

BELARUSIAN EXPORT-ORIENTED PROGRAMMING MARKET

RESEARCH AND INFORMATION REPORT
BY THE REQUEST OF THE SCIENTIFIC AND TECHNOLOGICAL
ASSOCIATION
«NATIONAL INFOPARK»
(September – October 2004)

INFOPARK

 **Market-Visio**
ICT Research and Advisory Services

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The Group of Experts has demonstrated a unique for Belarus model of cooperation between different (incl. competing) companies and organizations that participated in the Research, having made it possibly accurate.

The results of efforts of the Group of Experts greatly influenced the possibility of conducting the Research on the export-oriented software market in Belarus and positively affected processes of consolidation in Belarusian IT-export industry.

We would like to thank representatives of the following companies that managed to find time, engage their experience and expertise for carrying out this Research. We highly appreciate their further efforts in international promotion of Belarusian industry on the whole:

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We understand the importance of the Research of the export-oriented software market of the Republic of Belarus and hope that similar Researches will gain regular basis in order to obtain reliable and up-to-date market information.

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Introduction

In September-October 2004 “Market-Visio Consulting” Company conducted a research, devoted to the examination of the current situation and development tendencies of the export-oriented software market of the Republic of Belarus. The Research was conducted by request of the Scientific-technological Association “National Infopark” with assistance of the Group of Experts: SaM-Solutions, SienceSoft, BelHard Group, IBA, EPAM Systems, System Technologies.

This report contains complete results of the conducted Research. The report consists of 111 pages. For your convenience the major part of data are presented as visual aid in the form of 57 diagrams, 7 pictures and 4 tables.

Goals and methods of the Research

The main goal of the Research is to present accurate and up-to-date information on the volume, structure, competitive ability, major players and tendencies of Belarusian export-oriented software market.

General characteristics and tendencies of Belarusian export-oriented software market and characteristics of companies/IT-developers were studied during the Research. The following sources and methods of data collection were used:

- Desk Research, that includes analysis of articles from specialized editions, Web-cites and other public sources;
- Data from previous Researches by Market-Visio Consulting, Gartner and others;
- Interviews with experts in Belarusian export-oriented software market;
- Individual interviews with representatives of companies that work in the export-oriented software market.

7 detailed interview with market experts and 30 individual interviews with representatives of Belarusian software companies in Minsk and Gomel were conducted during the Research.

Structure of the report

Section 1. “Analysis of Belarusian IT export market” lists evaluations of the export-oriented software market in Belarus, volumes and structure of the market, quantitative and qualitative characteristics of the market by specialists that deal with export of IT services and products, dynamics and tendencies of the development of Belarusian IT export industry. Prerequisites of development of information and communication industry in Belarus, technical infrastructure of the country, role and competitive ability of Belarusian IT export industry in the world market are also considered in this section.

Section 2. “Characteristics of Belarusian IT exporters” presents basic characteristics of Belarusian IT exporting companies which participated in the Research. This section informs on size and turnover of the companies, level of certification, provided services, means of development and platforms. Characteristics of companies that work in Belarusian export-oriented software market are also included.

Section 3. “Strategies of Belarusian IT exporters” informs on the specialization of Belarusian IT exporters, promotion methods, structure of international demand and competitive ability of Belarusian companies in key niches.

Section 4. “Information on companies” presents the following information about major players of Belarusian export-oriented software market that participated in the Research.

- Company name
- Contact information
- Director/ Export Director
- Year of foundation/ Beginning of export/ Dynamics
- Founders/ Representatives
- Number of employees/ Level of education
- Certification
- Model/Key industries
- Specialization
- Tool means
- Clients/Orientation
- Price policy
- Strategy of expansion
- Priorities of development

Section 5 «Information about participating Ukrainian IT companies». This chapter outlines information about the experts, sponsors of the research, business units and the other research participants.

Structure of interviewees

7 market experts and 30 companies that work in Belarusian export-oriented software market were interviewed during the research.

All major players of Belarusian IT market that work in the open market of IT development for overseas clients had been invited to participate in the research in order to obtain possibly accurate information about Belarusian market of IT export. Moreover, during the research we tried to embrace other categories of companies, represented in the open market.

Diagrams 1-3 demonstrate structure of companies/software developers that participated in the research: according to the number of employees, year of foundation and starting date of IT export.

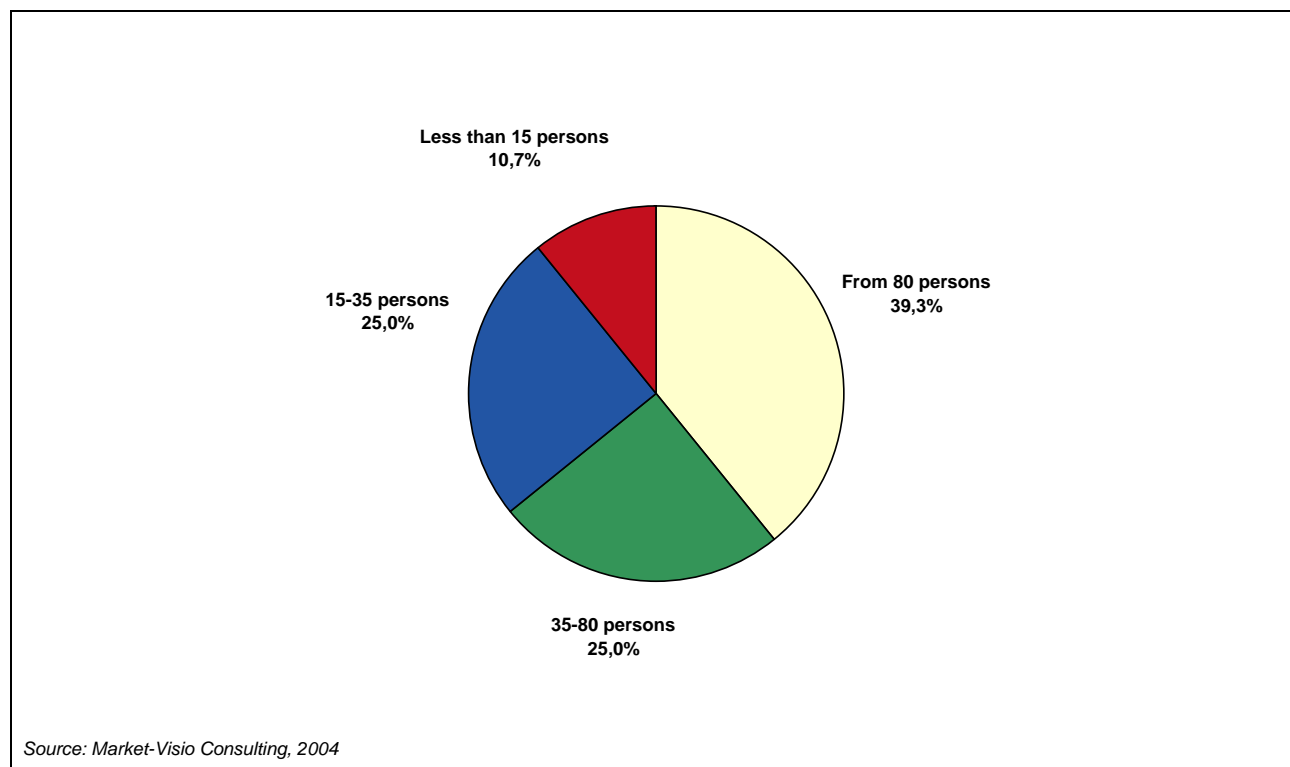
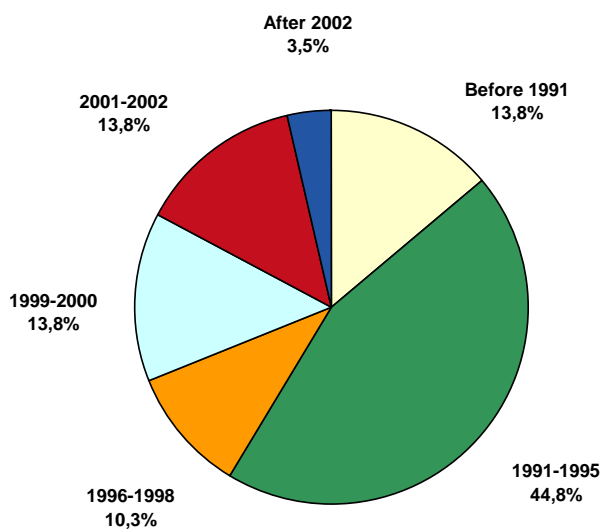


Diagram 1. Respondents structure by number of employees

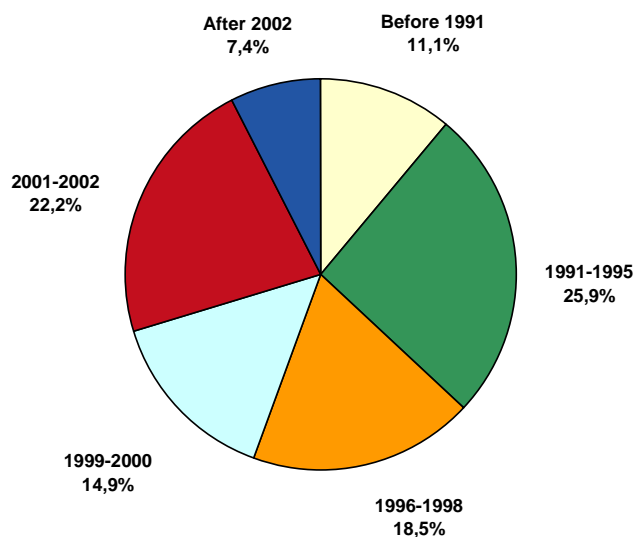
Belarusian export-oriented software market is presented in the research mostly by large companies with more than 80 employees. Medium commercial companies with the number of employees from 35 up to 80 and minor companies with the number of employees from 15 up to 35 that work in IT export market are presented in equal shares.

The share of small companies with less than 15 employees constitutes 10% of the total number of the interviewees.



Source: Market-Visio Consulting, 2004

Diagram 2. Respondents structure by years of foundation



Source: Market-Visio Consulting, 2004

Diagram 3. Respondents structure by year since when they engaged in export business

Most of the interviewed companies were established in the period from 1991 to 1995, it was at that period that major players of Belarusian market begun to export IT products and services. It should be noted that the number of new players in the export-oriented software market was growing steadily after that period.

The number of new players decreased after 2002. It can be explained by the fact that the formation of the export-oriented software market in Belarus has been almost completed.

Diagram 4 demonstrates the structure of the interviewed companies according to the type of their founders.

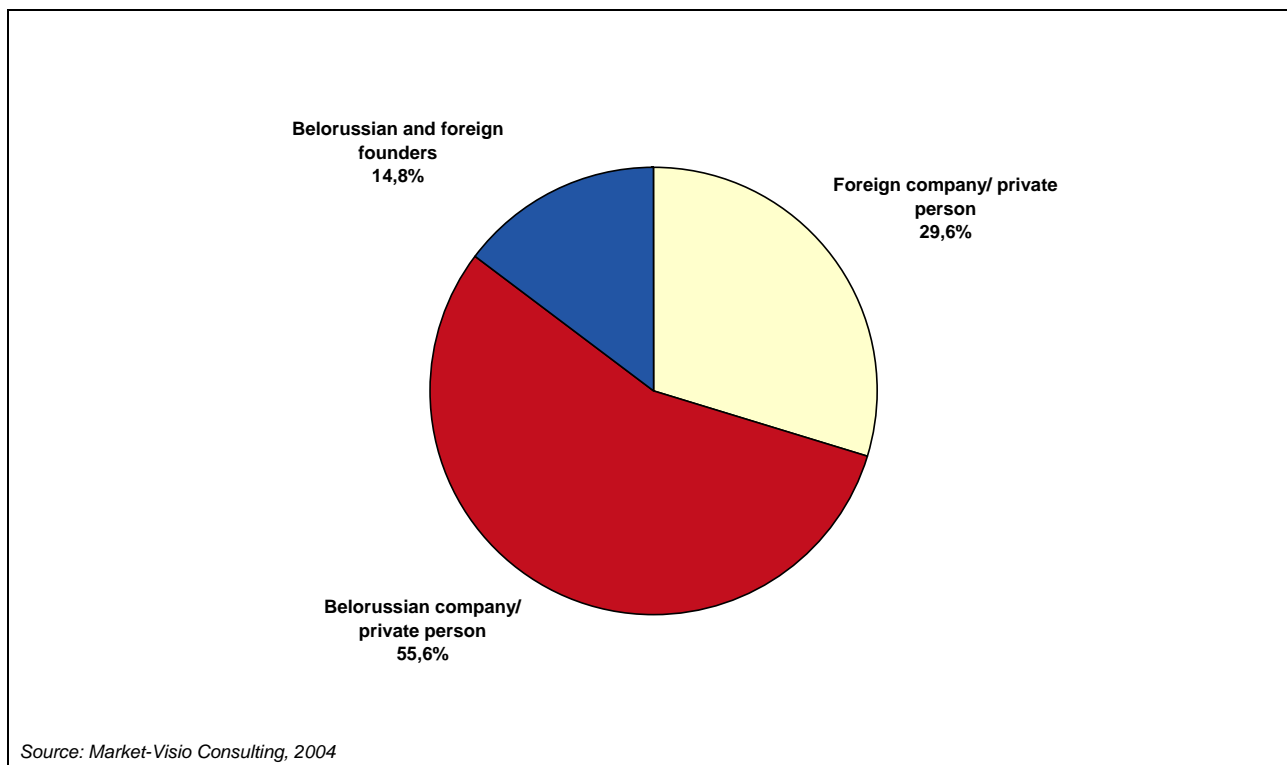


Diagram 4. Respondents structure by founders

Belarusian companies constitute more than a half of major players of the export-oriented software market. A third of companies were established by overseas companies or overseas private persons. The smallest share of the interviewed companies was founded with combined capital of Belarusian and overseas founders.

