern Europe» in which Russian companies' representation stays on the level of 80% for

with Russian of the global market for software development outsourcing.

Russia is a country where almost all leading world companies, governmental and intergovernmental organizations place their orders for software development. Unfortunately customers as a rule ask not to disclose their names, that is why even simple listing of them seems impossible to produce, even in brief.

In recent years the Russian export of licensed software is also growing rapidly. Success in this sphere could have been even more impressive. Weaknesses of the Russian companies are marketing, promotion experience and availability of financial resources for large-scale marketing efforts abroad. However, some companies achieve much success.

Such Russian companies as ABBYY (electronic dictionaries, text identification systems), PROMT (automatic translation systems), Kaspersky laboratory (antivirus programs), Center of speech technologies actively promote their software products on the developed countries markets.

In Personal Firewall Software Reviews 2007 rating software product Outpost Firewall Pro developed by Russian company Agnitum took 2nd place and Kaspersky Anti-Hacker software is 11th.

The Transas group with the head office in Saint-Petersburg has probably achieved the greatest success on the global market. Its export accounts for 70 MUSD, and turnover is over 160 MUSD. The network of Transas representations covers over 100 countries. The group competes with leading world producers of navigation systems, vessel traffic management systems, marine and aviation simulation systems and electronic marine chart systems. For the recent years the group has won the majority of tenders on simulation systems held in such countries as the USA and Japan.

Besides in 2007 Transas released to the market an «infotainment» complex Trans-Force which is a unique solution which has no analogues in the world.

Other success stories in the field of promotion of licensed software to foreign markets are still quite few. The list of successful exporters has not changed significantly for several years. But a breakthrough on the enlargement of the list is quite possible. There are companies which successfully compete with the leading foreign developers of information systems on the Russian market. From the point of view of functionality they are not inferior to the Western competitors in certain segments. They are restrained by lack of information about foreign markets, and also by the attractiveness of the fast-growing Russian and CIS markets. Providing such a considerable growth, which at some companies reaches 100%, ideas on the expansion to distant and unfamiliar regions arise only at the consideration of plans for the far future.

Chapter 2. Volume and structure of software export

The growth of software export by the Russian companies in 2006 exceeded the forecast done in the 2006 survey of the software export industry prepared by RUSSOFT Association. Respondents to the previous survey in 2006 predicted the growth of export earnings by 35% on the average, while in 2004 and 2005 this indicator was 40% and 30% respectively.

According to the results of 2007 survey, software export grew by 54% and accounted for appr. 1,5 billion USD. In the opinion of state authorities the growth in software exports is even higher. Thus, Minister on the Information Technologies and Communications of the Russian Federation Leonid Reiman reported in March 2007 that in 2006 the growth of IT exports accounted for 80%. Most likely that variances in the estimation of export volumes presented in the present survey and in the Minister's report result from the fact that L. Reiman cited data on the overall volumes of all IT export which include, apart from software development, export of other products and services in IT sphere.

Several factors influenced the significant growth of software exports from Russia.

One of these factors is the growth in the number of employees in the Russian companies. In the segment of software development outsourcing services the turnover of companies is directly related to availability of human resources.

There are no exact data on the number of employees in the Russian exporting companies. According to the results of the poll the number of staff in the companies grew on average by 20%. However, taking into account the growth of larger companies we can assume that smaller companies also contributed to that growth. Thus, the increase in the number of employees in larger companies is apparently even higher than 20%.

In larger companies the staff grows either due to the takeover of smaller companies mostly in big cities or due to the regional expansion and creation of the remote developing centers network. This network covers middle and small cities having universities capable of training graduates at good professional level. Practically every large company opened a couple of developing centers in the regions for the past two years employing mainly developers from local software companies. Apart from getting access to the quality human resources, which become more and more scarce, they also benefit form the difference in salaries between big cities and regional centers.

The inflow of human resources is also supported by the former graduates from universities, after retraining programs and migration of man power from CIS countries. It is difficult to provide exact estimation of the programmers migration scale, however practically all middle and large companies – according to the directors' interviews – attract employees from the neighbor countries, including Asian countries. Up to 10% of the newly-employed programmers are natives of CIS countries.

The number of graduates owing skills needed to the Russian software companies grew by 10% for the last year. Although not all of them are able to work for the companies oriented to the foreign customers, such growth has a positive impact on the export potential of the companies.

According to the RUSSOFT data, a yearly number of graduates who are capable to be engaged in programming according to the information in their diplomas is about 200 000 persons a year. However, only 10% of them fit to be employed by the export oriented companies. This figure is constantly growing due to the active cooperation of IT companies with universities, which add to the positive trends in the availability of human resources.

The increased share of ready-made products and solutions supplied to the international market by the Russian companies also contributed to the growth in exports. This segment, unlike outsourcing services, is less dependant of number of programmers. Export of products and ready-made solutions can grow rapidly (even in several times) without corresponding growth in the number of developers. For the previous year the export of such products practically doubled.

Nonetheless, the growth in exports can't be explained by the mere growth of personnel inflow and increased share of ready-made products. If there were no other factors, the growth wasn't as high as it is and won't exceed 30%.

It should be noted that there is an evident correlation between growth in the gross export earnings and average salary, and not the number of employees. Exports grow as the increase in salaries of software developers accounted for about 50% for the last year.

We should admit that export growth and corresponding demand for programmers resulted in the rise in cost of man power to the greater extent than vice a versa. However, the correspondence of these indictors against the non-correspondence with other indicators helps to explain other trends.

To all appearances there was a sharp growth of revenues per one employee in the exporting companies. This partly was caused by the consolidation of already larger companies which enabled them to get access to big and thus more profitable contracts. The number of employees in such companies grew faster than in other companies. Besides, for the last two years the market for the suppliers of software development outsourcing services saw several mergers and acquisitions, which significantly influenced human resources potential of these companies. These merges and acquisitions cleared the way for these companies to really big, hence more complex and promising projects they could never dreamed of.

The Russian export was also influenced by the general worldwide trend on the outsourcing software development market according to which more complex works, including scientific researches, are assigned to outsourced developers. According to the assessment of one of the acknowledged analytical company NeoIT (The forecast for the evolution of outsource market for the software development, January 2007), Russia is specialized on the challenging projects, so this trend have a positive impact on the growth of export generated by the Russian companies. The market for these companies is boosting even faster than for outsourcing companies from other countries.

The influence of these global trends on the exports volume is intensified by the promotion of the state support to the industry in Russia. Russian software companies built up resources expecting this support conveyed through the Law on the reduction of social taxes for software exporters, construction of research and technology parks and establishment of the Export Promotion Agency, investment funds for IT industry and elimination of administrative barriers.
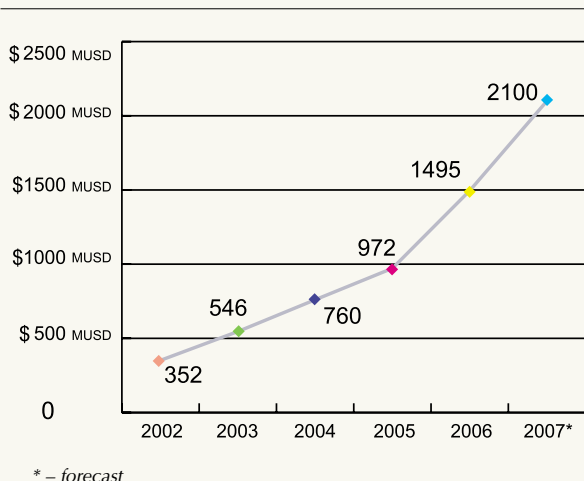
At the same time, due to the officially declared and promoted state support the level of confidence from foreign customers who expect to find in Russia favorable conditions for the realization of major software development outsourcing projects is growing.

It is crucial to meet their expectations. Otherwise, there are all chances to slow down the growth rates and return to the starting point when companies did not dare to set challenging projects as they could not rely to the state support and counted only on their own resources.
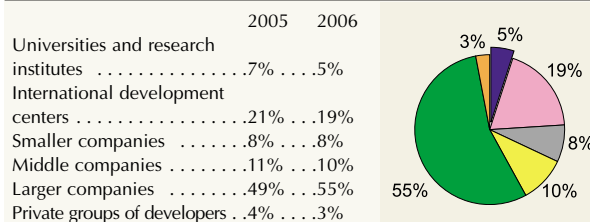
Software exports at the level of 1,5-2 billion USD did not reflect the existing potential of the country in that field. By the number of qualified developers in Russia we can expect the revenues only from software exports at the level of 10 billion USD a year.

Throughout 2007 the participants to the survey plan to increase the number of employees by 25-30% (it seems that companies' senior managers plan to continue creation of development centers in the regions and attract man power from CIS).

Picture 01   Software exports volume from Russia, 2002-2007

$ 2500 MUSD	
$ 2000 MUSD	2100
$1500 MUSD	1495
$1000 MUSD	972
$ 500 MUSD	546 760
	352
0	2002 2003 2004 2005 2006 2007*

* – forecast

Picture 02   Software export by type of producers

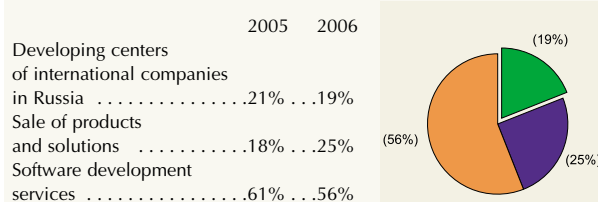|	2005	2006
Universities and research institutes	7%	5%
International development centers	21%	19%
Smaller companies	8%	8%
Middle companies	11%	10%
Larger companies	49%	55%
Private groups of developers	4%	3%

In terms of export structure as compared to 2005 the growth of larger companies (over 120 employees) share is evident. It grew from 49% to 55%. This is one of the consequences of business concentration that is taking place for the last couple of years. This tendency is showing itself in merges and in the fact that the growth of staff and revenues per one developer grew faster in the largest companies than in others.

International development centers last year continued to build up number of employees (this is the indicator used for the calculation of total investments in these centers). However the growth rates were not as high as in large Russian companies. Most likely that in 2006 these centers experienced a temporary slow down in growth rates as in the end of the last year and in the first half of 2007 several large foreign companies started mass recruitment of employees to their development and research centers. There are all chances that the share of international centers as of the end of the year will remain the same or grow.

It is hard to produce univocal conclusions from the change of indicators in the groups of universities and research centers and private groups of developers. At the calculation of these indicators there's a kind of inaccuracy which makes it impossible to define for sure either growth or decrease in share. The only conclusion suggesting itself is that neither of these groups has any noticeable influence on the labor market situation. So their shares in the export volumes are still small.

Picture 03   Software exports by the sources of export earnings inflow

	2005	2006
Developing centers of international companies in Russia	21%	19%
Sale of products and solutions	18%	25%
Software development services	61%	56%

The structure of export by the sources of earnings inflow experienced great changes for the last year. The share of licensed products and ready-made solutions grew from 18% to 25%. The growth mainly occurred due to the accelerated increase in the export of software products and the corresponding drop of services share in the total exports (however, this does not mean that the export of services is shrinking or stagnating, it was growing as compared to the export of software in the competitor countries but the rate of growth was slower than the export of products and solutions).

«In its drive to become the destination of choice for high-end application outsourcing, Russian and Eastern Europe are exhibiting six key trends: an 'up-tick' in industry consolidation, better marketing of the region, increased use of advanced development methodologies, emergence of larger engagements, increased vertical specialization, and providers establishing footprint closer to customers.»

Nick Puntikov
President Eastern Europe, Exigen Services
Board Director, RUSSOFT

Chapter 3. Major trends on the Russian software development market

According to the estimations of the companies taking part in the research, main trends did not change much in comparison to the previous year. Turnover of the majority of the companies increased greatly as well as a year before. So it is natural that the high growth rates are considered as the major trend. This year respondents had a chance to explain the growth in details. The «growth» was divided into «growth in export» and «local market growth».
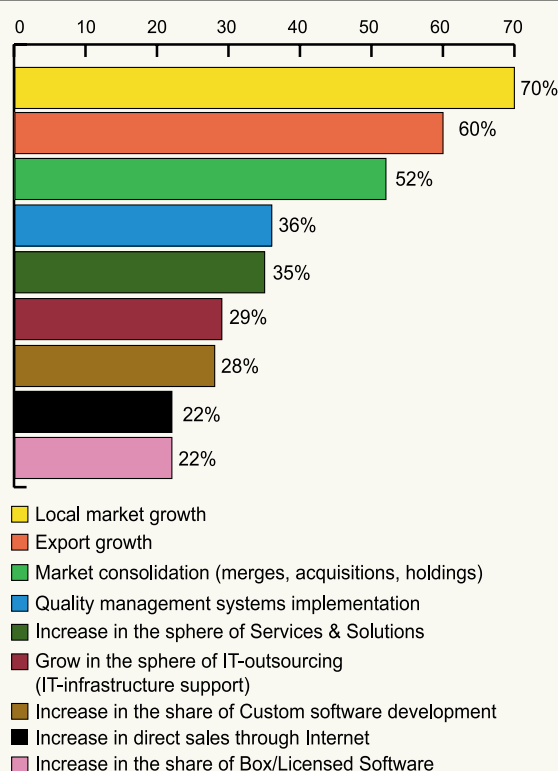
A little surprise was that the number of companies which mentioned the increase in the sales in Russia as the main tendency turned out to be just a bit higher than the number of companies which have chosen export growth as the main trend.

The situation has changed recently. Cooperation with the Russian customers became as profitable as with foreign ones. In the previous research it was noted that the share of export revenues in total earnings of some companies dropped. Even those companies which previously received 100% of revenues from export turned their attention to Russia.

However, there is an evident correlation between the mentioning export growth as the main trend and export share in total revenues. More the export share is — more often the exports growth is named as the major trend.

The companies with the turnover over 2 MUSD (76-86%) name export growth as the main trend more often. The smallest companies with the annual revenues less than 0,5 MUSD have more difficulties in dealing with foreign customers. That's why their indicator for that trend is the lowest — 44%, given the average of 60%. However, the same companies mention local market growth correspondingly rarely (56%). It seems that these companies experience problems with growth irrespective of where their focus is.

More than a half of companies consider consolidation as the main market trend. The indicator is the same as the previous year. It is considerably higher for the biggest companies which are more interested in consolidation as merges and acquisitions as a rule are beneficial for them rather than for small companies. This indicator is higher in Moscow (73%) and Saint-Petersburg (65%). These cities have the thickest concentration of big companies which actively search for possibilities to grow at the expense of regions.

Acquisitions of smaller companies as a rule are

Picture 04 Companies opinion concerning the main trends on the Russian software development market, %

- 70% — Local market growth
- 60% — Export growth
- 52% — Market consolidation (merges, acquisitions, holdings)
- 36% — Quality management systems implementation
- 35% — Increase in the sphere of Services & Solutions
- 29% — Grow in the sphere of IT-outsourcing (IT-infrastructure support)
- 28% — Increase in the share of Custom software development
- 22% — Increase in direct sales through Internet
- 22% — Increase in the share of Box/Licensed Software

done by the luring of developers, which are the main assets of small firms. However during the previous year several mergers did take place. The biggest one is connected with StarSoft, a company located in Saint-Petersburg. First the company established one more subsidiary in Dubna (Moscow region) on the basis of development center of American company Sesame. Then, in the beginning of 2007 StarSoft merged with a bigger company Exigen Services with HQ in the US and development center in the Baltic States.

Implementation of quality management systems is recognized as the main tendency mostly by the biggest companies with the turnover over 4 MUSD. The lowest references of this trend are registered in Moscow, while the highest is in «other» cities. To all appearances in three biggest cities the peak of implementation of quality management systems has already passed, and in other cities it is still in progress.

The reference to the trend «the increase in share of product developments» changed greatly

Table 07	Companies opinion concerning the main tendencies on the Russian market of software development by turnover, %			
	Up to 0,5 MUSD	From 0,5 to 2 MUSD	From 2 to 4 MUSD	Over 4 MUSD
Export growth	44%	65%	86%	76%
Local market growth	56%	87%	57%	82%
Market consolidation (merges, acquisitions, holdings)	44%	48%	57%	71%
Quality management systems implementation	31%	22%	43%	65%
Increase in the share of Box/Licensed Software	22%	35%	0%	12%
Increase in the sphere of Services & Solutions	28%	43%	43%	35%
Increase in the share of Custom software development	25%	13%	57%	41%
Grow in the sphere of IT-outsourcing (IT-infrastructure support)	25%	26%	29%	41%
Increase in direct sales through Internet	28%	26%	14%	6%

Table 08	Companies opinion concerning the main tendencies on the Russian market of software development by location, %			
	Moscow	St. Petersburg	Novosbirsk	Others
Export growth	50%	71%	82%	55%
Local market growth	73%	59%	82%	70%
Market consolidation (merges, acquisitions, holdings)	73%	65%	36%	36%
Quality management systems implementation	23%	35%	27%	48%
Increase in the share of Box/Licensed Software	14%	6%	45%	27%
Increase in the sphere of Services & Solutions	41%	35%	36%	30%
Increase in the share of Custom software development	27%	29%	36%	24%
Grow in the sphere of IT-outsourcing (IT-infrastructure support)	32%	29%	18%	30%
Increase in direct sales through Internet	32%	12%	9%	24%

in comparison with the previous year. If a year ago it was recognized by 29% of respondents as one of the main trends, this year this indicator is only 22%. These figures are contradicting to the data on the growth of licensed products in the structure of exports. This reflects delay in the perception of the new trend by the respondents in comparison to the real data on the growth. Companies engaged in service providing (which are the majority of respondents) can simply be unaware of product developing companies' success.

The relevance of development of licensed software product is highest for companies with the turnover at the level of 0,5-2 MUSD (35%). This reference of product developments is mentioned in Novosibirsk (45%), the lowest is in Saint-Petersburg (only 6%).

An increase in the share of licensed software is aimed at most by the companies with the export volumes not exceeding a quarter of the total revenues, but not less than 10%. Most likely such companies develop software products primarily for the Russian market, but count on selling them abroad as well.

An increase in direct sales through Internet was more often mentioned by companies with the turnover less than 2 MUSD. It was the least mentioned as the main tendency by representatives of

the biggest companies (only 6%). Their specialization (development of complex projects) in most cases doesn't assume the use of such method of sales.

At the same time the biggest companies with the turnover over 4 MUSD have the highest indicator for growth in the sphere of IT-outsourcing (IT-infrastructure support) — 41% while the average is 29%.

Size of companies also influences the level of references for the trend «increase in the share of Custom software development». It is much higher for companies with the turnover over 2 MUSD.

The core businesses of companies

Though the growth of the local market was mentioned as the main tendency more often than increase in the export revenues, «export growth» is ranked first in the rating of the core businesses of the companies in the market. However the indicator for «increase in sales on the local market « is just a bit lower.

Establishment of a wide marketing network abroad (third place in the rating) contributes to the increase in exports. An increase in the share of sales through Internet takes 4th place as a year before.

Certification of software development processes and establishment of development centers in regions are also considered important. It is worth to note leveling of significance of these two businesses. Last year the difference between them was quite significant. The priority of establishment of regional development centers was lower.

There were also other variants among answers. Some companies consider the following activities as a priority: work upon quality and functionality of products, wider range of software development services,

Table 09	Rating of core businesses by their priority
1	Export growth
2	Local market growth
3	Establishment of a wide marketing network abroad
4	Increase in the share of sales through Internet
5	Certification of software development processes
6	Establishment of development centers in regions

creation of new software products and increase in the share of long-term projects.

«The reality of Russia's steady economic growth is recognized by such credible sources as the World Bank, the Economist Intelligence Unit and UNESCO, indicating that the country's macroeconomic climate has surely reached the threshold of fertility. The booming domestic ICT industry reflects this economic growth and contributes to further development of modern infrastructure in the country.»

Alexander Egorov
**Chief Executive Officer, Reksoft**

Chapter 4. Overview of business environment in Russia

The poll of software companies shows that during previous year their business environment improved. There is still much of dissatisfaction and we cannot say that the changes are significant, but the share of companies which mentioned improvements increased greatly. These improvements covered practically all spheres. It is also worth to note that these changes affected mostly the largest companies. To all appearances the increased level of satisfaction of existing business terms reflects expectations related to the adoption of Law on the reduction of the unified social tax for software exporters and other measures declared by the Government (directed towards creation of research and technology parks, Investment funds and Export Promotion Agency). Unfortunately, the declared measures, including the Law on the reduction of the unified social tax for software exporters, do not work in fact, which may lead to the drop in the satisfaction of business conditions indicator in the future.

Human resources and the system of education

Attitude towards provision of staff and quality of their training remained the same. In comparison to the previous year estimations of all the companies are absolutely identical (difference of 1% can be neglected). This topic is revealed in details in the chapter «Human resources».

Here we can point out that an improvement of satisfaction level is noticeable for the companies generating turnover at the rate of over 4 MUSD. 77% of such companies evaluated the problem as «satisfactory» and «good», where «good» mark was given by 18% of respondents. Last year none of the largest company gave such a high evaluation to the availability of staff and system of education, while evaluations of the

Picture 05 **Human resources availability and system of education**
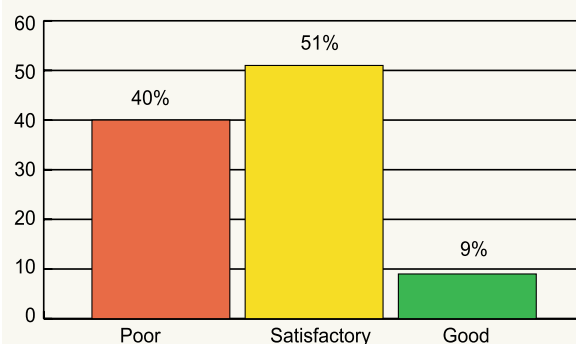
smaller companies became more modest.

Last year export-oriented companies were the

Table 10 **Human resources availability and system of education by the number of employees**

	Up to 35	from 35 to 120	Over 120
Poor	45%	41%	30%
Satisfactory	50%	53%	50%
Good	5%	6%	20%

least satisfied by situation with human resources in the industry. This year companies whose core business is export (over 75% of revenues) as in the previous years gave the largest number of «bad» evaluations. But now the deviation from average estimations is less.

The share of companies unsatisfied with human resources situation is about the same in all cities. It is about 40%. It seems strange that a great number of companies in Saint-Petersburg (18%) gave «good» evaluation to that indicator.

Табл. 11	Human resources availability and system of education by location of companies			
	Moscow	St. Petersburg	Novosibirsk	Others
Poor	38%	41%	36%	43%
Satisfactory	57%	41%	55%	50%
Good	5%	18%	9%	7%

In this city foreign companies open new research and development centers the most often. Last year such companies as Google, HP, and EMC started an active recruitment of engineers and scientists in Saint-Petersburg labor market. However these exactly companies do not have serious problems with personnel recruitment. Large companies are also not very concerned with the staff shortages. Provided existing redistribution and an active recruitment of developers from other cities some research participants can be quite satisfied with human resources availability and education system.

Outside Moscow and Saint-Petersburg a number of companies satisfied with human resources availability decrease, which is connected with a migration of specialists to both Russian capitals.

Comparing the both trends we can assume that the active establishment of development centers in the regions of Russia, Ukraine and Belarus by all Russian software developing companies (currently every leader has 6-10 centers) leads to the short term elimination of the human resources problem. Larger companies got access to the cheap qualified man power from the regions by luring these resources away from local companies. In many respects this cheap resource served as an accelerator which allowed Russia dramatically increase the exports volumes.
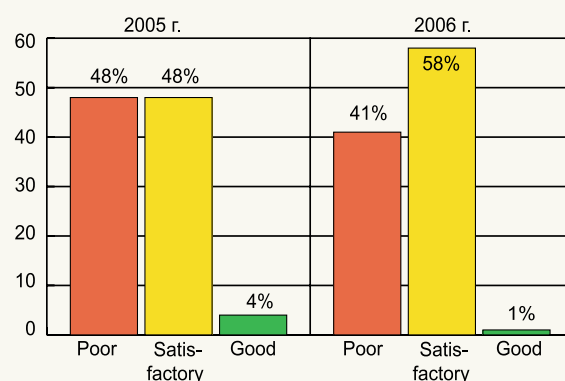
The system of taxation

Russian system of taxation is often and fairly criticized. It is an exceptional case when it is favorably evaluated by the business. This fact is reflected in the results of the conducted poll of software companies.

We cannot but note an evident grow in the number of companies which evaluated the current taxation system «satisfactory». Last year the share of such companies accounted for 48%, while this year it is 58%. As we said before, such growth of satisfaction level with the Russian taxation system may be linked to the expected coming into effect the 2006 Law on the reduction of the unified social tax for software exporters.