Executive Summary

At present time attention is being paid to the development of information and communication industry as the ground for intensive development of the country on the whole. Belarus possesses high scientific-technological potential and good programming school.

According to the rates of “Market-Visio Consulting”, Belarusian export-oriented software market amounted to around 65 million USD in 2003. Participants of the market are in the optimistic mood and expect double increase in the next 2 years. Average annual growth can reach 40-60%. According to the prognosis the value of the export-oriented software market will reach 200 million USD by the year 2006.

If we look on the IT market in general, the share of IT export constitutes 75% of the total volume of IT developing and can increase up to 80-90% by 2005.

According to official data there are 500 companies in the IT export market. Rates of the market experts differ from official statistics. According to their information, there are 200 companies in the IT export market, including 6 leaders of the market: SaM-Solutions, ScienceSoft, EPAM, BelHard, IBA, BelSoft. Around 70% of the companies in the market of export-oriented software are located in Minsk. Export of IT services and products is the main business for most of the companies/IT developers.

Medium and large companies make up the major share of Belarusian market of IT export (60%). Small companies and separate groups of software engineers constitute approximately a quarter of the market. The remainder falls on development centers of international companies.

We estimate the number of IT specialists in Belarusian export-oriented software market at 7 – 7.5 thousands specialists. Qualified highly-educated specialists are employed in the export-oriented software market of Belarus. Almost all specialists have higher education. There are doctors and candidates of sciences among employees in the companies; English knowledge level is high.

Belarusian market of IT export is mostly focused on IT developing on request. Product model and business process outsourcing are not yet characteristic for Belarusian market of IT export, but their share in the total volume of the market slightly increases at present time.

IT export market in Belarus is largely focused on the following fields: industry, finance and scientific research institutes/ education. Telecommunications and finance are the most developed spheres of IT application.

According to the opinion of “Market-Visio Consulting”, Belarus belongs to the group “Prospective players” in the world market of IT export and has good chances to enter the world market due to niche specializations using its favorable geopolitical location.

At present time several higher educational establishments train IT specialists in Belarus. The results of the research have shown that Belarusian state university provides the best quality of education in this field.

Salary of IT specialists varies greatly in Belarus. Salary of assistant personnel varies from 150 USD up to 2000 USD, salary of executive personnel – from 400 USD up to 5000 USD.

The majority of offshore companies were formed in 1991-1995; it is at that period that major players of Belarusian market started to export IT products and services. The rate of entering the market by new players slowed down after 2002. According to our estimations, the market of export-oriented software in Belarus has been practically formed and is actively developing.

The flow-out of specialists abroad is slowing down, but there is a growing number of specialists leaving to neighboring countries, particularly to Russia. Interstate IT Associations are being organized; Belarusian companies consolidate with companies from neighboring countries.

According to the rate of “Market-Visio Consulting” there are the following development tendencies in Belarusian market of IT export at present time: consolidation of the market, growth of companies, growth of IT export market, foundation of professional associations.

Development of IT industry in Belarus is being negatively affected by imperfection of legislature, fiscal policy and insignificant support of the industry by government. Highly qualified specialists, favorable geopolitical location of the country, high IT potential are the positive features of the industry.

Factors that negatively affect development of the telecommunications sphere as the ground for IT development are as follows: monopoly of the telecommunications market, absence of competitors and as the result low quality and high price at Internet services. Development of Internet and high speed technologies, mobile network and well-developed basic network are named as the positive characteristics of the telecommunications industry.

Major competitors of Belarusian IT engineers in the world export market of IT services and products are Indian, Russian and Eastern European software companies. Belarus can compete with Russia and other countries of Eastern Europe in science intensive IT engineering. India is the acknowledged leader in the sphere of business process outsourcing; besides there are few Belarusian models of BPO export-oriented software market introduced in the IT export market.

According to the experts' rate, Belarus can compete with Russia, Eastern European countries and countries of the former USSR in the export-oriented software market. It is stipulated by a number of factors, including cultural similarity, similar processes of gaining independence, common history.

A great number of certificateless companies are working in Belarusian market of export-oriented software at the present moment; more than 40% of companies intend to pass certification in 2005.

According to the estimation of "Market-Visio Consulting", Belarusian market of IT export in 2004 was focused on the USA, experts also note orientation at Central European countries, in particular Germany. In 2005 the focus of Belarusian IT export engineering will shift to Central Europe, significant increase of orders from Russia is expected.

Development of IT engineering, marketing and international promotion, establishment of representatives and development of new directions are key priorities for the majority of Belarusian IT exporters. The major players of the export-oriented software market in Belarus intend to develop export business at their own expense.

At the present moment Belarusian market of export-oriented software is developing dynamically and is largely focused on IT developing for specific spheres of enterprise automation.

1. Analysis of Belarusian IT export market

The present section presents evaluation of Belarusian market of export-oriented software, its structure, dynamics and tendencies, also specific features and role of Belarus in the world market of IT export.

1.1. Requisites for IT development in Belarus¹

Computer manufacturing in Belarus begun in 1960-s. Ordzhonikidze factory of calculating machines started manufacturing vacuum tube machines M3 based on the studies headed by Bruk, Corresponding member of Academy of Sciences.

Simultaneously Specialized Constructing Agency of calculating machines was created under the direction of Kuplenski and Lopato, engineers and scientists, who performed modernization and launched production of machines M3M and Minsk 1. Then transistor computer system Minsk 3 was developed under the direction of Przhevalovski. It started a new epoch in the history of Belarusian computers.

Foundation of microelectronics (Research and Production Enterprise “Integral”, KBTEM (Electronic Machines Constructing Agency) was grounded at the same period. Technological equipment for microelectronics and several structural subdivisions for programming, Institute of Mathematics of Academy of Sciences (G.K. Stolyarov) development of data base and system organization of computer processes (Central Technical Scientific and Research Institute, Veduta N.I, Dumler S.A) appeared.

3 basic components of information and communication industry were formed in the middle of 1960-s:

- Computer manufacturing (Scientific Research Institute of Computer Manufacturing)
- Microelectronics (Research and Production Enterprise “Integral”, KBTEM)
- Programming system centers (Institute of mathematics, Central Technical Scientific and Research Institute).

Wide necessity of computer application and planned economy stipulated intensive development of these components. At least 3 new types of computers had been launched into manufacturing, multitask computer system for industrial enterprises had been developed by the middle of 1960-s.

1970-80-s are connected with development of computer manufacturing, mass programming and computer system designing, decorated with the State’s highest scientific awards in 1980-s: State Award of the USSR in the sphere of science and technology. Such technologies were based on professional division of specialists where functions of system analysts and problem originators, systems programmers, test engineers and specialists of operational debugging were distinctly divided. High production centers of large computers (class CE), technologies of industrial programming, based on division of function, were established.

Standard and design solution system construction of basic functions of application programs determined another important aspect of IT development in Belarus and had a wide application in the USSR.

Simultaneously application of computers expanded intensively and process of integration of certain standard and design solution continued. Technologies of management information and control system, technological management system, flexible manufacturing system FMS and conceptually designed integrated systems with powerful means of communication were explored on this basis.

Different programming technologies, including technologies of time sharing, preemptive multitasking, programming of virtual computers, programming of computers of middle class and PCs, programming based on local and central data bases, top-down technologies, structural programming, object-oriented programming were explored during that process.

Belarusian programming school worked with different programming technologies for different classes of computer systems.

¹ This section was prepared by the representatives of scientific technological Association “National Infopark”

Rapid industrial acceleration was planned in the development of PCs and communication facilities. First highly effective networks appeared, wide international cooperation with Belarusian programming schools under the direction of CMEA (Council for Mutual Economic Assistance) (Belarusian-Bulgarian Institute) begun, complex programs of integrated systems and data bases were created. Belarusian programmers participated in most of the programs on computer network developing of CMEA countries. Simultaneously developing educational system was founded: Minsk Radio Technical Institute (Belarusian state university of Informatics and Radio Engineering), Polytechnic Academy; robot building center was developing. The factory of printed circuit boards and calculating machines was opened. Belarus initiated automated calculating systems. Systems of microprogramming were explored. The country had a developed methodological base of mass programming technologies and computer system creating. These data outstripped significantly the data derived by PMI.

Intensive flow-out of programmers started during the perestroika. Large enterprises broke into several minor companies that existed 2-3 years. Participants of these groups immigrated, causing vacuum of specialists, which is being compensated by educational system.

Belarusian programming school gained wide experience. All technologies were tested on hardware and software levels. Inner migration between engineering programmers and application programmers existed at that period.

Belarusian programming school possesses great experience and potential. It is an important factor for formation and development of information and communication technologies in the Republic of Belarus.

At present time special attention is being paid to the development of ICT industry in the Republic of Belarus. Researches to create scientific base for perfection of the industry and to present the Republic of Belarus as a full member of the world's information space are being conducted.

Fund of Informatization of the National Academy of Sciences and representatives of the World Bank implemented comprehensive evaluation of Belarusian ICT infrastructure and determined the level of its readiness for development. The results of the research were used for preparation of the State Informatization program for 2003-2005 and "e-Belarus" project up to 2010. Several state programs are being implemented in order to improve ICT industry: State Informatization program of the Republic of Belarus for 2003-2005, Subprogram "Computerization of Population" of the Presidential Program "Consumer Electronics", State Scientific-technical Program "Computer Technologies of Engineering and Manufacturing of New Products" and others.

A range of works is being performed to develop and apply ICT technologies in different fields of industry. Projects are being implemented to create network infrastructure of government bodies in order to ensure their automated informational cooperation and to form a unified national information source for entering global international information networks. Scientific researches and studies on advanced information technologies and software, protection of information in the context of corresponding state scientific and technical programs are being performed at the present moment.

1.2. Volume and dynamics of the market

According to the experts' rate, volume of Belarusian market of IT export reached 65 millions USD in 2003 and will reach 90 millions USD in 2004.

Diagram 1.1 demonstrates dynamics of the development of Belarusian export-oriented software.