According to poll results, situation has improved (- or is expected to improve) mostly for the larger companies employing over 120 people. 62% of them are satisfied with the current taxation system. The lowest indicator of satisfaction level is among middle companies. Unlike smaller companies they can not employ a simplified system of taxation according to the Russian legislation in force. Besides, these companies are quite large at the level of the region or city of their location

Picture 06   Evaluation of the system of taxation

so that local tax authorities draw special attention to them, which results in additional costs.

Evaluation of taxation system doesn't differ greatly depending on location of a company. This system is applied to all Russian regions, although at the level of regions there is a possibility to reduce a tax burden for certain categories of companies. Besides, the quality of work of tax authorities differs significantly

Table 12	Taxation system by the number of personnel		
	Up to 35	From 35 to 120	Over 120
Poor	37%	59%	35%
Satisfactory	60%	41%	65%
Good	3%	0%	0%

It is likely that a larger share of satisfied companies in Saint-Petersburg (71%) is connected with the successful activity of the Administration of St. Petersburg on the creation of favorable investment environment and business climate as well as the expectations of St. Petersburg companies related to the Law on the reduction of the unified social tax for software exporters (headquarters of software developers Association RUSSOFT is located in St. Petersburg and a PR campaign for the promotion of laws coming into effect is being conducted from there). Evaluations above the average are also recorded in Novosibirsk.

| Table 13	Taxation system by location of the companies			
	Moscow	St. Petersburg	Novosibirsk	Others
Poor	45%	29%	36%	46%
Satisfactory	55%	71%	64%	50%
Good	0%	0%	0%	4%

Bureaucratic and administrative barriers

Administrative barriers retain their negative impact on the sector on the same level as the last year. As before more than a half of the companies are

not satisfied with the existence of administrative barriers and their significant impact on their business. The share of such companies even grew a little, but not to the extent allowing to name it a tendency. Companies, especially foreign ones, enjoy support on the highest level, while mid-level officials due to various reasons cannot arrange their work so that to solve problems according to clear procedures and quickly.

Picture 07 **Impact of bureaucratic and administrative barriers to the business**
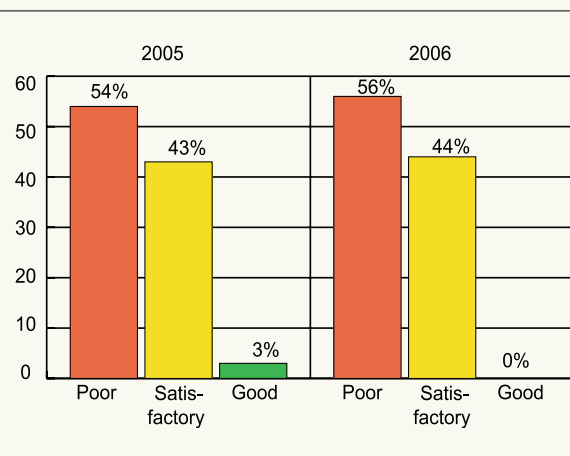
A negative impact of bureaucratic barriers concerns larger companies to a lesser extent. A majority of companies with the turnover over 4 MUSD are able to overcome them without any serious losses. The companies whose core business is export are less influenced by these barriers — there are 56% of satisfied respondents.

Table 14 **Impact of bureaucratic and administrative barriers by the turnover of companies**

	Up to 0,5 MUSD	From 0,5 to 2 MUSD	From 2 to 4 MUSD	Over 4 MUSD
Poor	36%	65%	29%	47%
Satisfactory	36%	26%	43%	41%
Good	6%	4%	0%	12%

As well as last year research participants from Saint-Petersburg are the most displeased with the barriers. They give «bad» evaluation to the approach to the problem in 60% of cases. Even more unsatisfied are companies (67%) located in Novosibirsk. However, it can hardly be said that the situation in other cities is somehow noticeably better.

Table 15 **Impact of bureaucratic and administrative barriers by location**

|	Moscow	St. Petersburg	Novosibirsk	Others
Poor	45%	29%	36%	46%
Satisfactory	55%	71%	64%	50%
Good	0%	0%	0%	4%

Availability of up-to-date infrastructure

Attitude towards existing infrastructure improved significantly in comparison to the previous year. Communication channels, modern business centers are being built in Russia, transport infrastructure is updated. This was reflected in poll results, though a negative evaluation still prevails as before.

There are reasons to assume that a number of companies satisfied with the infrastructure will continue to grow. Launch into operation of IT-parks in the coming years will also contribute to the improvement of the situation. Governmental program for building research and technology parks in several cities as well as the analogues program for the creation of special economic zones — both are being filled with budget funds, which should result in the building of advanced facilities within the upcoming 2-5 years.

So far the Government failed to create the same preferred conditions for the residents of research and technology parks as it had provided to the residents of special economic zones. However, such issues as construction of roads and communications, dormitories for the non-resident citizens and social and cultural facilities are to be solved. Attraction of Associations to the organization of innovative process in these research and technology parks and special economic zones seams to be a very effective way of attracting private funds to the support of the new innovative businesses.

Picture 08 **Evaluation of the existing infrastructure**
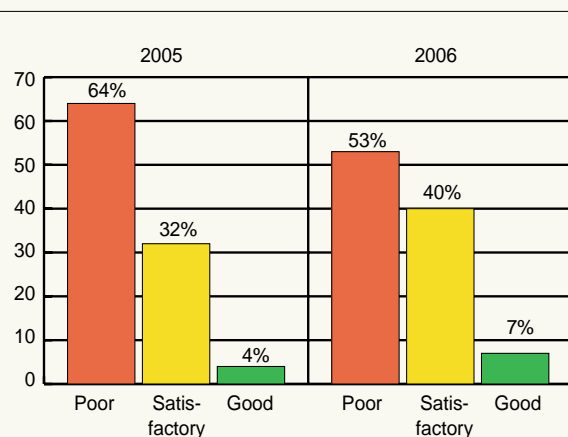
Middle-sized companies suffer the most from the lack of up-to-date infrastructure. Companies located in Novosibirsk demonstrate the highest level of dissatisfaction. The same level of dissatisfaction was expressed by St. Petersburg companies. Last year St. Petersburg companies were the most critical in respect of existing infrastructure, though foreign companies and different researches suggest that it is much better in Moscow and St. Petersburg than in regions.

| Table 16	Existing infrastructure by number of employees		
	Up to 35	From 35 to 120	Over
Poor	53%	59%	50%
Satisfactory	44%	29%	40%
Good	3%	12%	10%

Nonetheless, in other cities (except Novosibirsk) complaints are heard less than in Saint-Petersburg. According to the poll results we could have made a conclusion that infrastructure in regions is the same as in Moscow, which has the best parameters. Most likely it doesn't represent the real facts, and the reason for such answers is the difference in requirements expected from infrastructure. In this case it is more indicative that the situation has evidently improved everywhere. In order to compare infrastructure of different cities fairly, there's a need to conduct a separate research.

Table 17	Existing infrastructure by location			
	Moscow	St. Petersburg	Novosibirsk	Others
Poor	47%	60%	67%	48%
Satisfactory	43%	40%	33%	41%
Good	10%	0%	0%	11%

Financial support to smaller businesses (start-ups). Investment Funds

Companies demonstrate less discontent with financial support of start-ups. The progress is evident. However, their evaluation most likely reflects their expectations. State-supported venture funds have been established on the federal and regional levels in Russia. They haven't yet started to operate to the full capacity, but their appearance as it is may be positively assessed by respondents. On the other side there is a clear evidence of the interest of non-governmental
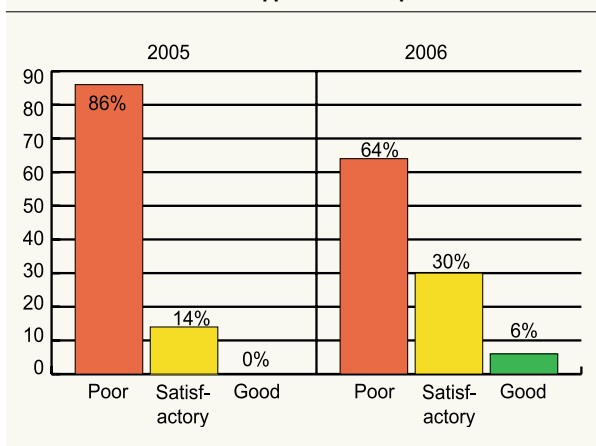
investment funds towards software development businesses, which is likely to positively influence the level of dissatisfaction with the state support of the start-ups.

Bigger the company, more export share it has — higher is the possibility that it is satisfied with financial support to «start-ups». Almost 70% of companies with the turnover over 4 MUSD evaluate it positively. This may be explained by the fact that companies oriented to foreign markets have more qualified experts who are engaged in the professional preparation of technical and economic reasoning for the projects requiring outside investment.

Table 18	Financial support of start-ups by turnover			
	Up to 0,5 MUSD	From 0,5 to 2 MUSD	From 2 to 4 MUSD	Over 4 MUSD
Poor	74%	77%	60%	31%
Satisfactory	18%	19%	40%	63%
Good	8%	4%	0%	6%

As large Russian and foreign funds start their work mostly in Moscow, there are more positive assessment of financial support of «start-ups» in this city.

Table 19	Financial support of start-ups by location			
	Moscow	St. Petersburg	Novosibirsk	Others
Poor	52%	73%	50%	73%
Satisfactory	43%	27%	25%	23%
Good	5%	0%	25%	4%

The least level of criticism towards support of start-ups was expressed by the companies oriented to the foreign markets. The more the export share the more positive evaluation is given to the situation around financing of start-ups.

| Table 20	Financial support of start-ups by the share of export in turnover				
	Less than	From 11% to 25%	From 26% to 50%	From 51% to 75%	Over 75%
Poor	91%	80%	72%	67%	50%
Satisfactory	9%	20%	28%	22%	39%
Good	0%	0%	0%	11%	11%

State support of international marketing activity

Evaluation of the state support of international marketing activity hasn't changed in comparison to the previous year. Negative attitude is demonstrated by 80% of respondents. To all appearances quite strong PR-support from high-ranking officials at the participation of Russian at CeBIT exhibition in Germany was not considered as marketing by respondents.

Larger companies (with the turnover over 4 MUSD) and companies from Moscow are less

Picture 09   Financial support of start-ups

Picture 10   State support of international marketing activity

2005   2006
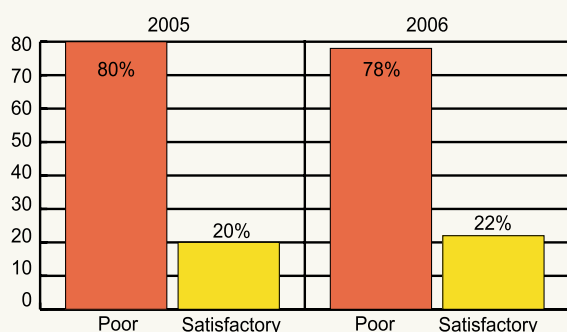
critical to the state support of international marketing activity. Last year there was more negative assessment from Moscow-located companies.

Table 21   State support of international marketing activity by turnover

	Up to 0,5 MUSD	From 0,5 to 2 MUSD	From 2 to 4 MUSD	Over 4 MUSD
Poor	84%	86%	80%	59%
Satisfactory	16%	14%	20%	41%

It seems that larger companies do not consider state support of the marketing activity somehow important for their business. They are more concerned with the diminishment of taxes and with the state supported actions directed to the creation of favorable image of the country. This is corresponding to the global practice according to which state support applies primarily to new innovative companies by decreasing the risk level at the entry to the market.

Table 22   State support of international marketing activity by location

	Moscow	St. Petersburg	Novosibirsk	Others
Poor	65%	86%	88%	80%
Satisfactory	35%	14%	12%	20%

State support to certification of quality management in compliance with the international standards

A bit more than 2/3 of companies don't feel any state support in the sphere of certification in compliance with the international standards. Almost all the rest are satisfied with this support, but don't assess it high.

The largest companies and those located outside three largest cities of Russia give the largest number of positive estimations.

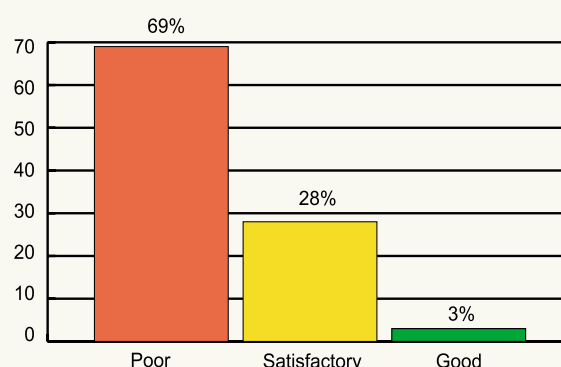**Picture 11   State support of certification in compliance with the international standards**

Table 23   State support of certification in compliance with the international standards by turnover

|	Up to 0,5 MUSD	From 0,5 to 2 MUSD	From 2 to 4 MUSD	Over 4 MUSD
Poor	72%	80%	80%	56%
Satisfactory	28%	20%	20%	44%

Table 24   State support of certification in compliance with the international standards by location

	Moscow	St. Petersburg	Novosibirsk	Others
Poor	72%	73%	88%	58%
Satisfactory	22%	27%	12%	38%
Good	6%	0%	0%	4%

State support to the sector of information technologies

In comparison to the previous year the number of those who think that the state support of the sector improved in the last 2 years has increased. Improvement was noticed by 33%, while last year the figure was only 26%. The majority of respondents don't see any improvement, but still the tendency encourages.

Picture 12   State support in IT for the last 2 years
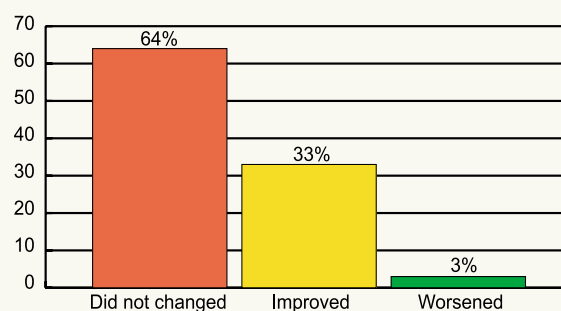
During a year the situation greatly changed for different categories of companies. Improvement of state support was pointed out by 81% of companies with the turnover over 4 MUSD, i.e. by the majority of larger companies. This indicator is much higher than the last year. Therefore we can insist that the

state support is mainly felt by larger companies.

According to small companies' estimations, there

Table 25	State support in IT for the last 2 years by turnover			
	Up to 0,5 MUSD	From 0,5 to 2 MUSD	From 2 to 4 MUSD	Over 4 MUSD
Did not changed	80%	73%	66%	19%
Improved	17%	23%	34%	81%
Worsened	3%	4%	0%	0%

was no progress during previous years. Some of them even noticed a change to the worse.

Table 26	State support in IT for the last 2 years by location			
	Moscow	St. Petersburg	Novosibirsk	Others
Did not changed	55%	69%	70%	66%
Improved	45%	31%	30%	27%
Worsened	0%	0%	0%	7%

As well as a year ago improvement of state support is more evident in Moscow than in any other Russian city. Almost a half of Moscow companies experience it.

The situation in the sphere of property rights protection

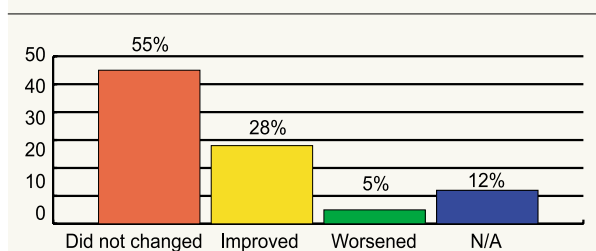| Picure 13	The situation in the sphere of property rights protection for the last 2 years

Table 27	The situation in the sphere of property rights protection for the last 2 years by turnover			
	Up to 0,5 MUSD	From 0,5 to 2 MUSD	From 2 to 4 MUSD	Over 4 MUSD
Did not changed	50%	65%	86%	41%
Improved	22%	26%	0%	53%
Worsened	8%	4%	0%	0%
N/A	19%	4%	14%	6%

In respect of property rights protection respondents noted a significant progress during the last 2 years. 28% of respondents felt improvements in the sphere (last year 22%). It is strange that some companies (5%) mentioned a negative change though fight on piracy during the last 2 years was not a trifling matter. It is not unlikely that this reaction is related to the fact that larger companies enjoyed most benefits from pirates' persecution in the first place.

Table 28	The situation in the sphere of property rights protection for the last 2 years by location			
	Moscow	St. Petersburg	Novosibirsk	Others
Did not changed	59%	53%	45%	58%
Improved	27%	35%	36%	21%
Worsened	5%	0%	0%	9%
N/A	9%	12%	18%	12%

Dissatisfied with changes have turnover less than 2 MUSD. 53% of the largest companies see improvements.

Progress in property rights protection is more significant in Saint-Petersburg and Novosibirsk in comparison to the previous year. If last year there were the least number of companies which noticed improvements, this year this indicator is higher than on the average.

«The major two target markets served by Russian ITO vendors are as before the USA and Western Europe, with dynamic growth of demand for advanced and innovative ITO services in Scandinavian countries. Increasing attention is paid by vendors to such home opportunities as Russia, Belarus, and Ukraine.»

Arkadiy Dobkin
CEO and President, EPAM

Chapter 5. Primary markets

About half of the Russian software exporting companies are located in the two Russian capitals — Moscow and St. Petersburg. All major software companies and international development centers with little exceptions are also located there. Thus, by total revenues Moscow and St. Petersburg companies account for over the half of the Russian software export.

Good infrastructure, transport availability for international customers contributes to the high concentration of exporting companies in the capitals. However, this concentration led to tensions in the Moscow and St. Petersburg labor markets, which shows itself in the lack of available engineers and in the fast growth of already high salaries. This problem is being solves by the location of development centers of businesses from Moscow and St Petersburg in the regions and by the recruitment of man power from regions and CIS (mainly from Ukraine and Belarus).

Practically all important Moscow and St. Petersburg companies opened subsidiaries in the regions and CIS for the last 2 years. New offices are established primarily by the companies which already have effective geographically distributed structure and now they are engaged in the expansion.

It is not that easy to create such a structure. That is why very few middle and smaller companies dare to open a remote office. Only about 20% of respondents have branches. Providing this, the majority of them established Moscow rep. offices in order to be closer to the customers.

There are companies which open branches in order to support their customers (as a rule in CIS countries), but sometimes these branches perform functions of software development centers at the same time.

Thus, only large exporting companies establish a geographically distributed structure with the single purpose of using resources in the regions and neighbor CIS countries. All of them are generally known and make up the list of the leading software development services suppliers in Eastern and Central Europe.

We predict the growth of larger companies and, consequently, their regional development centers' network. Every year several new rep. offices are being opened by the companies with the geographically distributed structure. In 2007 the process of geographical expansion to the regions of Russia, Ukraine and Belarus of the development centers of the larger companies will most likely continue.

For the establishment of the remote development center larger companies choose quite big cities having good universities which produce engineers of the needed quality.

Location of subsidiaries

The poll results suggested the following cities as the most popular for the establishment of subsidiaries.

Russia:
Voronezh, Kazan, Nizhniy Novgorod, Novosibirsk, Rostov-on-Don, Samara, Saratov, Tver, Ryazan, Dubna, Omsk, Tomsk, Novokuznetsk.

Ukraine:
Kiev, Vinnitsa, Dnepropetrovsk, Odessa, Kharkov, Kherson.

Belarus:
Minsk, Gomel, Mogilev, Novopolotsk, Grodno, Vitebsk. .

Due to the difficulties in management of remote development centers the majority of Moscow and St. Petersburg companies also solve human resources'

Table 29	Branches in foreign countries					
	3-rd annual survey			4-th annual survey		
	2005	2006*	2007*	2006	2007*	2008*
The US and Canada	38%	43%	51%	39%	37%	39%
Germany	9%	17%	23%	16%	19%	23%
Scandinavia	6%	10%	15%	6%	6%	11%
Other European countries	13%	14%	17%	20%	20%	28%
Asia	4%	3%	8%	6%	5%	6%

* Forecasts

problem by the attraction of developers to their headquarters. Active recruiting in the regions and neighbor CIS countries is characteristic to those companies which have geographically distributed structure.

If in Russia and CIS the rep. offices are established in order to be closer to the resources in foreign countries they are needed for the better contact with existing and potential customers.

For the passed year the share of companies having representations in Germany and in other European countries (apart from Germany and Scandinavian countries) has risen dramatically. In the US and Canada there is a slight growth which can be neglected, while in Asia the increase by 1.5 times should not be taken into account as the sampling from that region is quite small. The fact that instead of 2 companies 3 mentioned representations in Asian may be accidental.

Foreign representations are being created by exporters of different size, but larger the company — more resources it has to open representation abroad. The majority of companies with foreign offices are located in Moscow and St. Petersburg.

In Scandinavia mostly St. Petersburg companies (18%) have representations; among Moscow companies the same is typical only to 5%; companies from Novosibirsk do not have Scandinavian representation while companies from other cities add only 3% to that statistics. According to the plans in 2008 the number of companies with Scandinavian representation will grow thanks to the regional companies — 15% of respondents from regions consider to open subsidiary in Scandinavian countries.

Comparing the actual presence of foreign offices in 2006 with the plans for the present year, there is a full coincidence for Germany, the plans for the US (-with Canada) and Scandinavia are partly not reached, while in other European countries there were opened more subsidiaries than planned.

The general trend is as follows: Europe is catching up with North America by the number of branches owned by the Russian companies.
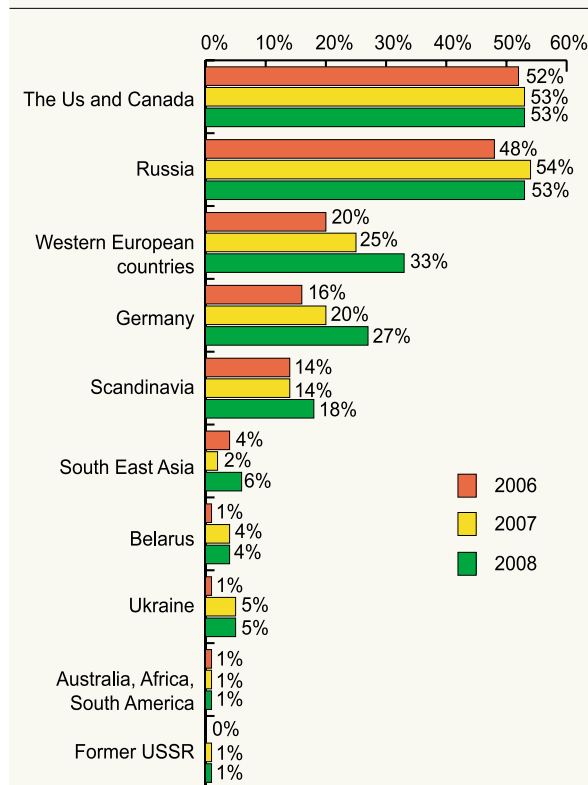
As for the US and Canada the plan for 2007 is adjusted towards decline. Last year 51% of respondents planned to open offices in that region, while this year only 37%. In practice this means that a big part of the companies willing to have representation in the US and Canada have already done it.

For Germany. Scandinavia and Asia — planned parameters for 2007 also decreased. As for the other European countries these parameters are adjusted towards growth as in 2006 there were opened more representations than planned. In the current year we expect the growth in the number of companies having offices in Germany, which may be linked to the aggressively promoted idea of the strategic cooperation between Germany and Russia in IT sphere which was introduced by RUSSOFT and BITKOM at CeBIT exhibition. As for the other regions there are no expectations of significant changes for 2007. Last year dash of the other European countries will hardly continue.
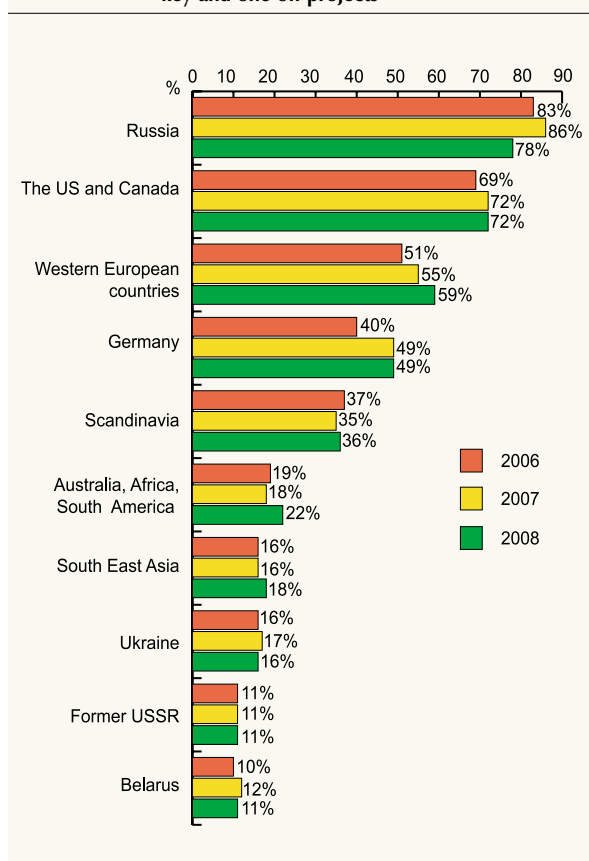
But in 2008 28% of the companies (now this figure is 20%) plan to open representations in that region. Number of companies having offices in Scandinavia and Germany shall grow from 6 to 11% and from 16 to 23% respectively. In the US and Canada as well as in Asia, according to companies' plans, will remain only these representations which exist now.