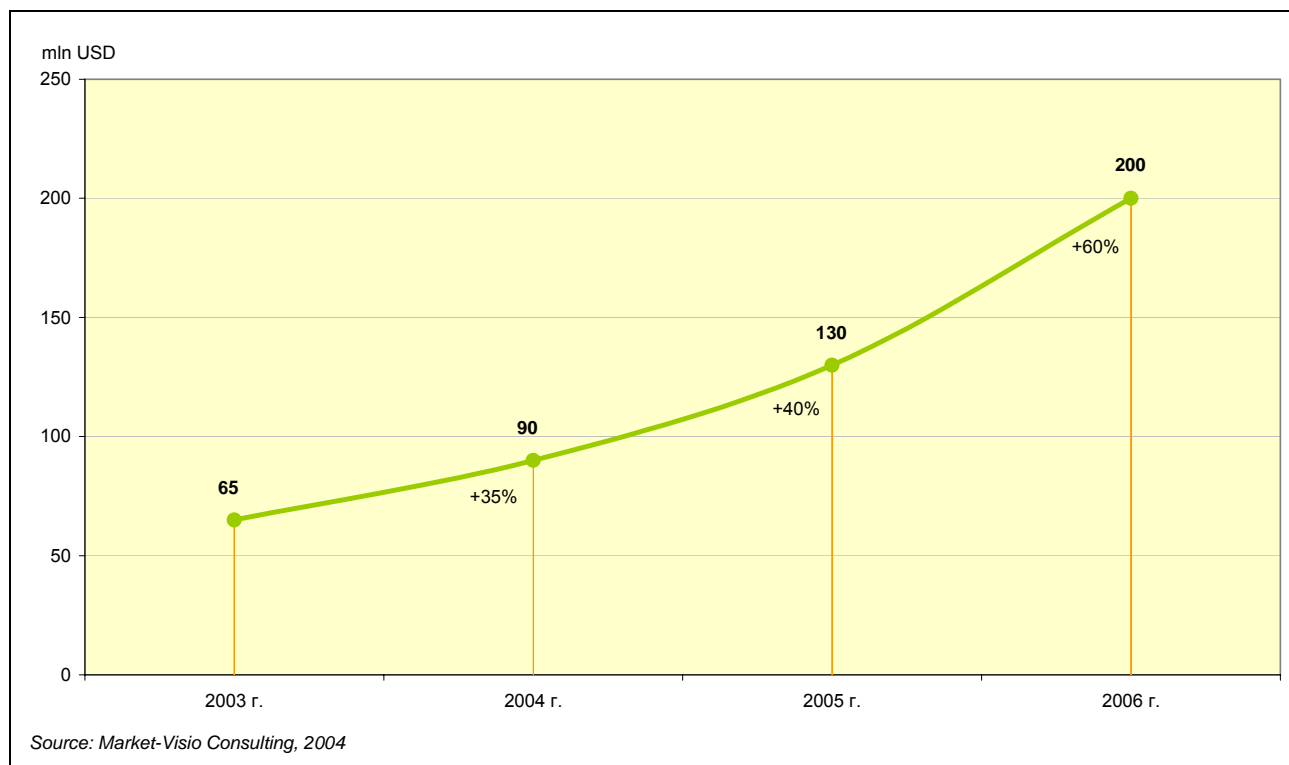


Diagram 1.1. Ukrainian IT services and products export market size

Participants of the market are in the optimistic mood and expect double increase of IT export in the next 2 years. Average annual growth can reach 40-60%. According to the opinion of experts, the most intensive development will fall on the year 2006 when the volume of the market can reach approximately 200 millions USD.

Industry can develop at higher rate provided that Belarusian government supports its development and IT developing companies can combine their efforts for promotion of their services in overseas markets.

According to the opinion of experts, the share of IT services and products export constitute 75% of general volume of IT developing and related services and can increase till 80-90% by 2005. It is significantly higher than in Russian and the Ukraine where the figures are 35% and 50% correspondingly.

1.3. Role of Belarus in the world industry

Belarusian market of IT export is relatively small on the global scale. For comparison Russian volume of IT export reached around 390 millions USD in 2003 according to our information.

In accordance with analysts from Gartner Company (see picture 1.1), in respect to IT export Belarus belongs to the category “Up and comers”. Countries of this category do not possess large volumes of IT export, nevertheless they have good chances to enter international markets due to niche specializations.

Global Sourcing Powers: Status and Perspectives			
Leader	Challengers	Up and Comers	Beginners
India	Canada China Czech Republic Hungary Ireland Israel Mexico Northern Ireland Philippines Poland Russia South Africa	Belarus Brazil Caribbean Egypt Estonia Latvia Lithuania New Zealand Singapore Ukraine Venezuela	Bangladesh Cuba Ghana Korea Malaysia Mauritius Nepal Senegal Sri Lanka Taiwan Thailand Vietnam

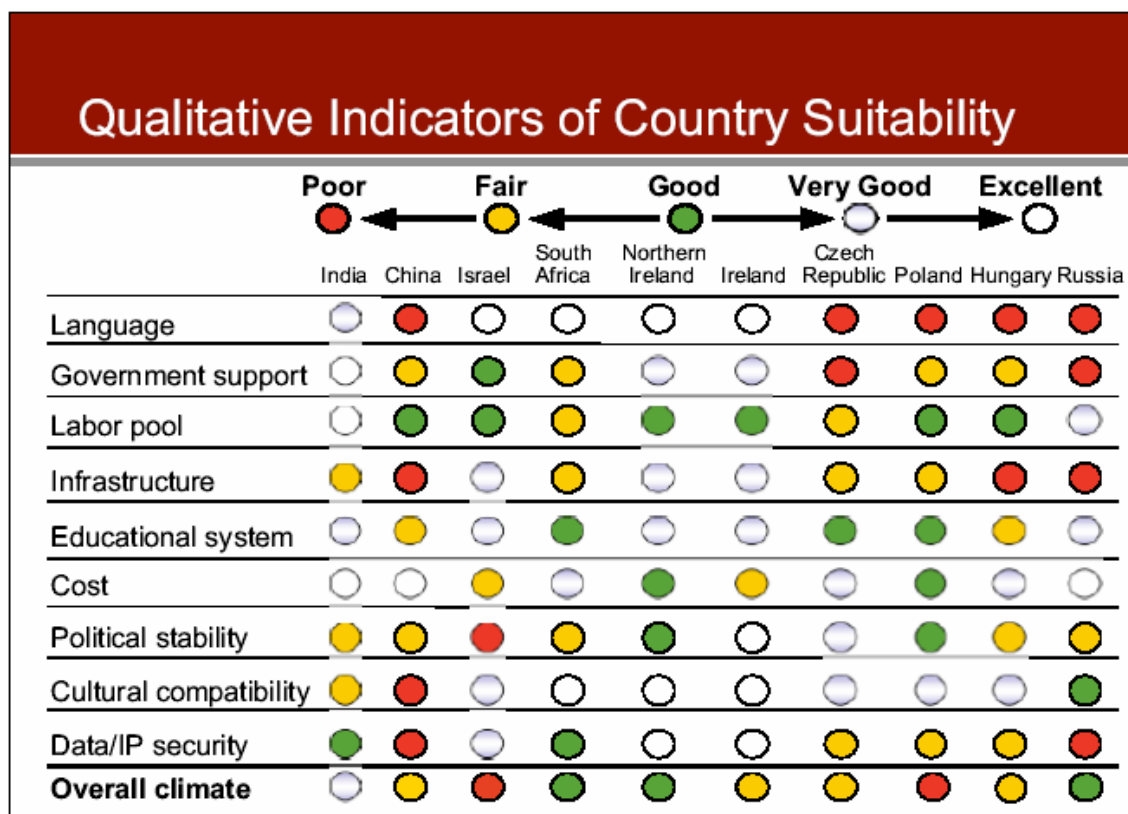
Picture 1.1. Global Sourcing Powers: status and perspectives

In comparison with the majority of countries from its group Belarus has a favorable geopolitical location. Belarus has central position in relation to the countries of the former USSR (Ukraine, Russia, Lithuania,) and Eastern European countries (Poland). The advantage can be used in organizing interstate associations of export-oriented software.



Picture 1.2. Geopolitical location of Belarus

Gartner uses several factors for estimation of possibilities and risks. These factors allow potential clients to compare and choose IT providers (see picture 1.3). The key factors are: language, governmental support, workforce reserve, infrastructure, educational system, cost, political stability, cultural compatibility, level of data protection.



Picture 1.3. Qualitative Indicators of Country Suitability

Belarus is not presented as a separate country in the table; however, we believe that Russian characteristics are similar. Opinions of experts about positive and negative factors that influence Belarusian IT export market confirm our assumption.

Major advantages of Belarusian IT exporters in the world market of IT outsourcing are:

- Staff potential, high qualification and educational level of specialists;
- Relatively low cost of services;
- Geographical and cultural similarity with EU countries.

1.4. Structure of the market

This section presents expert evaluation of Belarusian IT export according to the size of companies/ IT engineers, market segmentation in relation to business models, specialization of software engineers and analysis of the level of informatization in Belarusian economy.

1.4.1. Size of companies

“Market-Visio Consulting” estimated structure of participants of Belarusian IT export market according to the following categories:

- Medium and large commercial companies;
- Developing centers of international companies in Belarus;
- Small companies (less than 15 employees) and independent groups of programmers.

Diagram 1.2 shows analysis of market shares of each of the named groups in the total volume of Belarusian IT export market.

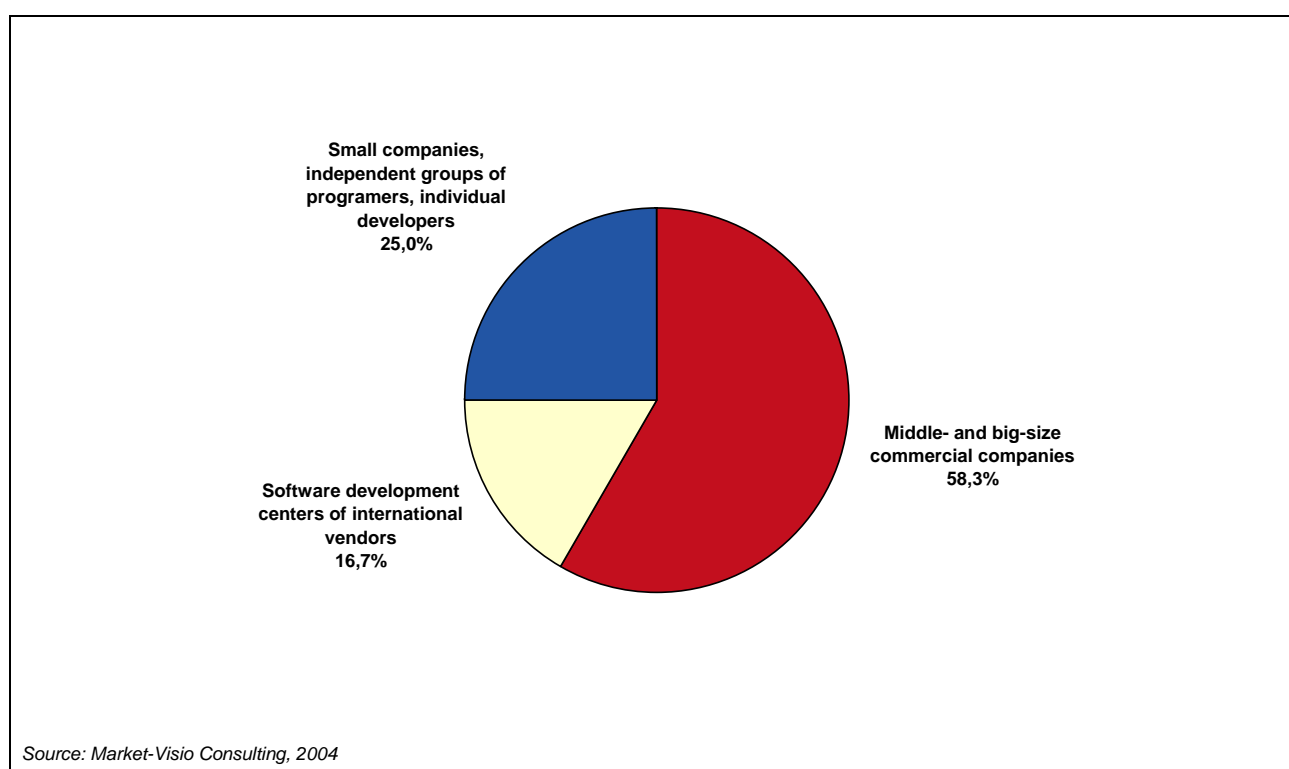


Diagram 1.2. Market shares of different IT services and products exporters groups

According to the results of the research the major share of Belarusian IT export market (58%) consists of medium and large companies. Small companies and separate groups of programmers constitute around 25% of the market.

Developing centers of international companies make up around 17% of the market as estimated by the experts. For comparison developing centers of international companies in Russia (there are no more than 10 of them) take only 25% of all Russian market of offshore engineering. Developing centers of international companies in the Ukraine constitute insignificant share of the market and do not reach 5%.