Data on the foreign offices corresponds to the markets which are considered as key markets by the respondents in 2006 and upcoming 2 years. The US and Canada were named a key market by 52% of respondents. For 2007-2008 this indicator is practically the same (53%). The importance of other European countries according to poll results will grow from one year to another. 20% of the companies consider this region as a key market in 2006 and 33% of them think

Picture 14　　Key markets

Picture 15   **Presence on the global markets, including key and one-off projects**

Table 30   **Vertical markets of exporting companies**

	2005	2006
Information Technology	80%	89%
Science & Research	28%	36%
Banking & Financial Services	27%	35%
Retail & Distribution	30%	35%
Telecom	38%	34%
Industrial Automation	19%	31%
Government	23%	28%
Hospitality, Travel & Transportation	22%	24%
Healthcare & Pharmaceuticals	25%	23%
Gambling & Entertainment		20%
Power supply, Gas & Oil	16%	18%
Other	17%	-

In other regions which are not considered as priority markets by the Russian developers we do not expect a large number of newcomers in 2007-2008. These regions are interested to less than 2-3% of respondents.

Europe is becoming more important for the Russian developers, while the importance of America remains the same. This tendency was present in the previous year as well.

Vertical markets

Changes in the structure of exports by industries in comparison to the previous year indicate the extension of customer range characteristic to the majority of respondents. The number of records increased practically in all industries. Telecom and healthcare have fewer records which can be charged as inaccuracy. However, the growth of records for information technology (plus 9%), industrial automation (plus 12%), science and research (plus 8%) and banking and financial services (plus 8%) can hardly be explained by inaccuracy.

The dramatic growth of indicators for information technology, science and research providing their high absolute values confirm the fact the specialization of Russian companies on the complex and challenging projects in the sphere of software development and engineering become more evident.

In the previous research it was mentioned that not many Russian companies work with foreign customers representing industries, although there are conditions for the increase of them. To all appearances assumption on the existence of these conditions was correct as the number of references for industrial automation grew the most — by 12%.

that it will remain as such in 2008. For Scandinavia this indicator increases from 14 to 18%, while for Germany from 16 to 27%.

Russian market as such was included into the questionnaire for the first time this year in order to assess the attractiveness of the Russian market in comparison to other markets. It took the second place. The respondents consider that in a year the Russian market will be as attractive as the markets of the US and Canada. It is forecasted that in 2008 this indicator will remain the same for Russia — 53% of the companies will view the Russian market as priority market for their business.

As for the number of companies operating on the market our survey put Russia on the first place and it should reserve it in the future. A small number of companies will appear in the US and Canada; a bit more newcomers to the market are expected in Germany and in other European countries. In Scandinavian countries appearance of new Russian companies is not expected at all in the coming 2 years.

«The level of Russian education is something we can be proud of. Our students prove it every time when they come out on top of the international competitions. What we need to do now is to standardize our educational programs according to the world-standards, add some industrial programming subjects and develop tutoring system. Most leading Russian software vendors understand it and take active part in the educational process. Thus, we are facing a steady IT-specialists qualification growth.»

Prof. Andrey Terekhov
Head of Software Engineering Chair
at St.Petersburg State University
CEO, Lanit-Tercom

Chapter 6. Human resources and situation on labor-market

As the level of training and the number of specialists in many respects determine the situation in the sector, this year more attention were paid to personnel problems than in previous annual researches. Compared with previous years, the difference in the range of questions is significant.

First of all, the number of questions concerning personnel problem increased significantly. In the previous research respondents estimated the existing supply on the labor-market and education system simultaneously. The answers to these questions gave just a general idea of the importance of personnel problem in different cities and in different groups of companies.

In order to bring into focus existing problems and tendencies, this year respondents were asked as to which specialists they missed the most and which specialists they recruited. Besides, there appeared subsections of questions concerning cooperation with the high school, personnel turnover, actual number of personnel and their skills in foreign languages.

In spite of such substantial changes, it is still possible to conclude how the importance of personnel problem in software companies changed. There remained some overlaps in the answers.

Questions concerning cost of man-hour and average salaries remained. However, the wording for the question relating to the average salary did not change. This allows making direct comparison with the data of the previous studies.

On the basis of available results we can make a conclusion that for the passed year the situation with the availability of staff did not change substantially. As well as before, only 10% of respondents note that they don't have any problems with developers' recruitment and their training. In the previous research every tenth respondent estimated the situation with personnel on the whole as «good», while this year the same amount of respondents «don't feel lack of specialists». Wordings of questions and answers differ, but not to the extent not to allow to have a general idea of the tendency.

The overall conclusion is as follows: the situation with the staff availability is stable and difficult. However the problem can be observed from the other side. Demand for Russian developers' services grows so rapidly that supply which grew by 20% for the last year doesn't keep pace with it.

Lack of engineers

As well as a year ago personnel problem is the most important for large companies. Only 5% of companies with the staff over 120 people don't feel lack of developers. The same indicator for those companies which have less then 35 people in staff is 11%. Mid-size companies (from 35 up to 120 people) have a little higher indicator — 16%.

Last year all companies with the staff over 120 people recruited at least one developer. Among all the rest only one out of 20 companies did not employ any programmer. So almost all companies experience personnel shortages, aiming at increasing the number of developers or more or less are active on labor-market.

Taking into account cities separately, it is strange enough but the majority of those satisfied with staff supply are located in Moscow (14%) and in Saint-Petersburg (12%). Last year everything was vise versa. It is generally assumed that the situation on labor-market in two Russian capitals have been and remains the most difficult.

This contradiction can be explained by the fact that the majority of companies which establish development centers in the regions of Russia, Ukraine and Belarus and attract developers from other regions —

are located in Moscow and Saint-Petersburg. Besides, many companies in these cities made efforts of training engineers (for example, they opened training-centers). So, they took different measures and saw their results, and most likely they are satisfied by them-selves. Companies calmed down and ceased to complain about the lack of personnel.

Though it is still worth to note that very few managers irrespective of location of their companies don't feel shortages of personnel.

Table 31	Share of companies which don't have shortages of personnel, %		
Moscow	Saint-Petersburg	Novosibirsk	Other
14%	12%	9%	6%

Surely, structure of demand in terms of location is also not homogeneous. It is connected with the fact that regional specialization has been already determined. Differences are substantial for a number of engineers. DB developers are more in demand in Moscow (27%) and less in Novosibirsk (9%).

Novosibirsk has the biggest problems with test engineers (shortage is felt by 45%), while in Saint-Petersburg companies need them much less than in other cities (probably the problem with testers in St. Petersburg was resolved by the intensive training program for testers launched by StarSoft company on the base of the State Technical university). At the same time in 2006 testers were recruited in all cities equally actively. Every third company employed a test engineer.

There is a particular shortage of web-developers (ASP. Net/ MS SQL) in «other cities». However, their shortage is not felt at all in Novosibirsk. Last year companies from Novosibirsk which took part in the survey did not recruit them at all. Besides, in the biggest city of Siberia there is no shortage of web-developers (PHP/MySQL) due to the same reason. Most likely this is connected not with the abundance of such specialists, but with the specialization of Siberian companies.
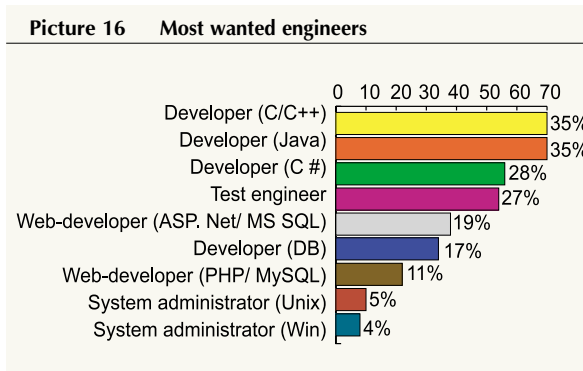
Besides, last year in Novosibirsk there was an active recruitment of system administrators, and now Siberian companies don't feel lack of such specialists.

Table 32	Demand for engineers by location			
	Moscow	Saint-Petersburg	Novosibirsk	Other
Developer (C/C++)	27%	41%	45%	33%
Developer (Java)	32%	29%	27%	42%
Developer (C #)	27%	35%	27%	24%
Developer (DB)	27%	18%	9%	12%
Test engineer	27%	12%	45%	27%
Web-developer (PHP/ MySQL)	14%	6%	0%	15%
Web-developer (ASP. Net/ MS SQL)	14%	18%	0%	30%
System administrator (Win)	5%	6%	0%	3%
System administrator (Unix)	9%	6%	0%	3%

Developers with C/C++ and Java knowledge are in the greatest demand in Russia. It corresponds to the popularity of these programming languages. This shortage if reflected on wages. It is already impossible to find a Java developer for 1, -5 thousand $. To find another developer with the same wage is more real. C/C++ и Java — now are the most required technologies among customers. This shortage has affected the salaries of these specialists.

At present educational programs are built so that C/C++ is more often replaced by such languages as Java and C#. That is why the population of C/C++ developers doesn't renew.

Third and fourth places in the list of wanted specialists are occupied by C# developers and test engineers. System administrators cause the least problems.

Picture 16 — Most wanted engineers

Developer (C/C++)	35%
Developer (Java)	35%
Developer (C #)	28%
Test engineer	27%
Web-developer (ASP. Net/ MS SQL)	19%
Developer (DB)	17%
Web-developer (PHP/ MySQL)	11%
System administrator (Unix)	5%
System administrator (Win)	4%

The size of companies directly influences the demand for certain specialists. Larger the company, more problems it has with recruitment of the following specialists: developer (Java), developer (C#) and Web-developer (ASP. Net/ MS SQL).

Companies with the staff over 120 people have more options to get large orders which require recruitment of listed engineers. There is lack of these specialists on the labor market that is why there is such a distortion.

Companies oriented to local market do not care about the situation on the labor market at all. 27% of companies where the export share accounts for less then one tenth of the total income do not experience shortages of developers. This means that personnel shortage is caused mostly by export orders.

Companies oriented to export do not require PHR/MySQL developers at all. At the same time ASP. Net/MS SQL developers are not required by companies which have less then 25% of income from export.

PHP technologies are used for development of web-sites, production of which is rarely outsourced by foreign customers. While ASP.NET technologies are used for development of complicated information systems which are usually ordered by western customers.
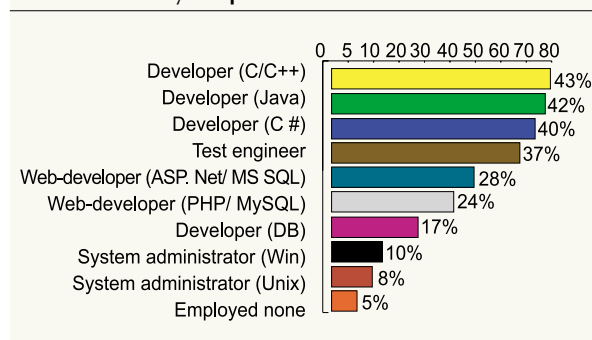
Respondents had an option to name other professions. As a result there were added: project managers (3 references), analysts (3), technical writers,

C/C++ developers for UNIX and Delphi (1 for each), Senior architect (Java/.Net/C++), html-designers, account managers, Data Warehousing.

Employment of developers in 2006

Only 5% of companies haven't recruited any engineer in 2006. References to professions on the whole coincide with rating of their shortage. That means that last year demand was not satisfied and companies are planning to go on increasing the number of personnel.

Picture 17   **Engineers, most often employed by companies in 2006**

Developer (C/C++)	43%
Developer (Java)	42%
Developer (C #)	40%
Test engineer	37%
Web-developer (ASP. Net/ MS SQL)	28%
Web-developer (PHP/ MySQL)	24%
Developer (DB)	17%
System administrator (Win)	10%
System administrator (Unix)	8%
Employed none	5%

Cooperation with the high school

The problem on the labor market makes the majority of companies take part in training of personnel. Large companies as a rule cannot go without it. Almost all companies with the turnover over 4 MUSD and the number of personnel over 120 people cooperate with high schools. The smallest companies have fewer possibilities to arrange contacts with universities. However, more than a half of companies of this category also work with students.