1.4.2. Business models

‘Market-Visio Consulting’ points out three main business models while analyzing market sectors of the export of IT-services:

1. Customer’s model. The company develops software by the order of foreign customers. All the intellectual property that is created while meeting obligations of a contract is the customer’s property (the property of a foreign company). The majority of Indian companies work according to the customer’s models.
2. Producing model. The company issues a license on technologies and/or on both software product as a whole and a part of some other software product. The customers of such companies are either software producers or companies-licensors. Producing business models prevails in Israel and Scandinavian countries.
3. Mixed model. It’s a combination of the first two patterns. Many companies develop software by the order of foreign companies. They develop their own software products at the same time.
4. Business Processes Outsourcing (BPO). BPO means company services of carrying out routine business operations (filling out statistic forms, charts and etc.) for foreign customers. Such services are not connected directly with support and development, but they are often provided by the companies, working at the export market of IT-services and products.

Market structure and dynamics of the sectors of the export market of IT-services and products is presented in diagram 1.3. The whole volume of Belarusian export market is presented as 100% in 2003 and 2005 accordingly.

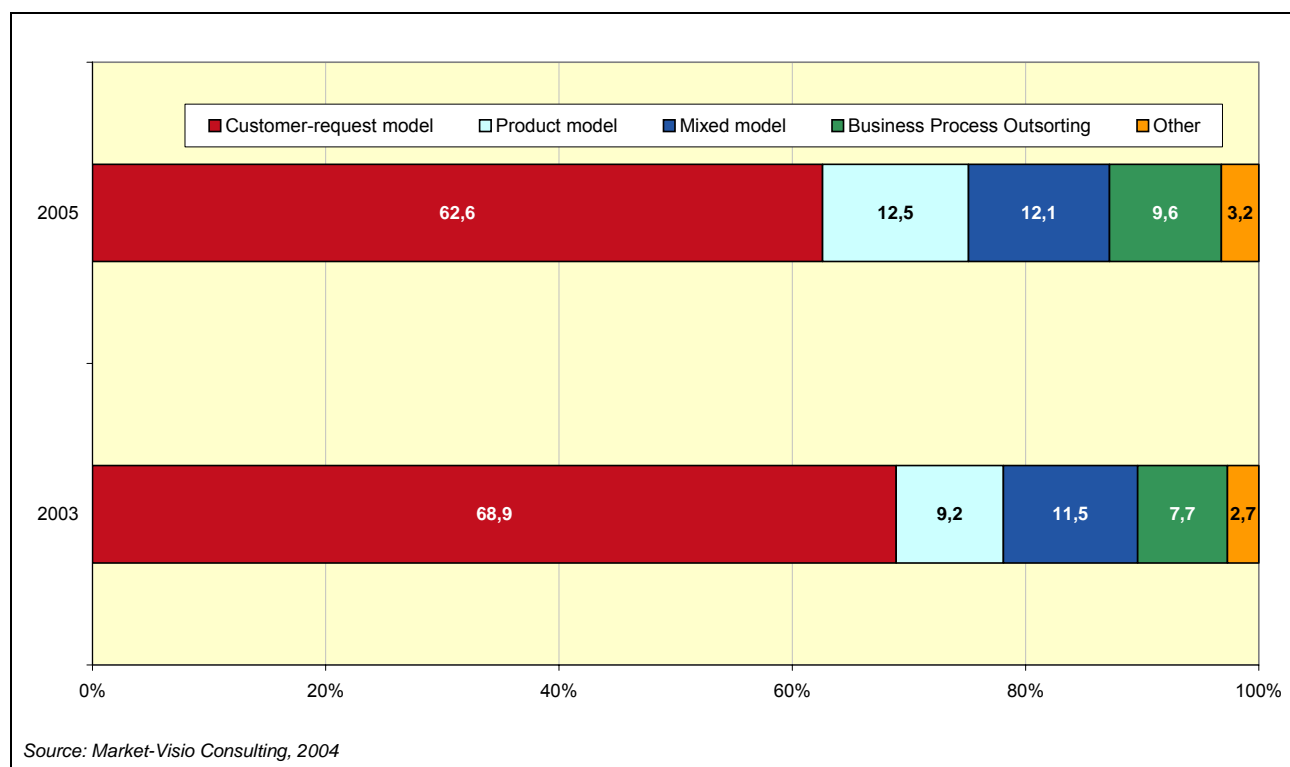


Diagram 1.3. Belarusian IT services and product exporters business models, dynamics

The biggest part of the market volume (about 70%) is turnover of the companies, working on customers’ order. Some experts forecast little reduction of the part of the producing pattern to 63% of the market by the year 2005.

Product model and BPO till are not distinctive models in Belarusian export-oriented market. But according to experts opinion these models have a trend to grow.

1.4.3. Sectoral Orientation

The specialization of Belarusian companies at the market of export-oriented programming was studied in this research in the following directions:

- Technologies (the development of software for specific technologies, platforms);
- Horizontal decisions (the development of software in specific spheres);
- Vertical decisions (the development of software for industries)

Sectoral orientation of Belarusian export market of IT-services and products is presented in diagram 1.4.

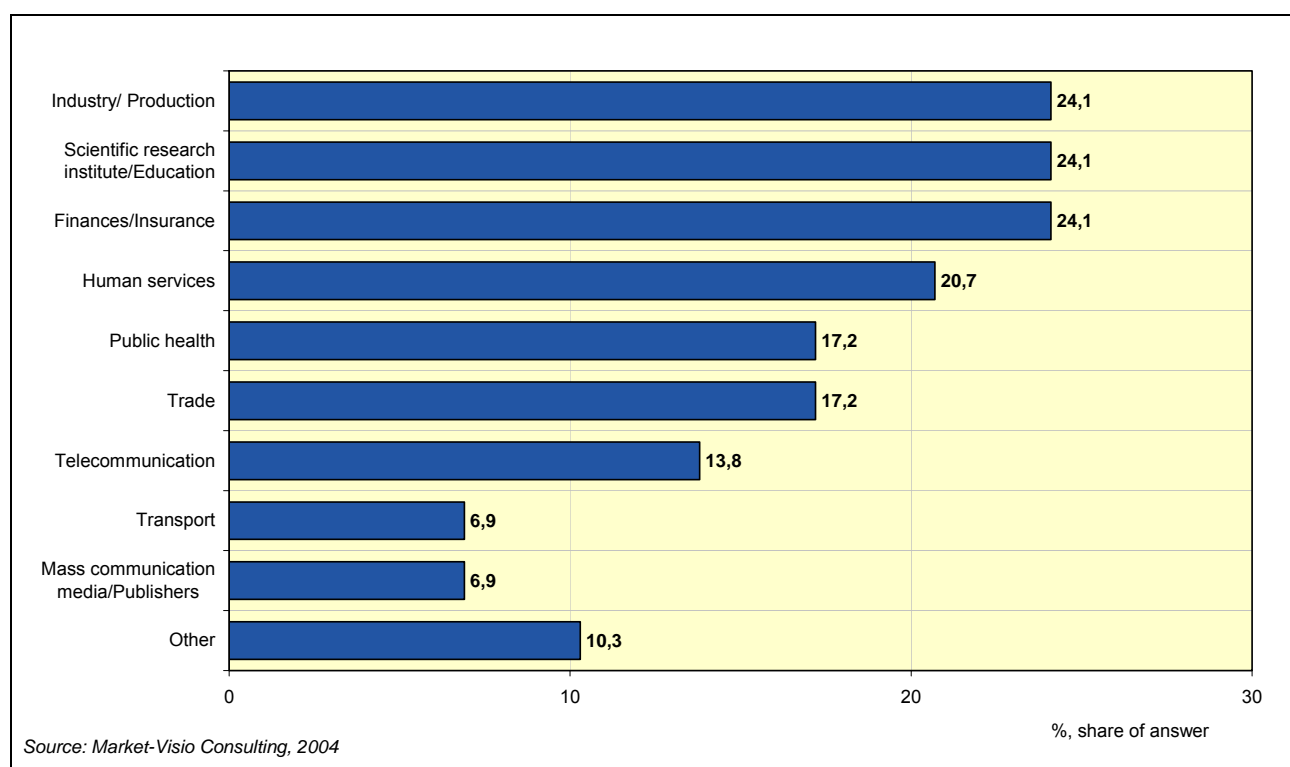


Diagram 1.4. Sectoral orientation of Belarusian export-oriented programming market

Export market of IT-services and products in Belarus specializes primarily in the following spheres: Industry/Production, Finances/ Insurance and Scientific Research Institute/Education. Some respondents also point out the sphere of Services, Trade and Health Protection as the main consumers of IT-services and products. The biggest market operators refer Agriculture, Hi Tech and Energy to “Other Spheres” category.

The market specializes in Transport, Mass Media and Publishing spheres to a lesser degree.

The distribution of experts' answers to the question of the most perspective branches of Belarusian economy as consumers of IT-services and products is presented in diagram 1.5.

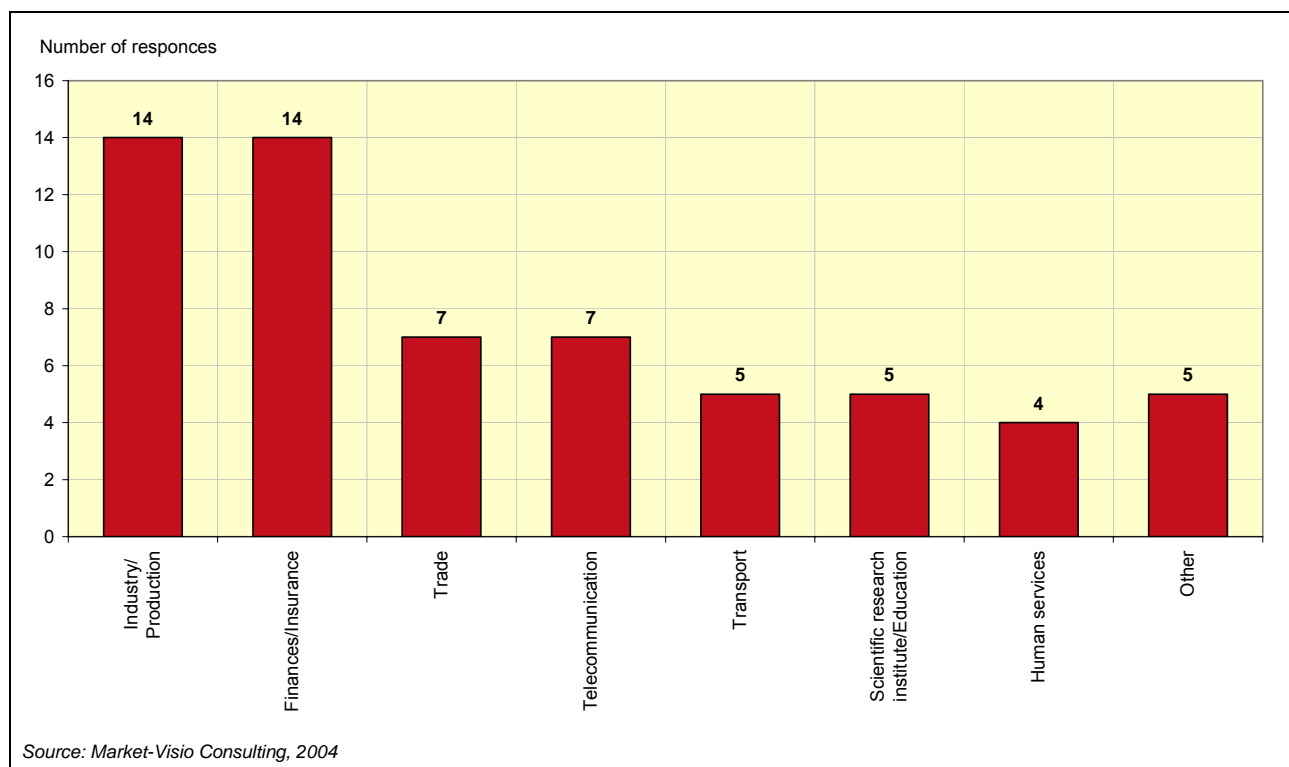


Diagram 1.5. Perspective industries sectors as consumers of IT-services and products

Market experts point out Industry and Finances/Insurance as the most perspective consuming spheres. Respondents consider Agriculture, Energy, Hi Tech to be perspective spheres as well; these spheres are also referred to "Other" category.