Different forms of cooperation with high schools are used. The most widely used method is training on probation, which speeds up the process of training of a qualified engineer. Young men while studying at the university get a chance to receive a valuable experience of working in a successful company. If a university graduate has only an academic training, he (she) has to be trained additionally in the process of work as a member of staff.

Targeted preparation with a further employment is less often mentioned than training on probation due to its complexity. «Development and conducting of training courses» is on the third place with high indicators.

In Novosibirsk companies are less active in the implementation of joint programs with the high school. Though it may be connected with a fewer sampling for this city. In Saint-Petersburg training on probation is more popular. But in other cities (-apart from Moscow and Novosibirsk) the indicator is almost the same.

Picture 18   **Main forms of cooperation of companies with universities**
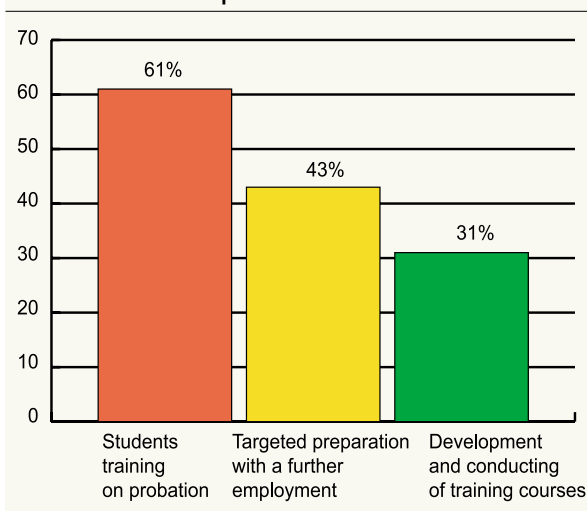
Companies with export share of 51-75% cooperate with high schools most actively as they are the largest ones. Least of all cooperate companies receiving insignificant share of income from export (less then 10%). They have fewer problems with personnel.

Apart from earlier mentioned widespread forms other forms of cooperation wi higher schools are also used by companies. For example, ABBYY organized the department of image recognition and word processing in MFTI. The company's employees act as lecturers. Software companies rather often support different competitions and contests on programming on the financial and organizational level. Some of them sponsor world championships on programming among students at the stage of quarter-finals and semi-finals.

Rating of universities graduates which are most wanted by software companies was composed for the first time this year. 4 leading universities were determined for Moscow and Saint-Petersburg. They are ranked according to the number of references. Among the rest there are those universities which were mentioned by respondents, but more rarely.

In regions estimation of universities is mostly the same. The first place as a rule belongs to classical state university (with mathematic and mechanic, physical and mathematic faculties), and the second one — to one or more technical high schools.

For example, in Novosibirsk graduates of Novosibirsk State University are in the greatest demand. Novosibirsk State Technical University is on the second place. In Nizhniy Novgorod this pair is absolutely the same. Nizhniy Novgorod universities even have similar names, except for the first word which reflects their location. There is almost the same situation in other cities.

Staff turnover

The sector has a very good index of staff turnover, particularly given rather fierce competition between companies on the labor market. It constitutes 6-8%

Table 38	Average cost of man-hour by the size of companies, USD	
Large companies (over 120 employees)		26-30
Middle size companies (35-120 employees)		20-22
Small companies (Less than 35 employees)		15-20

In most cities average salaries grew in approximately 1, 5 times. Moscow is the only exception. Last year companies in the capital paid in salaries by 84% more than a year before. Moscow salaries are still much higher than in Saint-Petersburg, which differs greatly from the previous year when they were practically the same.

Table 39	Average salaries by location of companies, USD			
	Moscow	Saint-Petersburg	Novosibirsk	Other
2005	1003	974	747	600
2006 1850	1400	1100	900	
growth, %	84	44	47	50

Picture 20   Average salaries by location of companies, USD
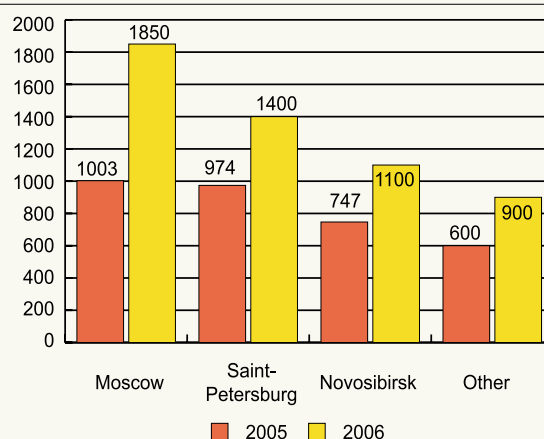
«The demand for Russian IT skills has been increasingly growing in the U.S. and Europe for the last several years. Russia has a large pool of talented IT specialists able to solve complex tasks and provide hi-end solutions. In the current multi-sourcing environment, experienced Russian outsourcing service providers are able to become reliable strategic partners for Western high-tech and software companies.»

Alexis Sukharev
President and Founder, Auriga

Chapter 7. Technologies

Operating systems

The frequency of records of different operating systems used by the companies corresponds to their popularity on the global market. Anyway, all changes in comparison with the previous year may be explained by the global trends. For example, the growth of records for MS Windows Mobile from 33% to 42% corresponds to the speedy growth in the sales of mobile devices existing practically in all countries. With the wider penetration of these devices the demand for related applications developed for the operating systems used in mobile handsets and PDAs is also increasing.

In particular, with the growth of demand for mobile applications the number of records for Symbian OS increased from 15% to 20%.

12% growth (from 15 to 27%) of the indicator for Mac OS is also explicable. Apple which uses it in its computers improves its positions on the global PC market. By the end of this year some experts predict the growth of its share by 1.5 times. However, the Apple share is still too small – only 2.8% – according to IDC.

The growth of records for Solaris from 24% to 30% apparently reflects activity of the Sun Company on the promotion of that system. In 2005 it launched freeware version of Solaris (OpenSolaris) and secures the possibility to integrate Linux-applications into the OS Solaris.

There were no evident grounds for the change of Open/Free/NetBSD indicator. Thus, it remained on the same level – 32% (33% this year).

A large number of respondents still work with DOS – about 16%, even more than a year before (10%). The OS itself is quite obsolete and it is currently used in niche segments. However, there is a necessity of transfer applications from DOS to other platforms that is why the indicator for DOS usage is not decreasing but even growing.

The mentioning of operating systems installed on mainframes grew from 4 to 7%. With the growth of scalability and integration facilities of program

Picture 21   Major operating systems

	0 10 20 30 40 50 60 70 80 90 100
MS Windows 9x/2k	96%
GNU Linux family	58%
MS Windows Mobile	42%
Open/Free/NetBSD	33%
Sun Solaris	30%
Mac OS	27%
HP-UX	23%
Symbian OS	20%
DOS	16%
Mainframe	7%
Novell Netware	7%

Table 40   Major OS as compared to the previous year

	2005	2006
Windows	93%	96%
Linux	69%	58%
Windows Mobile	33%	42%
Open/Free/NetBSD	32%	33%
Sun Solaris	24%	30%
Mac OS	15%	27%
Symbian OS	15%	20%
Mainframe	4%	7%

systems the necessity to develop expertise in that sphere emerges.

Windows and Linux positions did not change significantly. The most widespread OS is used by 96% of respondents. Deviation from the last year indicator (93-94%) lies within inaccuracy limits. We can point out that a little decrease in the records of Windows thanks to the growth of Linux popularity noticed in the previous 2 years did not continued this year. Today we even see a reverse trend related to the fact that hopes for Linux did not fully meet expectations.

As for the shareware OS there can't be a univocal conclusion. We can merely assume that the frequency of their mentioning did not change dramatically. There was a change in the questionnaire – two of them were combined into one as they duplicated one another. Besides, the list of operating systems offered to respondents changed. This changes referred to Linux family.

Last year Open source Linux/Unix was used by 67% of respondents. This year we eliminated this category completely. However, we can determine the share of companies which employed open source systems. It accounted for 65% and most likely would not have changed if the question from the last year remained in the questionnaire.

Linux which was dealt separately lost 11% (58% vs. 69% last year) but providing introduced changes into the questionnaire it is more reasonably to compare the records for commercial and shareware Unix-like systems. The frequency of records for them decreased by 2-3 %, while for Windows increased by 3%.

Table 41   Free and proprietary operating systems

	2005	2006
Windows	93%	96%
Opensorse *nix	67%	65%
Commercial *nix	26%	23%
Mac OS	14%	27%

Probably this is the result of counterattack by Microsoft which Russian subsidiary did not pay attention to Linux before and have recently started a purposeful fight on the strengthening positions of this company in Russia.

The reasons for such changes may be related to the changes in questionnaire. The only thing which is clear is that there's no evident shift in the fight between shareware OS with the commercial ones. If for the previous years Windows lost its positions a bit, while now it has restored them.

In terms of cost reduction it is more beneficial for developers to use shareware programming products. However, this approach bears a lot of pitfalls connected with the decrease of the efficiency of their work.

At the development of solutions for commercial operating systems developers get strong marketing support from vendors. For instance, Microsoft in different ways helps developers who by their Windows-related applications contribute to the popularity of this OS.

However, there are certain problems with the promotion of Vista – the next operating system of this company. Thus, the interest to shareware may increase in the future.

This year the list of operating systems was added by the Netware OS (it got 7%) and OS/2 was excluded because IBM had ceased support of this OS quite a long time ago. For some time applications for that operating system were still needed but this time has gone.

Popularity of various operating systems among different categories of companies is not even. The larger companies naturally mention practically all OS. The range of their partners and fields of activity are quite wide which leads to the necessity of working with the large number of operating systems.

Among the most significant deviations from the average parameter in the first place we should mention smaller companies employing less than 35 people. These companies (and this is understandable) rarely work with Netware and Mainframe. The most popular OS among them are Linux and Windows. As for the other operating systems the usage indicator is lower than on the average.

There are considerable deviations from average by the cities. In Novosibirsk Mac OS is popular (2 times higher than on the average), while Netware and Mainframe are neglected. DOS is mentions 3 times rarely by St. Petersburg companies. Mainframe is quite widespread in St. Petersburg and Moscow which also correlate with the size of the companies.

Table 42   Major OS by location of companies

	Moscow	St. Petersburg	Novosibirsk	Other
MS Windows 9x/2k	95%	94%	91%	100%
GNU Linux family	45%	71%	36%	67%
MS Windows Mobile	32%	59%	36%	42%
Open/Free/NetBSD	23%	29%	9%	48%
Sun Solaris	36%	35%	27%	24%
Mac OS	23%	18%	55%	24%
HP-UX	27%	24%	18%	21%
Symbian OS	14%	18%	18%	27%
DOS	18%	6%	18%	18%
Mainframe	14%	12%	0%	3%
Novell Netware	5%	6%	0%	12%

Linux is less used in Moscow and Novosibirsk. Leadership of St. Petersburg in use of MS Windows Mobile is noticeable. Everything connected with mobile technologies is very dear to St. Petersburg companies.

Open/Free/NetBSD has quite high indicator in other cities column (all cities apart from Moscow, St. Petersburg and Novosibirsk). It is 48%, while Russia average is 33%.

There is a correlation between number of references to OS and the share of export in the total revenues. The largest number of operating systems is used by the companies with the share of export at the level of 25% up to 50%. This can be explained by the fact that the majority of companies with such a share of export are larger companies.

Slightly less number of OS is employed by the companies which are oriented to external markets. Providing this, the references to different OS by the companies where export constitutes over 50% of revenues is higher per all OS. The only exceptions are DOS and Netware. However, the sampling for this OS is so small that it can be neglected.