1.4.4. The Level of Informatization of Belarusian Industries

Within the research the main market operators of the export of IT-services and products were offered to determine the level of informatization of Belarusian industries.

In diagram 1.6 the level of informatization of the industries of the Republic of Belarus is presented.

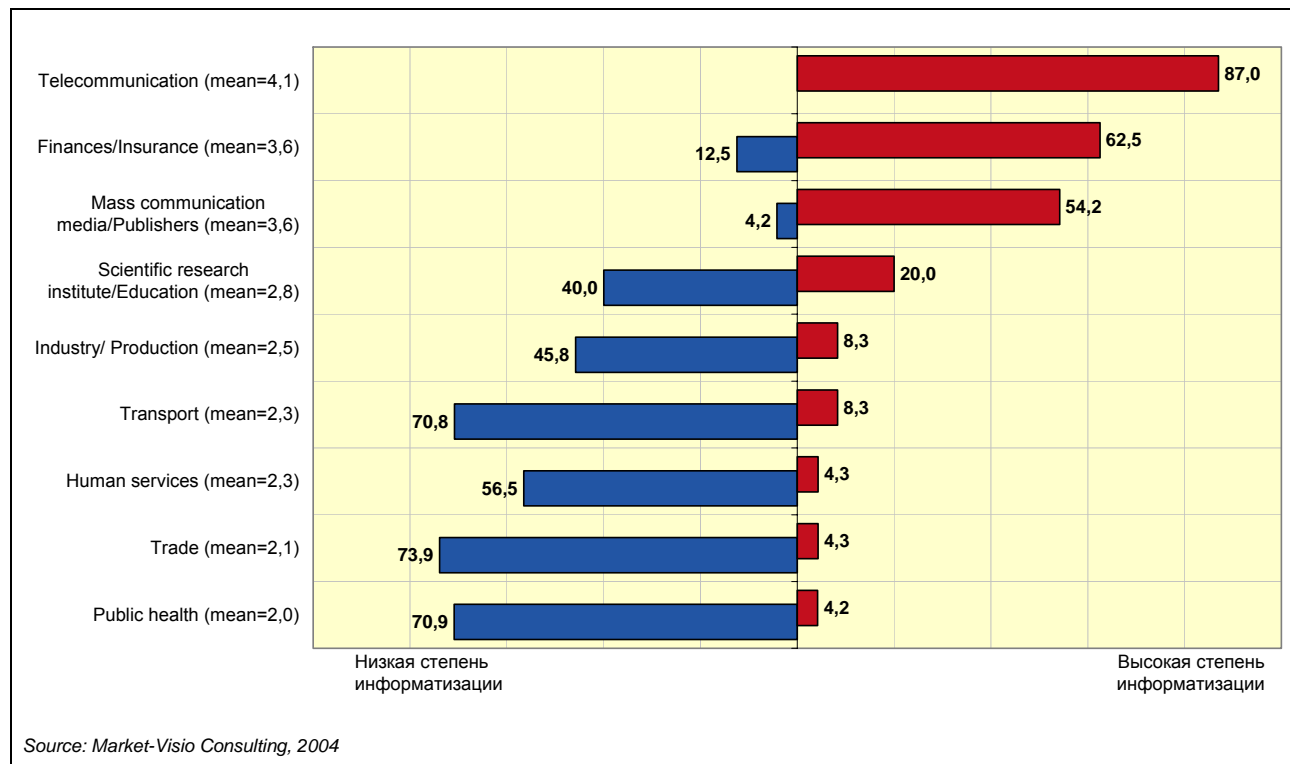


Diagram 1.6. Level of informatization of Belarusian industries sectors

As about 87% and 62, 5% of respondents think accordingly, the industry of Telecommunications and Finances/Insurance is the most developed, taking into account the application of Information Technologies.

Transport, Service Business, Trade and Health Protection got average rate, near two points, according to 5-point scale. Industrial production is considered by the respondents as the most perspective consumer of IT-services and it is evaluated as a branch with rather low level of informatization.

1.5. Labour Resources

The respondents were offered to evaluate labour resources of Belarusian market of export-oriented software: the average amount of the employees at the market, the level of education and the experience of employees, as well as migration processes, affecting the export market of IT-services and products.

1.5.1. The Average Amount of Experts, Employed at the Market

According to the official information, the average amount of companies, registered at the export market of IT-services and products, is about 500. In the opinion of experts, today about 7- 7,5 thousand specialists are employed at the market of export-oriented software in the Republic of Belarus.

In graph 1.7 the average annual amount of work of the specialists, working in the sphere of export of IT-services and products, is presented.

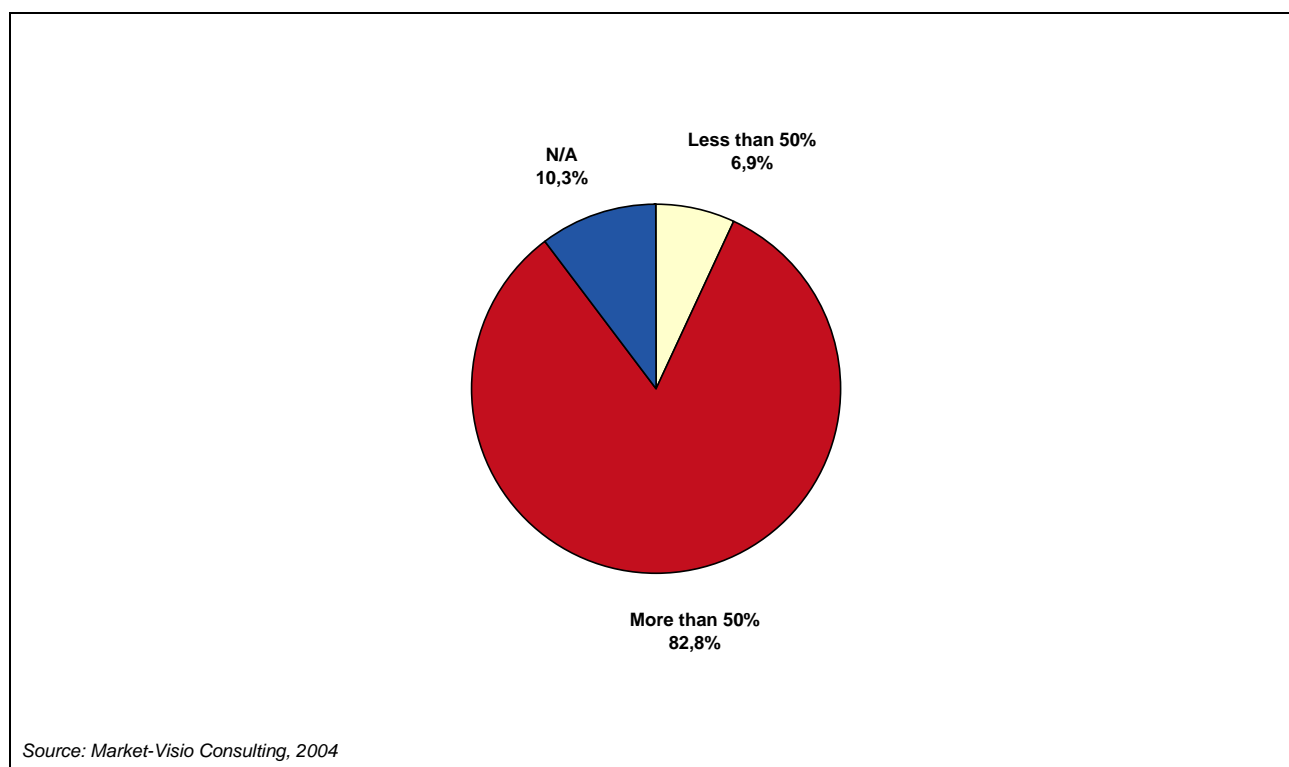


Diagram 1.7. Average annual workload of specialists

The overwhelming amount of the main market operators of export-oriented programming of the Republic of Belarus (more than 80%) consider, that manufacturing personnel of their companies have got the amount of work, that makes up about 50% and more of maximum average annual. About 7% of the respondents determined the average annual amount of work of their specialists as less than 50%.

The result received proves that Belarusian specialists do not have enough work and the export market of IT-services and products has got available resources and good potential for providing IT-services to foreign customers.

1.5.2. Educational Level and Certification of Specialists

According to the experts' rate, qualified specialists with high educational level work at the Belarusian market of export - oriented programming. It is a significant competitive advantage for the export market of IT-services and products of Belarus.

More than 90% of the specialists, working at the export market of software, have got higher education. There are some employees with doctoral degree in every company that provides the export of IT-services and products. The specialists, that passed inspection certification of international software companies work there as well, but the amount of such employees is not that great yet.

Good command of the English language is also pointed out in the companies, working at the export market. About 90% of specialists know at least Basic English; about 60% of employees can speak English easily. It is explained by the fact that many specialists have got job experience in foreign companies.

1.5.3. Rating of Universities

Belarus has got good school of personnel training in the sphere of Information Technologies. The specialists, taking part in the research, were offered to have a look at the list of Belarusian Universities. The respondents could notice what place this or that establishment takes, according to the quality of training of IT-specialists. The distribution of answers to this question is presented in diagram 1.8.

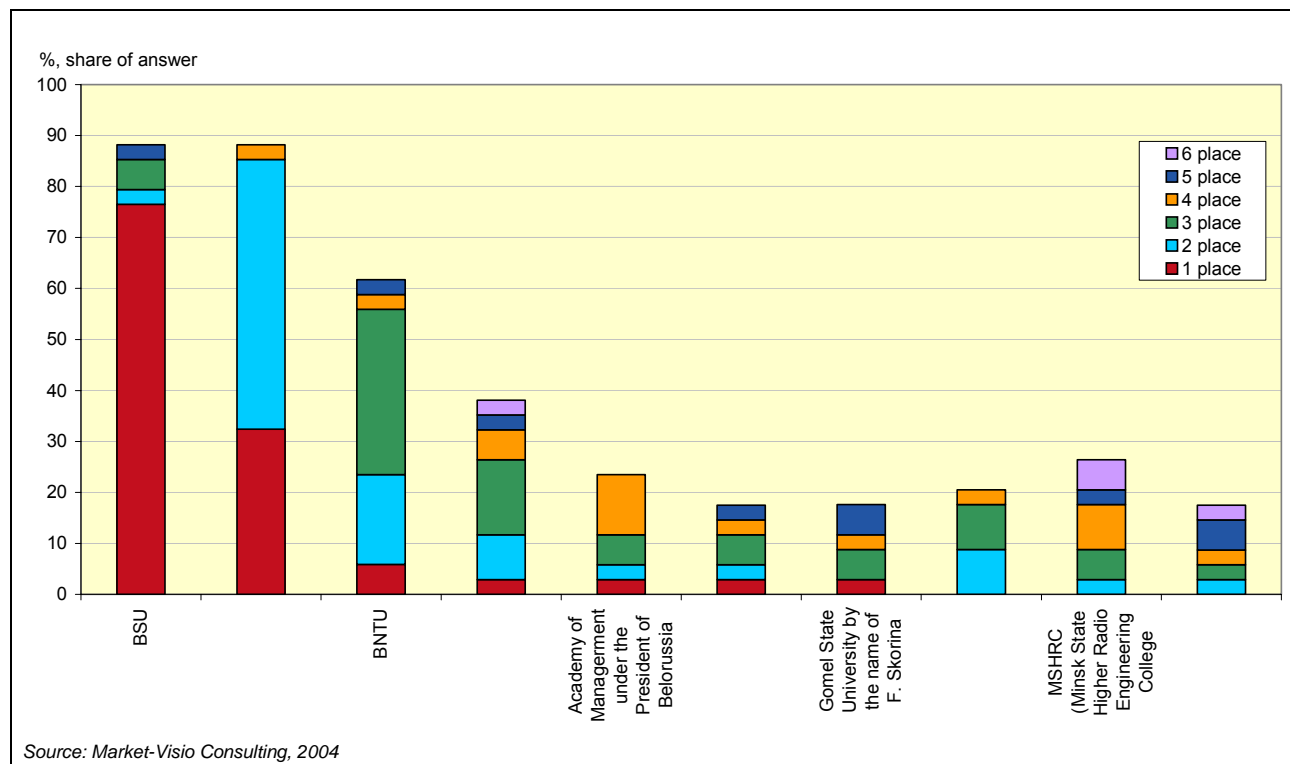


Diagram 1.8. Universities rating according to the quality of IT-specialists training

In the opinion of main market-operators, Belarusian state university takes the first place according to the quality of IT-specialists' training. In the opinion of experts, the universities that also graduate highly qualified IT-specialists are the following: Belarusian national technical university and Belarusian state technological university.