Table 43   Major OS by the share of export in turnover

	Less than 10%	From 11% to 25%	From 26% to 50%	From 51% to 75%	Over 75%
MS Windows 9x/2k	100%	100%	100%	90%	97%
GNU Linux family	45%	43%	88%	80%	60%
MS Windows Mobile	27%	29%	63%	70%	49%
Open/Free/NetBSD	9%	14%	63%	50%	37%
Sun Solaris	9%	14%	38%	40%	34%
Mac OS	9%	0%	13%	40%	34%
HP-UX	0%	29%	25%	30%	31%
Symbian OS	9%	0%	38%	40%	23%
DOS	18%	0%	25%	20%	17%
Mainframe	0%	0%	0%	10%	9%
Novell Netware	9%	0%	13%	0%	6%

For companies with the focus on the local market (share of export is less than 10%) the indicators of usage for all OS are significantly lower than average. Only Windows stands out — this system is used by 100% of the group. References to Linux are practically the same (45% vs. 58% on average), while deviation for MS Windows Mobile (27% vs. 42%) is more essential; as for other OS the indicators differ by several times. Most likely the volumes and the structure of demand in the internal market differ from foreign markets, which in its turn may be explained by the gap in technological development of these markets.

DBMS

The number of DBMS offered for assessment to respondents increased greatly as compared to the previous year. Last year we evaluated only most popular systems; in this survey we included practically all existing systems.

However, not all presented DBMS were mentioned by respondents. That's why DB4, PrimeBase, Rdb got zero indicators and were not included into the

table. Fox Pro was expelled from the questionnaire as it doesn't have any prospects.

As a year before the most mentioned systems are MS SQL and MySQL (within 70-75%). The only difference is that these systems changed places with one another. MySQL grew by 6%, while MS SQL decreased by 2%, which confirm the assumption of better prospects for MySQL against its age-old competitor.

The number of Oracle references increased a little and now this system in catching up with the two leaders. This growth was mainly secured by middle companies.

MS Access positions worsened, but still this system is among 4 the most popular DBMS.

Expensive and powerful systems like Oracle, Sybase, SAP, IBM as a year ago are preferred by larger companies. But references to Oracle a bit grew among middle companies. The cost of this system doesn't frighten them. Wide penetration of this system is supported by the policy of its vendor aimed at customer support.

The indicators for all systems which are considered to be expensive improved (IBM DB2 demonstrated the highest growth — from 18% to 30%). Probably this can be explained by the fact that all leading developers have free versions of their DBMS.

MS SQL and MySQL remain the most popular systems among companies of any size. Smaller companies prefer «free» Firebird and PostgreSQ to IBM and Sybase. PostgreSQL is quite often mentioned by larger companies as well.

Table 44   Major DBMS

	2005	2006
MySQL	70%	76%
MS SQL	75%	73%
Oracle	61%	66%
MS Access	49%	42%
PostgreSQL	-	35%
IBM DB2	18%	30%
MSDE	-	22%
InterBase	-	19%
Firebird	-	17%
IBM Informix	11%	14%
Sybase	19%	22*
Sybase ASA	-	12%
Paradox	-	11%
SAP DB	10%	10%
Sybase ASE	-	10%
SQLite	-	8%
Sybase IQ	-	7%
Berkeley DB	-	6%
Cachee	-	4%
Ingres	-	4%
DataFlex	-	2%
Pervasive SQL	-	2%
LINTER	-	2%

* – сумма показателей для Sybase ASA и Sybase ASE

Programming tools

As compared to the previous year Java language is mentioned more often. Its indicator grew from 32%

Table 45   **The use of some programming languages as compared to the previous year**

	2005	2006
Java	32%	44%
PHP	13%	12%
Pascal (Delphi)	9%	12%

to 44%. C/C++ family yields its positions a bit but still is among leaders. PHP retained leadership (the indicator is practically the same) and remained the most popular language for Web-applications.

Table 46   **The most popular development tools**

	2006
Microsoft Visual Studio	50%
Eclipse	21%
IntelliJ IDEA	14%
Delphi	10%

Picture 22   **Most popular programming tools, 2006**

C/C++	44%
Java	44%
.NET (C#, VB.NET, ASP.NET)	43%
PHP	12%
Pascal (Delphi)	12%
Perl	<5%
ABAP	<5%
COBOL	<5%
PL/SQL	<5%
T-SQL	<5%
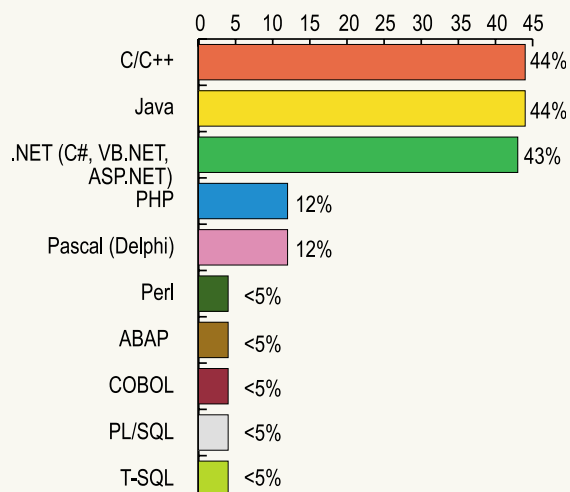
Chapter 8. Quality management systems certification

For the passed year the number of respondents having quality management systems complying with one of the international standard (ISO or CMM/CMMI) increased from 18% to 28%. Here we take into account only those companies which can confirm in writing the compliance of their systems with one of the international standard.

Some companies tend to comply with the international standards without formally obtaining the compliance certificate. Sometimes they manage to do so and they convince their clients that their quality management systems are in line with ISO or CMM/CMMI standards. These companies are not ready to undertake certification procedures at the authorized appraisers; however it is not unlikely that they can get a compliance certificate if they have sufficient financing.

According to the data base of outsourcing-russia.com, less than 10% of the exporting companies went through certification compliance procedures. The data of the present research is much higher.

Such difference is explained by the fact that in the survey were active companies which went though compliance certification or which implemented the quality management system without confirmation of compliance with one of the international standards. Thus, the sampling is not similar to the general totality.

In this case outsourcing-russia.com allows assessing the situation with certification more fairly.

Table 47	Share of the companies which went through compliance certification with the international standards*, %
ISO 9000/ ISO 9001	27%
CMM/CMMI	10%
Not certified	72%

* – totally there are more than 100% because several companies have compliance certificates with several standards.

Last year mostly larger companies (over 120 of staff) wend through certification. Thus, only 1/3 of the companies from this group have quality management system which is not certified to one of the international standards. A year ago the number of such companies was considerably higher — about a half of the group. The number of companies with the staff less than 120 people which wend through certification also increases, but the changes in that group are not that noticeable.

Table 48	Share of companies having quality management system in compliance with the international standards by personnel, %		
	Up to 35	**From 35 to 120**	**Over 120**
2005	6%	21%	47%
2006	8%	26%	71%

For the passed year the number of companies whose quality management systems comply with CMM/CMMI standard created especially for software developers nearly doubled. The share of such companies is 10%, while last year there were only 4% of them. However, the real share of companies having confirmed with the written documents such compliance is most likely less than 10% of all exporting companies.

Software Engineering Institute (SEI, developer of CMM/CMMI standards) unfortunately does not have detailed statistics by countries. Authorized appraisers of this Institute check quality management systems for the compliance with the standards. Publication of the results of such examination is not obligatory. Thus, we do not have accurate data on the number of Russian companies which went through such checking procedure.

There are 4000 companies in the list which declared compliance with CMM/CMMI. According to rough estimations, there are 20 Russian companies in that list. Taking into account that there are 1000 software exporters in Russia according to RUSSOFT data, then we have only 2%, and not 10% as the survey showed.

The expensive checking procedure for the compliance with the CMM/CMMI was passed mainly by the largest companies. For the group of companies employing over 120 people the share of companies which declared compliance with the CMM/CMMI standards is 33% (last year only 20%). As a rule these companies have also certificate for compliance with ISO standard.

The growth is quite significant. However, here we most likely have the same overestimation related to the fact that companies work in accordance with the standard but did not pass official certification for compliance. Thus, the CMM/CMMI compliance certificate is obtained by less companies than mentioned 33% of larger companies.

Table 49	Share of companies having quality management system in compliance with the international standards by location*, %			
	Moscow	**St. Petersburg**	**Novosibirsk**	**Other**
ISO 9000/9001	27%	35%	9%	24%
CMM/CMMI	9%	24%	0%	6%
Non certified	73%	59%	91%	73%

* – totally there are more than 100% because several companies have compliance certificates with several standards

Notwithstanding a considerable growth of companies certified to ISO 9000/9001 standard, their share is too small as compared to the developed countries and Indian and China. We do not have data for software companies but the ratio of the number of

companies certified to ISO (for all industries) to the total number of companies is 10-20 times less in Russia than in developed countries.

As compared to 2001 the growth in the number of certified companies in all industries is huge. The highest rate of growth was mentioned in 2004 – the number of ISO certificates issued to the Russian companies increased by 4 times. Then the growth slowed down to 25%. The same trends were typical to the software industry. Thus, Russian is very slowly catching up with the developed countries, and not only them, in terms of ISO certification.

For example, by the number of obtained certificates for ISO 9001:2000 standard India is within the top ten countries, while China took the undisputable lead. Russia is far beyond that top ten, although in terms of size of economy and overall number of companies should have at least approached these countries. Even such small countries like Poland and Czech Republic which are not considered developed, can boast of larger number of ISO 9001:2000 certificates than Russia.

In India and China there are 6-7 times more software companies with quality management systems complying with CMM/CMMI standards than in Russia, even notwithstanding the last year doubling of indicators.

It is encouraging that there appeared authorized appraisers in Russia (e.g. RUSSEE/TEKAMA). Now Russian companies can get consulting services or go through certification for compliance with CMMI standards without using expensive foreign consultants.

We should remember that compliance certification is not an end in itself. Some time ago India and China aggressively certified their quality management systems, which certainly raised the culture of developments but at the same time led to the decrease in the level of confidence by customers to these certificates.

However, it is interesting to know why so few companies in Russia went through certification and to what extent these certificates are needed. It is possible that some forms of state support for exporters would be efficient here as they were in India and Chine.

It is worth remembering that 69% of companies consider state support in the sphere of certification as bad. At the same time certification of quality assurance system is considered as one of the most important issues for successful business by respondents.

However, only one third of respondents declared the plans to certify their quality management systems in upcoming 2 years. We assume that certificates are needed to the larger number of companies but many of them postpone certification due to high prices for the authorized appraisers' services. This is the task for a separate survey. In this research we can only briefly assess the situation with compliance certification and make conclusions relying on the plans declared by companies.

These plans show that larger companies in the majority have already passed certification for compliance with CMM/CMMI standard and in the coming 2 years will not endure another certification. Only 5% of companies employing over 120 people plan to go through certification procedure by 2009. A year ago the figure was 20%. After 2007 none of the larger companies plan to obtain any certificate.

This means that the certification plans were fulfilled in the previous years. It is obvious that all larger companies which management thinks that they need an international compliance certificate went through all necessary procedures of checking their quality management systems.

It should be mentioned that sampling is not quite accurate. It allows only to define the general trends. It is possible that there are larger companies which did not take part in the survey but plan to certify their quality management systems in the future.

The share of companies planning certification is decreased in all groups but not that dramatically. Only 33% of respondents plan to certify their quality management systems in the upcoming years.

Table 50	Share of companies planning to certify their quality management systems in the upcoming 2 years by personnel, %			
	Up to 35	From 35 to 120	Over 120	Overall
2006	39%	53%	5%	33%
2005	≈25%	≈50%	≈20%	≈30%

The same figures were noted a year before. If the number of larger companies planning certification shrink sharply, the number of smaller companies (- up to 35 people in staff) cherishing hopes for certification grew. For the middle companies the situation did not change. The majority of them planned to go through certification in 2007, thus, it is premature to make any conclusion on the fulfillment of their plans.

Conclusions

The survey shows that on the whole software development industry is advancing, although limited financial resources and lack of state support restrain the companies from having more ambitious plans.

According to analytical data and foreign researches positions of Russian software development business on the global market have strengthened.

In the opinion of the large foreign customers the main advantages of Russian software companies are as follows: low level of staff turnover, availability of qualified technical specialists, ability to follow the changing needs of customers.

Major foreign customers ceased to complain about Russian infrastructure and forgot problems connected to the intellectual property rights protection.

One of the main problems of the foreign customers still remains the language barriers. But they still note that the situation changers to better.

Business conditions in Russian are improving, which is reflected in the growth of investment into the economy of the country (including the IT sphere).

In Russia the majority of programmers are involved into complex, science intensive and challenging projects. This specialization is strengthening from one year to another.

The growth of export of the Russian software companies in 2006 was bigger than expected. It accounted for 54%, while the volume of export reached 1,5 billion USD.

The growth in export can be linked to the increased number of big complex projects which are more expensive and require more qualified and higher paid specialists.

The companies are consolidated due to merges, growth in staff, establishment of subsidiaries in the regions and neighbor CIS counties, man power migration.