1.5.4. Specialists' Salary Level

Within the research market experts and other participants were offered to evaluate salary level of the employees at the market of export-oriented programming of the Republic of Belarus for the following categories of personnel:

- Management staff
- Project-managers
- Quality assurance managers
- Analyst
- Programmers
- Support personnel

In table 1.1 the range of salary of the employees at the export market of IT-services and products is presented.

Table 1.1. Max and Min salaries of employees involved in IT services and products export business

Specialists	Minimal salary USD	Maximal salary USD
Management staff	400	5000
Project-managers	300	2000
Quality assurance managers	200	1500
Analyst	300	1500
Programmers	150	1500
Support personnel	150	500

Salary range of the employees of every category is, in the opinion of experts, rather wide. In every case salary depends on the company, on its turnover. Higher level of salary is proper to big market operators.

1.5.5. International Job Experience of Specialists

Within the research the experts were offered to count the amount of employees at the market of export-oriented programming in Belarus, that have got international job experience. The representatives of 13 companies answered this question, and they pointed out that on the whole about 458 specialists have got job experience in foreign companies.

In diagram 1.9 the structure of the amount of specialists, having got international job experience is presented.

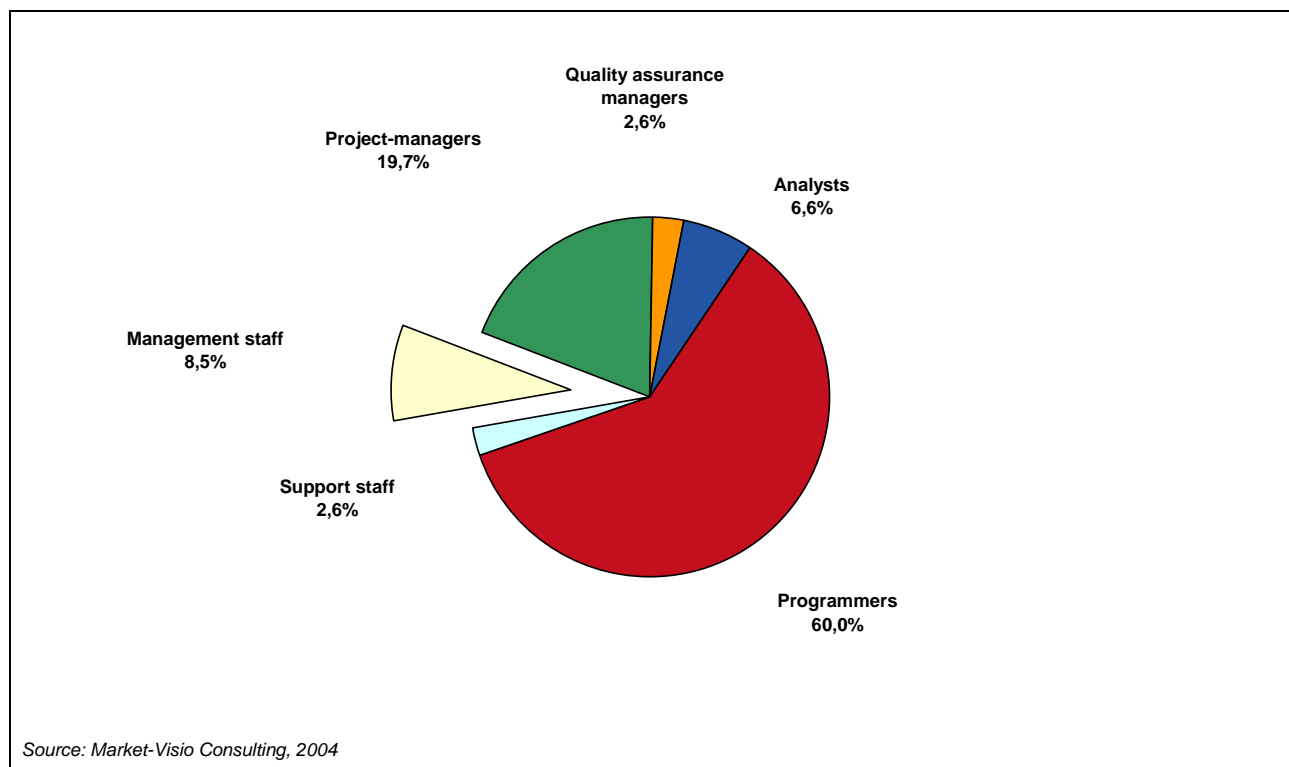


Diagram 1.9. Structure of specialists, having got international job experience

Among the specialists with international job experience about 60% are programmers, 20% - managers of projects and about 9% are managing staff.

Tables 1.2 presents the information about the countries, in which the specialists of the export industry of IT-services and products were employed.

Table 1.2. Work experience in the foreign countries

Specialists	Countries
Management staff	Great Britain, USA, Germany, France, Russia, Finland, Ireland, India, Netherlands, Italy, Hungary
Project-managers	Germany, Switzerland, Ireland, USA, Netherlands, Great Britain, Austria, France, Spain
Quality assurance managers	USA, Sweden
Analyst	USA, Germany, Great Britain, Ireland, Portugal
Programmers	USA, Germany, Great Britain, Ireland, Portugal, Sweden, Netherlands, Israel, Italy
Support personnel	Great Britain

The majority of the employees at the market of export-oriented programming of Belarus have got job experience in Great Britain, USA and Germany.

1.5.6. Migration Processes

Market experts were offered to evaluate migration processes, affecting the market of export-oriented programming of Belarus.

In the opinion of experts, mass flow-out of IT-specialists from Belarus began in the period of 'perestroika'. Today the majority of the experts at the market of IT-services and products point out, that emigration process has not finished, but it is not as intense as before. In the opinion of experts, the amount of the specialists, going abroad, has recently considerably reduced and makes up about 2-3% of the whole amount of employees at the export market of IT-services and products. That means about 150-200 employees per year.

Experts point out the tendency of reducing emigration of specialists to foreign countries and increasing the amount of specialists, leaving for the neighboring countries, in particular to the cities of Russia, such as Moscow and Saint-Petersburg.

Home migration processes are also quite noticeable. The specialists, working in the sphere of export-oriented programming in the regions of Belarus, are leaving for Minsk, in which about 79% of companies, providing IT services and products, are situated.

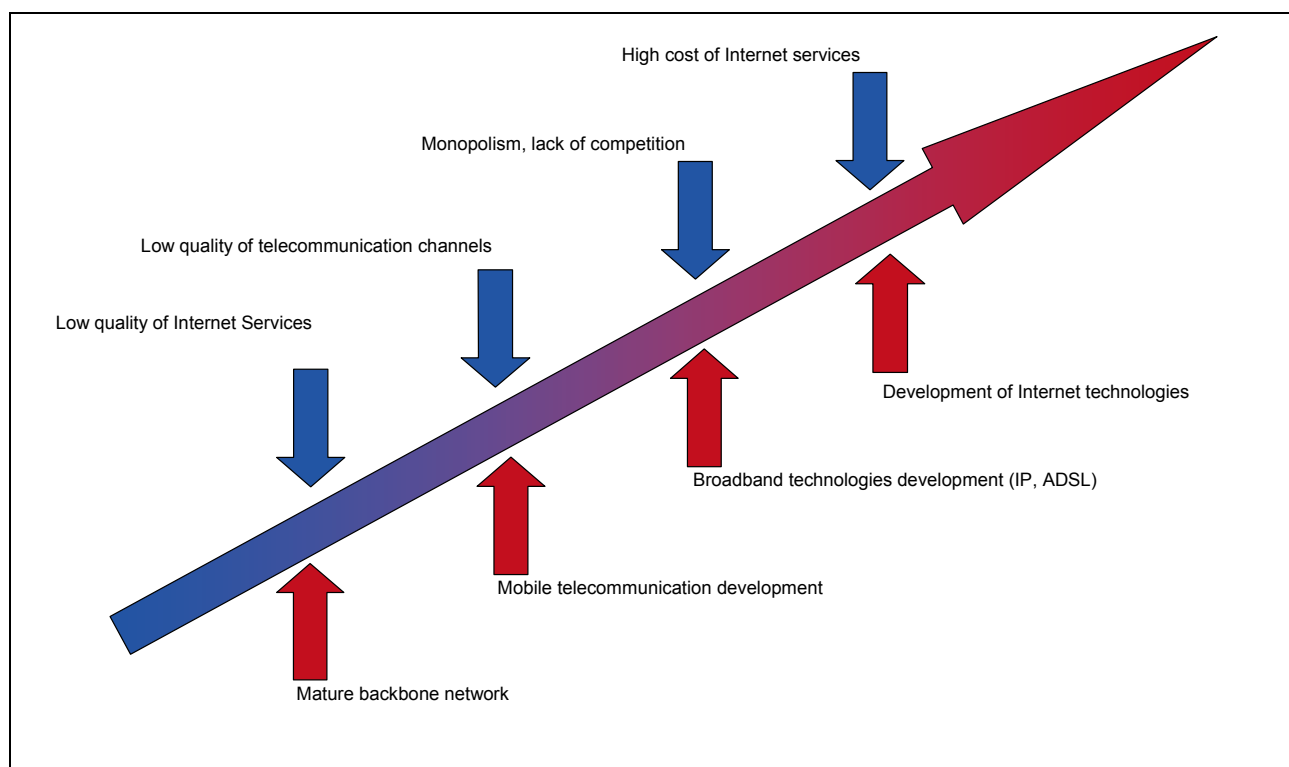
1.6. Technical Infrastructure

The telecommunication infrastructure of the Republic of Belarus, the tendencies of its development and improvement are viewed in this subsection as the development basis of export-oriented programming.

1.6.1. Present Telecommunication Infrastructure in the Republic of Belarus

Within the research the respondents were offered to estimate telecommunication infrastructure of the Republic, to highlight its advantages and disadvantages.

In picture 1.4 the indicators of the telecommunication infrastructure of the Republic of Belarus are presented.



Picture 1.4. The indicators of telecommunication infrastructure in Belarus

Monopolism of telecommunication market and lack of competition are considered to be the most negative factors, influencing the development of telecommunication industry. Today monopolistic position at the market in Belarus is taken by the company 'Beltelecom'. State general network of transmitting data BelPak is considered to be a national network. In order to get telecommunication services of BelPak, one must sign up a contract with 'Beltelecom'.

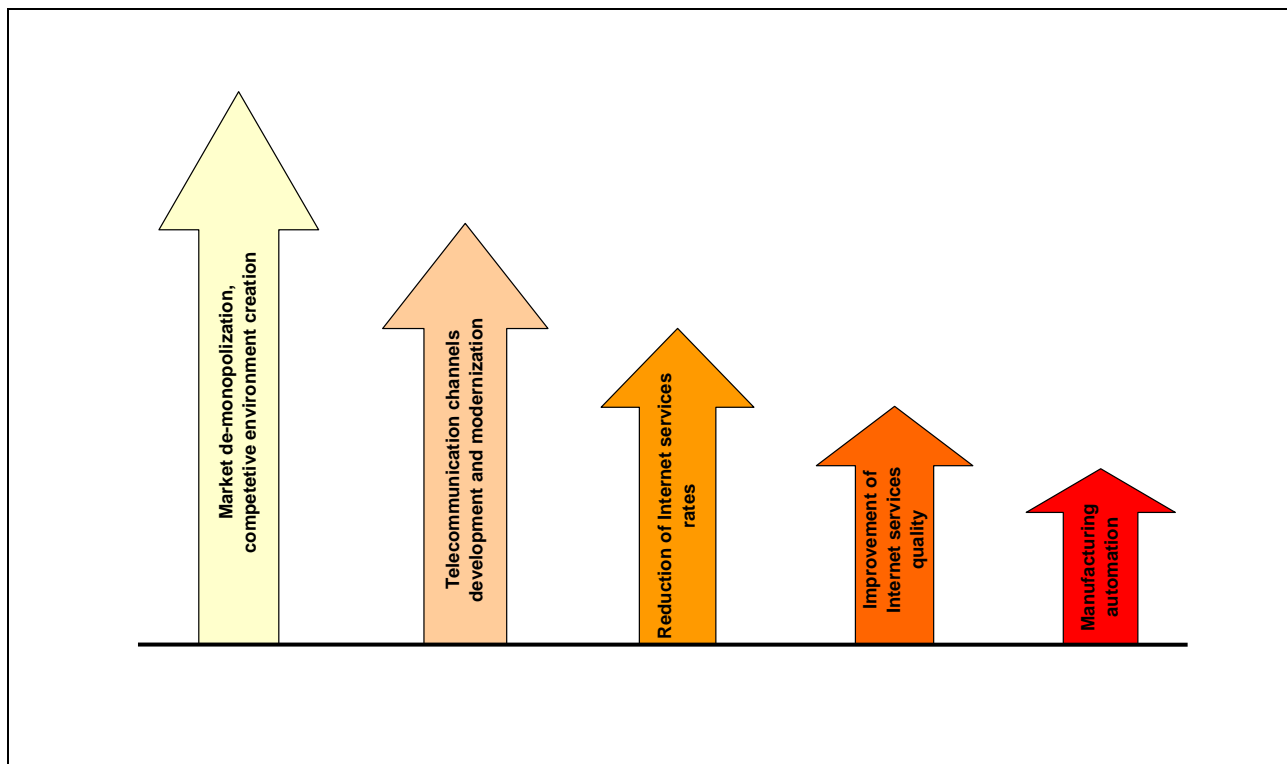
The lack of competition causes low quality and high price of Internet services. These factors are marked as a significant drag on the way of market development.