The share of larger companies in total export earning in 2006 grew up to 55% (in 2005 it was 49%). Larger companies built up their staff by 20%, while for the rest of companies this indicator is lower.

The importance of the local market, according to the respondents estimations, is growing. The groth of the Russian software development outsourcing market is considered as the major trend of the market in 2006 while the second and the third places are given to the growth of export and to the merges and acquisitions in the industry.

Russian local market will become the Priority market #1 for Russian providers in 2008, bypassing markets of US and Europe. Still overall export of software products and services will continue to dominate over production for the local market.

For the passed year the number of respondents having quality management systems complying with one of the international standard (ISO or CMM/CMMI) increased from 18% to 28%. The dynamics is encouraging but in practice the share of companies having compliance certificate is considerably lower.

In the largest cities (St. Petersburg, Moscow and Novosibirsk) the peak of implementation of quality management systems has long gone. The majority of larger companies already have these certificates. At the same time, Russia is among countries that are lagging behind in terms of quality management certification.

The number of larger companies planning certification shrink sharply, the number of smaller companies (up to 35 people in staff) cherishing hopes for certification grew.

For the passed year the share of companies having offices in Europe increased considerably. Europe (especially Germany) is becoming one of the key markets for Russian software developers, while the importance of the American market remains stable. The same trend was mentioned in the previous surveys.

New representations are mainly opened by the companies which already have effective geographically split-up structure.

Survey among software companies shows that conditions of their work improved a little, but not to the extent to call them satisfactory.

The improvement in the state support was noted by 81% of respondents with the turnover over 4 MUSD. This indicator grew significantly for the last year.

The most wanted specialists in Russia are developers with the knowledge of C/C++ and Java.

In 2006 only 5% of companies did not recruit a single specialist. All the rest are quite active on the labor market. Difficult situation on the market forces companies to participate in trainings and support of future employees.

The increase in the average salary in the larger companies (employing over 120 of staff) is 24%, while for the rest of the companies the salary grew in 1,5 times.

In the majority of cities the average salary grew 1,5 times. However, in Moscow companies paid more by 84% than a year before. The Moscow average salary is again higher than in St. Petersburg, which justifies significant changes in the labor market.

EXIGEN SERVICES COMPANY PROFILE

Overview

Exigen Services provides technology-driven application outsourcing services from multiple delivery centers across Central and Eastern Europe. With a strong operational base in EU and a deep reach into the local talent pools in Russia, Ukraine and Belarus, Exigen Services has been serving some of the world's leading companies for over 15 years. As one of the largest and most comprehensive software outsourcing providers in Central and Eastern Europe, we combine the highest quality talent and project management capabilities with the convenience and client service expected from an EU-based partner.

Experience

With our strong technical expertise in a wide spectrum of modern and legacy technologies, as well as deep knowledge of business processes in a range of core verticals, including banking, insurance, telecom and media, Exigen Services provides a continuum of services, from standard staff augmentation and ADM engagements to high value services and large scale transformational projects. Our clients include T-Mobile, Deutsche Bank, Standard & Poor's, Universal Music Group, Dell, CSC, and others.

Agile Leader

Exigen Services is a global leader in applying Agile development methodologies to offshore software development. We work with our clients worldwide to deliver distributed and offshore Agile development projects, and provide consulting and training services to help our clients achieve agility in their software outsourcing initiatives for better quality, customer satisfaction, and higher ROI.

Technology-driven Application Outsourcing

Exigen Services use proprietary SOA-based methodologies and tools to analyze legacy systems and to model the best adapted solution. Our toolkit contains open source components such as rules engines, workflow, imaging and business-object-modeling software, which either already incorporate the required new functionality or allow much of the new code to be automatically generated in modern programming languages. The result is a highly structured, repeatable process for undertaking application development, maintenance or transformation projects.

LUXOFT
Expertise in Software Services

Company Overview

- Established: Founded in April 2000
- Locations: Moscow, Russia (World Headquarters); New York, USA (US Headquarters); and, London, UK (Luxoft Europe). Sales and Marketing offices in New York, NY; San Jose, CA; Seattle, WA; London, UK; Development Centers in Moscow (HQ), St. Petersburg, Dubna, Omsk, Kiev, Odessa, and Vancouver (BC).
- Staff: Luxoft employs a staff of 2,300
- Revenue total/offshore: $110 million in 2007 (est.); $69 million in 2006; $45 million in 2005. 90% of revenues derived from offshore.
- Web: www.luxoft.com

Services Portfolio/Strategy

Luxoft, a global software developer, provides high-end software development services and technology solutions for enterprise clients worldwide.

Luxoft's standard services:

- Application Development and Maintenance
- Product Engineering
- Embedded Systems Development
- Software Quality Assurance

Luxoft's premium services:

- Architecture Consulting
- Performance Engineering
- Security Consulting
- Process Consulting

Target Markets - Verticals, Geographies, and Marquee Customers

- Verticals: Finance, Communications, Media, Energy and Utilities, IT, Transportation, Manufacturing, Government and Education.
- Geographies: Central and Eastern Europe, Western Europe, the Americas, and Asia.
- Marquee Customers: Boeing, Caterpillar, Citibank, Dell, Deutsche Bank, IBM, UBS, Thomson, U.S. Department of Energy, Areva, T-Mobile, and Harman/Becker.

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- Strong focus on processes and quality: first in Europe to achieve Level 5 CMMI quality certification; to accommodate each client's outsourcing requirements, Luxoft offers a unique Client Engagement Framework, called LUXguide™.

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EPAM Systems

A global service provider that demonstrates leadership, innovation and outstanding performance in software development outsourcing, has 14 year long track record of supporting clients with premium software development services. Drawing on Russia's renowned intellectual talent for strong technical skills, EPAM focuses on delivering software engineering services to top platform vendors including SAP, Microsoft, and BEA and on leveraging this unique expertise to successfully develop advanced end-to-end business solutions to enterprise clients. The ability of EPAM to handle complex requirements and sophisticated technologies and deliver high-end mission critical business applications has been noted by many of the company's technology as well as enterprise clients.
Combining the best development processes, the leading horizontal technology expertise with proven vertical domain knowledge, gained from complex projects for our globally recognized clients, EPAM provides the strongest possible value proposition as a software development and IT services outsourcing partner.
EPAM maintains US headquarters in Lawrenceville, NJ, and European headquarters in Budapest, Hungary, as well as support and delivery operations in UK and Germany. EPAM software development centers are located in Russia, Hungary, Belarus, and Ukraine.
The company's leadership position in Central and Eastern Europe affords 2800-strong EPAM a distinct competitive advantage in recruiting and retaining the best regional talent to quickly scale up for large, complex, and challenging projects.

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Auriga - is an IT outsourcing services provider, incorporated in the U.S., and operating software development centers in Russia since 1990. Auriga has 16+ years of experience combining onshore account and project management for U.S. and European clients with Russian offshore software engineering capabilities. Auriga developed and implemented Remote Engineering Center client engagement model concept focused on satisfying the specific needs of high-tech companies. Auriga focuses on delivering robust business and technology solutions to the high-tech and specialty equipment manufacturers worldwide. During years Auriga has been attracting best Russian engineering talents, famous for their mindset for creativity.

Auriga is recognized by the leading analytical companies such as Forrester Research, Gartner, IDC, AMR Research as one of the leading software outsourcing vendors from Russia. The company is included in the reputable Global Services 100 list since 2006. Auriga was ranked as one of the "Top 5 to Watch in Central and Eastern Europe" and the "Top 10 to Watch in Emerging European Markets".

With 260+ employees at 5 development centers in Russia Auriga assures highest quality with stringent control mechanisms developed and implemented across all services

- Full life-cycle system level/embedded development and maintenance;
- Application software development and maintenance;
- Technology conversion (Re-engineering & porting);
- Technology consulting;
- Verification & testing;
- Localization.

Specializing from the start in the embedded/system level development Auriga has build up significant strengths in:
- Linux and UNIX kernel and drivers;
- Board Support Packages (BSP);
- Windows and Windows Embedded internals;
- Real-time systems;
- Embedded platforms;
- Networking, distributed and web applications;
- E-Commerce, enterprise applications, sales support, CRM;
- Document and content management.

Proven expertise in the following verticals and segments:
- ISV and OEM;
- Telecom;
- Medical devices;
- Avionics.

Clients:
- BroadVision
- CROC
- Draeger Medical Systems
- IBM
- LynuxWorks
- NMS Communications
- Pigeon Point Systems
- Queplix
- Verdasys
- and others.

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LanitTercom
software engineering

LANIT-TERCOM, Inc is one of the largest software companies in Russia (350 employees), which has been represented in the international market since 1991 and has been providing world-class cost-effective services for clients from the USA, Denmark, Sweden, Germany and Finland.

What sets LANIT-TERCOM apart from the other Russian software companies is that it provides a wide range of unique services ranging from the development of software/ hardware complexes, to the re-engineering of system software and electronic equipment, to IT consulting and ODC setup. LANIT-TERCOM is one of the few Russian IT companies that can not only fulfill orders for mass-production, but can also carry out highly-intensive programming projects. Working for different customers from the USA and Europe, LANIT-TERCOM has employed a variety of development techniques ranging from traditional Waterfall model to MFS and Agile methods.

LANIT-TERCOM employs one of the largest and most technically competent teams in Russia. The core of our team consists of graduates of the Mathematics and Mechanical Engineering Faculty of St. Petersburg State University - internationally known as one of the best schools for programmers in the world.

LANIT-TERCOM Outsourcing Services
- Offshore Development Center operations
- Custom Software Development
- Software Maintanance
- Software Testing
- Research & Development
- Legacy Application Migration
- Low-Level / System-level programming
- Hardware Engineering

Areas of Expertise:

- eCommerce
- healthcare
- education
- banking/finance
- telecommunications
- government/ public sector
- transportation
- R&D

The company's employees have extensive background both in traditional and recent programming technologies, such as CORBA, EJB, J2EE, COM/DCOM, Microsoft .NET, SAP ABAP, XML, ASP, JavaScript, Perl, PHP, HTML, database management systems, including Oracle, Microsoft SQL Server, IBM Informix Dynamic Server, IBM DB2 UDB, MySQL, Microsoft Access, PostgreSQL, InterBase, and operation systems, including Microsoft Windows 98/NT/2000/XP/2003, Linux, Sun Solaris, IBM AIX and HP-UX.

Over the years, the company has completed hundreds of projects for European and American clients, earning the reputation as a reliable partner that focuses on establishing stable, long-term relationships with clients.

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Reksoft, Software and Systems Engineering

Reksoft is the Software and Systems Engineering Company focused on development of high availability software systems for Telecom, Banking and Finance, Hospitality and Travel, and IT industries. Reksoft is CMMi Level 4 and ISO 9001 certified, and provides services of R&D, Software and Systems Engineering, Application Support and Maintenance.

General Facts

- Dedicated Technology Practices: NET, J2EE, EMC Documentum, Microsoft Office SharePoint, Remedy ARS, SAP R/3
- Delivery and representative locations: St. Petersburg (HQ), Russia; Moscow, Russia; Munich, Germany; Stockholm, Sweden.

Offer to Telecom and Media

Reksoft is the only services provider in Russia, possessing expertise in all the segments of the telecom IT value chain. Reksoft develops systems and applications for wired and wireless communications, such as network testing and management, BSS/OSS, billing, value-added services, legacy migration and localization.
Key customers: Aastra Telecom Schweiz AG, AMedia, Ascom AG, Comverse, ProSieben, First Hop, Sicap, Swisscom Mobile, and T-Systems. Reksoft is also an integration partner to End2End Mobile, Evolving Systems, First Hop, Sicap, Systeam, Prime Carrier, and Redknee.

Offer to Enterprise Customers

Reksoft offers IT outsourcing services, with the focus on enterprise content management systems and high-availability web systems - intranets, corporate portals, etc.
Key Customers: Dirol Cadbury, Fujitsu Siemens Computers, Philip Morris, Springer Science+Business Media, UPM.

Offer to Banking and Finance

Reksoft distinctive competence is the development of on-line trading and on-line payment platforms.
Key Customers: Assist.ru, Nomos Bank, RosEuroBank, Saxo Bank.

Offer to IT and High-Tech Companies

Reksoft offers deployment of Nearshore Competence Centers, specializing in a set of relevant technologies and products.
Key Customers: Siemens Switzerland, SoftBrands Hospitality, T-Systems, TietoEnator, Updater.

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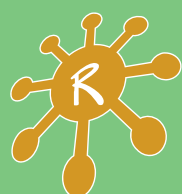
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