Main market operators state the following positive indicators of telecommunication industry: the development of Internet and high-speed technologies, cell phone communication, as well as developed home supporting network and its compactness, available in Belarus.

1.6.2. Tendencies of Infrastructure Improvement

Within the research market experts were offered to determine the tendencies of telecommunication infrastructure improvement in the Republic of Belarus.

The results of the research are presented in picture 1.5.



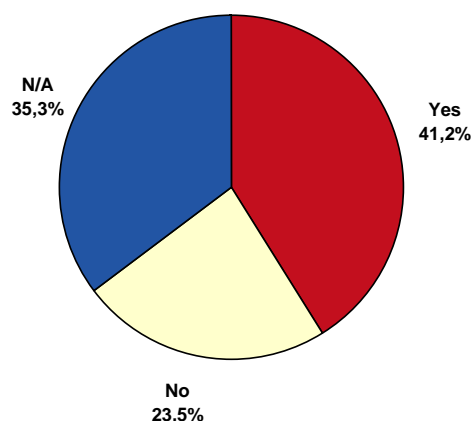
Picture 1.5. Trends of telecommunication infrastructure improvement

The majority of experts state market denomopolization and competition as the main directions of telecommunication infrastructure improvement. In the opinion of experts, development and modernization of communication networks are necessary as well. Experts forecast reduction of price rates and quality improvement of Internet-services if new operators enter the market.

Active development of telecommunication infrastructure is going on in Belarus now. State program of communication development 2003-2005 is being carried out, congresses and conferences on telecommunication problems are held, while exchanging experience with foreign partners.

1.7. Key Competitors

According to the respondents' rate about 40% of Belarusian companies that export IT-services and products have got direct competitors in foreign countries, operating at export market.



Source: Market-Visio Consulting, 2004

Diagram 1.10. Competition in export-oriented programming market

Respondents were offered to point out the countries, which in their opinion are the main competitors of Belarusian exporters of IT-services and products at the world market. The results received are presented in table 1.3.

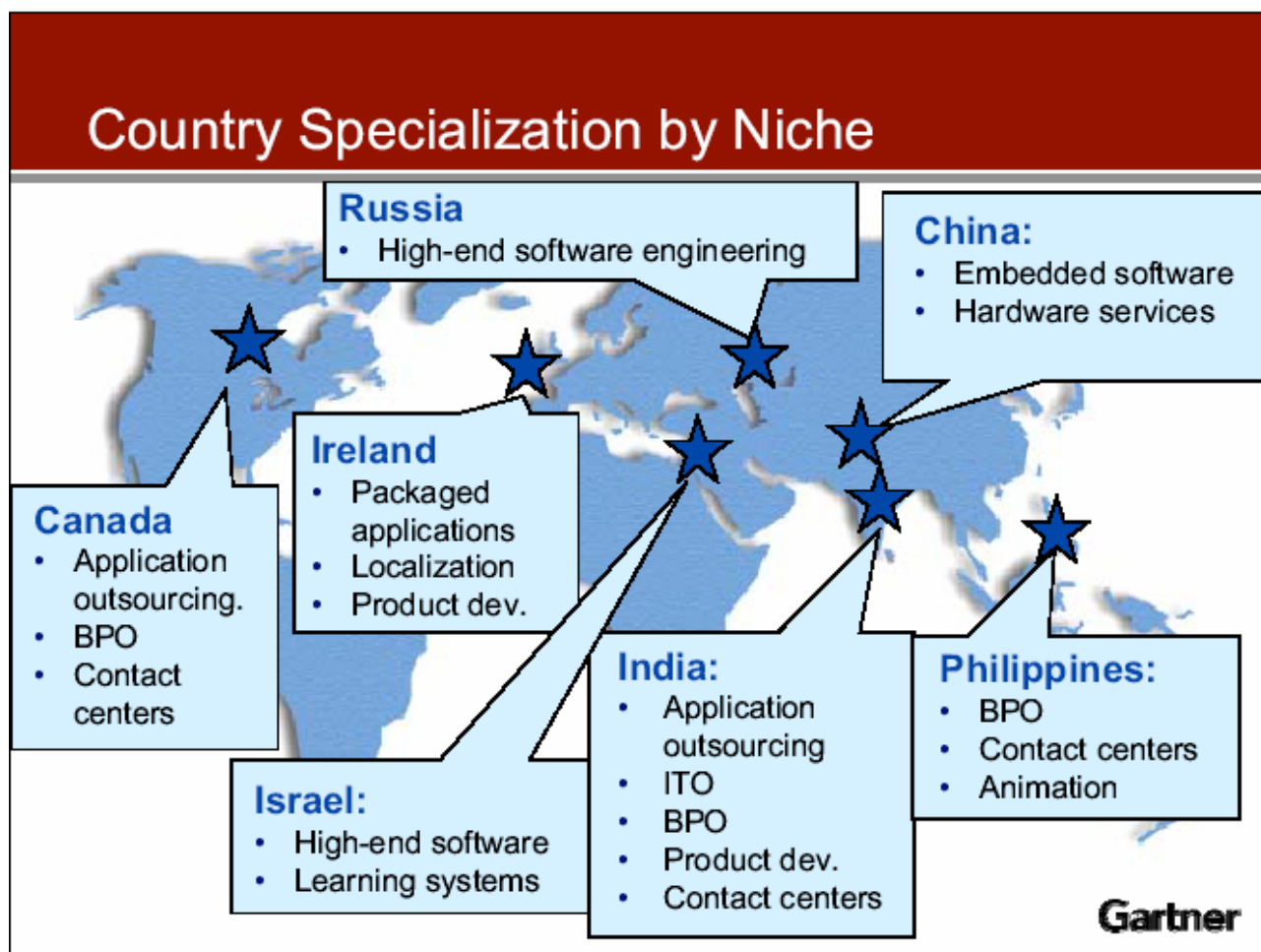
Table 1.3. Main countries-competitors of the Belarusian IT-services and products export business

Countries	Number of mentions
India	10
Russia	7
East European countries (Bulgaria, Rumania, Poland)	5
China	3
West European countries (Germany)	2
USA	2
Ukraine	2

In the opinion of respondents, software companies from India, Russia and countries of Eastern Europe are the main competitors of Belarusian developers at the world export market of IT-services and products. Even though Russia is a significant competitor, considerable amount of projects of Belarusian developers come through marketing channels of Russian companies. Thus Russia plays double role for Belarusian export industry of IT-services and products: it is both the main competitor and customer.

1.8. The trends of the world export-oriented programming market

The majority of leading countries in the sphere of export of IT-services and products have got very qualified commission of experts and specialize in the directions, presented in picture 1.6.



Picture 1.6. Country Specialization by Niche

The following tendencies in activity are being observed at the world market of export-oriented programming today: development of software, outsourcing of applications, Business Processes Outsourcing of (PBO), contact centres.

In the opinion of Gartner analytics, Russian providers of IT-services and products specialize to a greater extent in the development of complicated scientific software.

Taking into account the results of the research, one can notice that Belarusian software developers also specialize in the mentioned direction, because of many factors (including qualification level, educational system, etc.).

1.9. Forecast of Market Development

According to the experts' rate, the volume of Belarusian export market of IT-services and products was in 2003 about 65 billion \$, by the end of 2004 it will be about 90 billion \$.

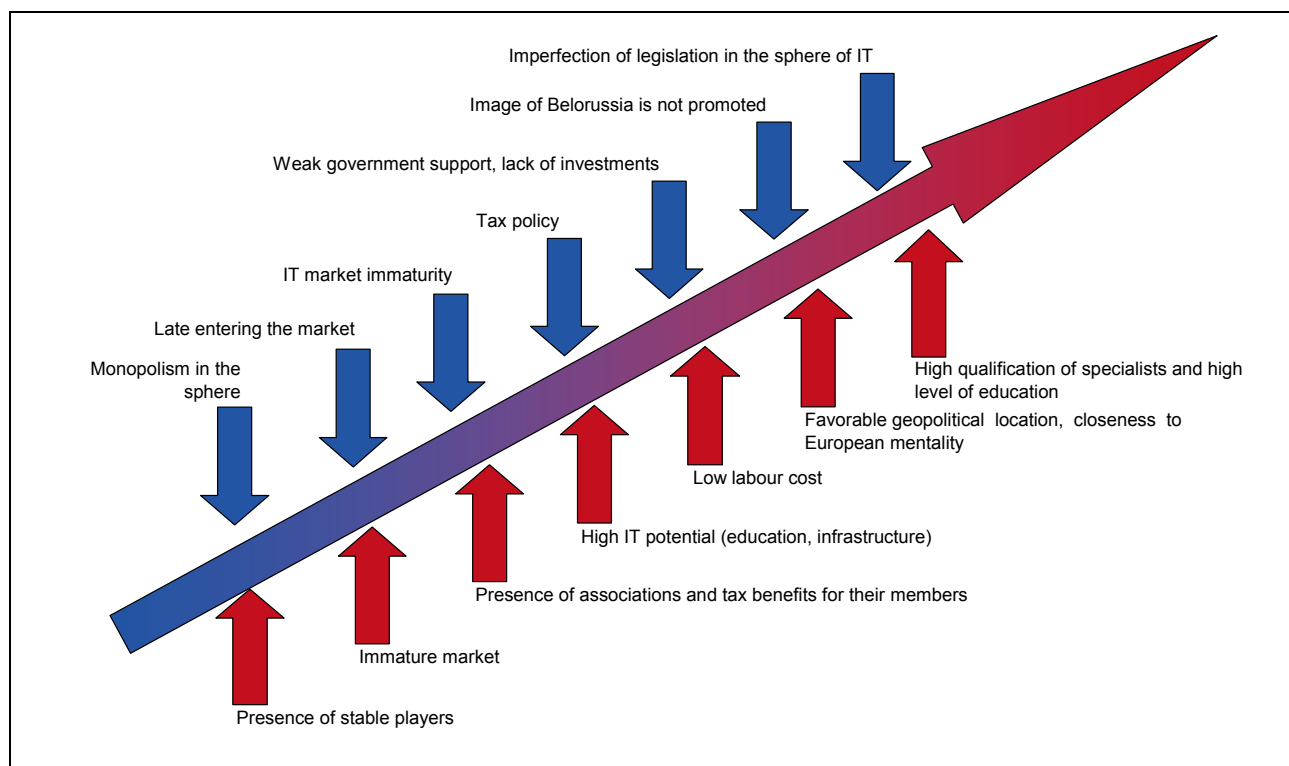
40-60% of annual average growth is forecasted. According to the experts' rate, the volume of export market, will be in 2006 about 200 billion \$. (Graph 1.2)

Within the research, the respondents were offered to point out the tendencies of the development of Belarusian export market of IT-services and products:

- Market consolidation and growth of market operators
- The growth of the export market of IT-services and products
- Increasing competition at the home market
- The growth of production sector
- Quality improvement of services, including customer service
- The creation of professional associations
- Specialization of companies

In summer 2004 Associations of Latvia, Lithuania and Belarus signed up a contract on the cooperation within Baltic Cluster of Information Systems. They are negotiating now about the fact of creating an association, joining the countries of CIS (Russia, Ukraine, Belarus, Kazakhstan, Armenia and etc.) in order to provide complex services at the world market of export-oriented programming.

The respondents were also asked to point out positive and negative factors, influencing the development of Belarusian export market of IT-services and products. The results are presented in picture 1.7.



Picture 1.7. Factors affecting Belarusian IT services and products export market

Disadvantages of the legislation system in the sphere of Information Technologies are stated as one of the most considerable obstacles on the way of the development of Belarusian export industry of IT-services and products. In the opinion of experts, tax policy and bad government support also have negative influence on the development of the market of export-oriented programming.

Experts refer highly qualified specialists at the market, favourable geo-political position of the Republic and high IT-potential to the factors, stimulating the development of Belarusian export industry of IT-services and products.

Within the research the main operators were offered to estimate in what directions Belarusian government should join its efforts for the development of export-oriented programming. In diagram 1.11 respondents' opinion about the following fact is presented: either the government should considerably improve business situation in the suggested directions or it would rather not interfere.

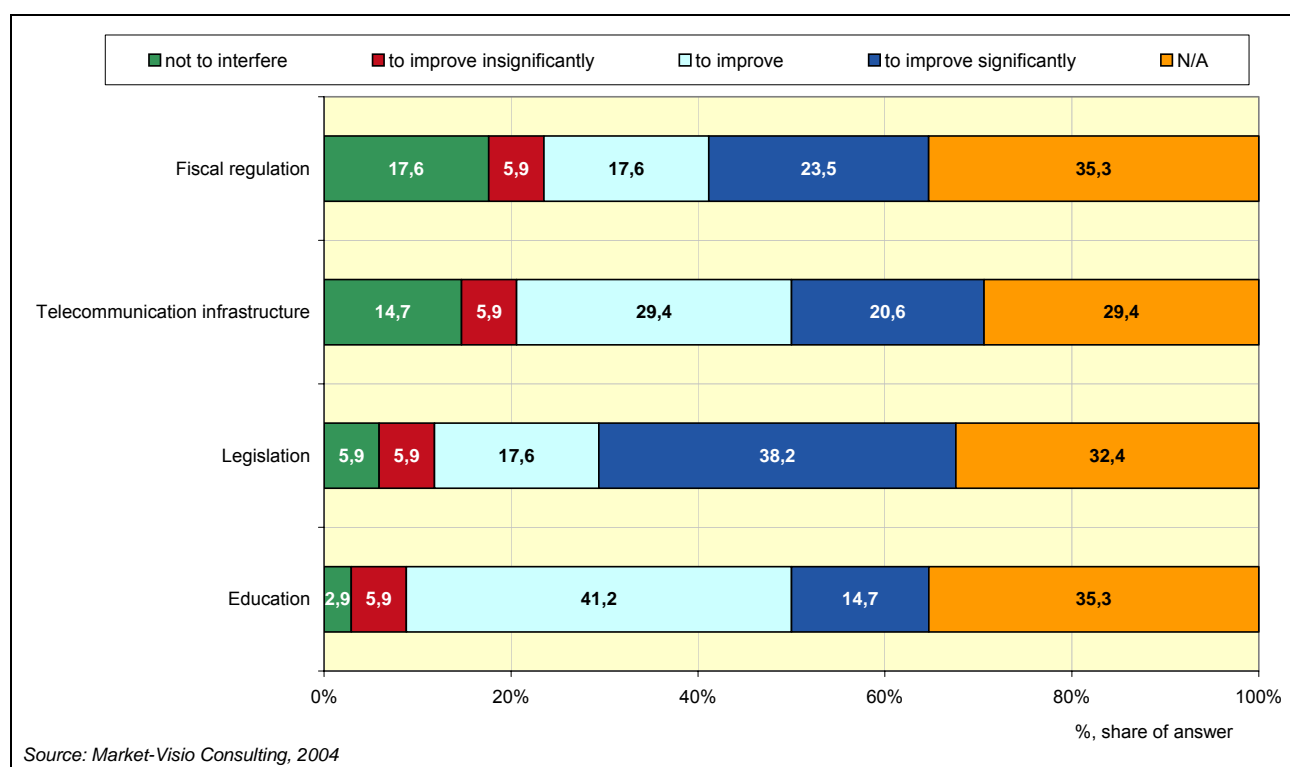


Diagram 1.11. Necessary improvements

The majority of respondents (more than 55%) consider that today improvement of legislation- and educational systems of the Republic is necessary. More than the half of the experts believe that improvement of telecommunication infrastructure is important.

It is necessary to underline that significant amount of the respondents consider that the government should not interfere in the financial regulation.

2. The Characteristics of Belarusian Exporters of IT-services and Products

The information about Belarusian exporters of IT-services and products, the size and turnovers of companies, the level of certification, services which are provided and used in the means of development and platforms is presented in this subsection.

2.1. Main Market Operators

According to the official information about 50 registered companies work at Belarusian market of export-oriented programming.

Experts' rates differ from the official statistics. In the opinion of experts today about 200 companies work at the export market of IT-services and products, 20 of them are main market operators. The experts single out 5-6 large companies:

SaM-Solutions, ScienceSoft, EPAM, BelHard, BelSoft.

In diagram 2.1 the companies are presented, which were mentioned as the biggest operators at the market of export-oriented programming of the Republic of Belarus.

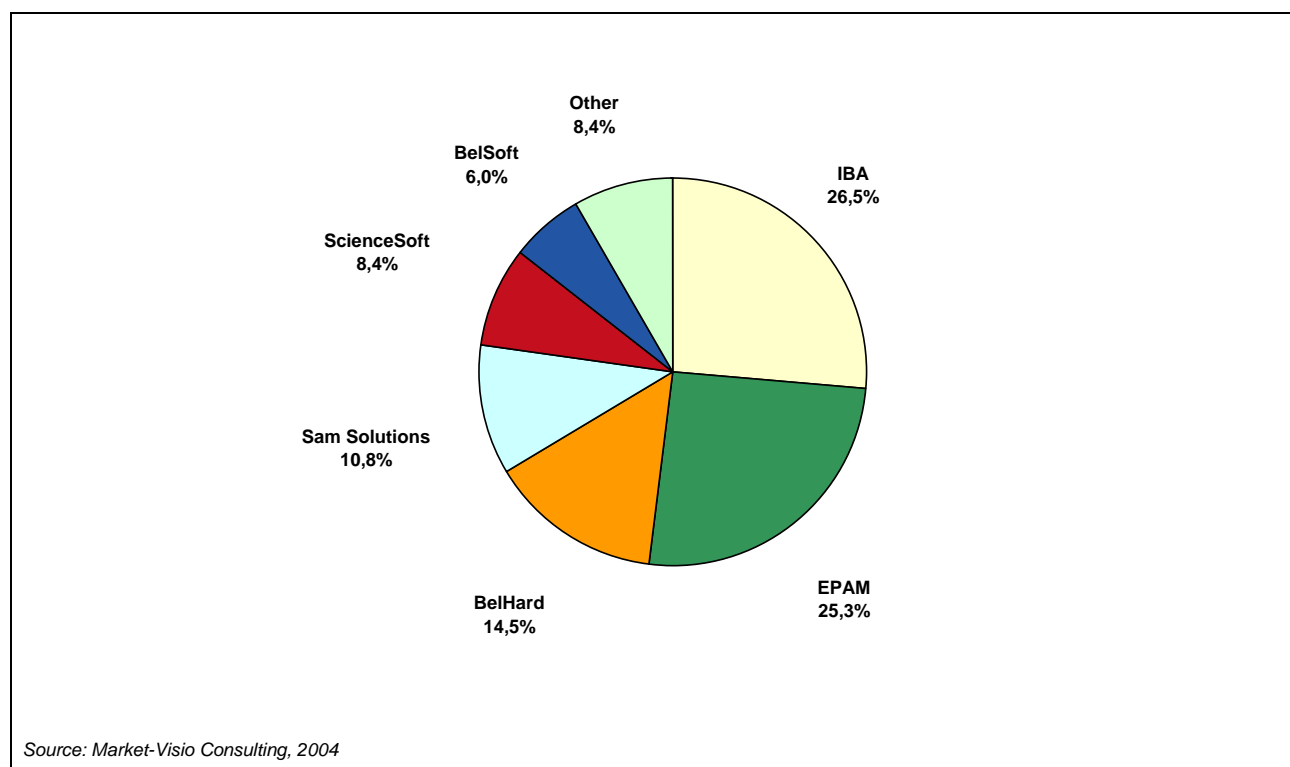
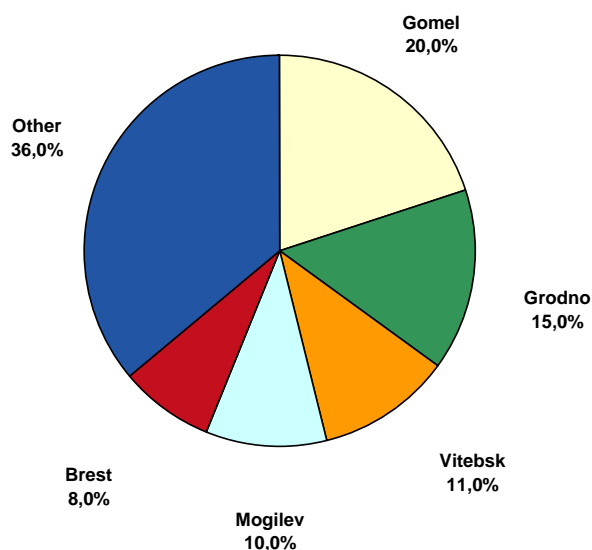


Diagram 2.1. The leaders of Belarusian export-oriented programming market

The forth of the respondents referred IBA and EPAM companies to the main operators at the export market of IT-services and products, then according to a fewer number of answers BelHard, SaM-Solutions, ScienceSoft and BelSoft go. Agat, Itrasishn/BelHard, NIISA, G2X companies were referred to 'Other' category.

In the opinion of experts, about 73% of companies, working at the market of export-oriented programming, are located in Minsk, 27% of companies are situated in other cities of Belarus. The distribution of regional companies in cities is presented in diagram 2.2.

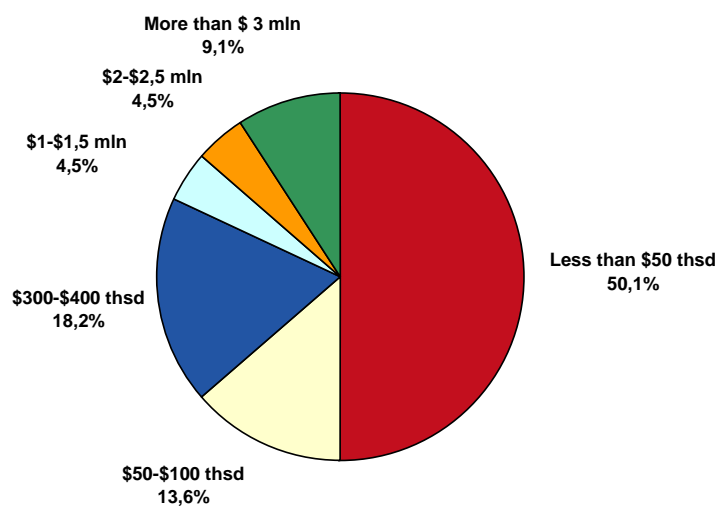


Source: Market-Visio Consulting, 2004

Diagram 2.2. The Distribution of regional companies over the cities

2.1.1. Turnover of Companies

Within the research the respondents were offered to evaluate the volume of business export of IT-services and products. The results are presented in diagram 2.3.



Source: Market-Visio Consulting, 2004

Diagram 2.3. Companies turnovers in IT services and products export business

About half of market operators answered that the export volume of IT-services in 2003 was about 50 thousand \$. 18% of the respondents pointed out, that the volume of export of their companies in 2003 was more than 1 billion \$.

In diagram 2.4 the part of the export of IT-services and products from the whole general turnover of companies and its dynamics till the year 2005 is presented.

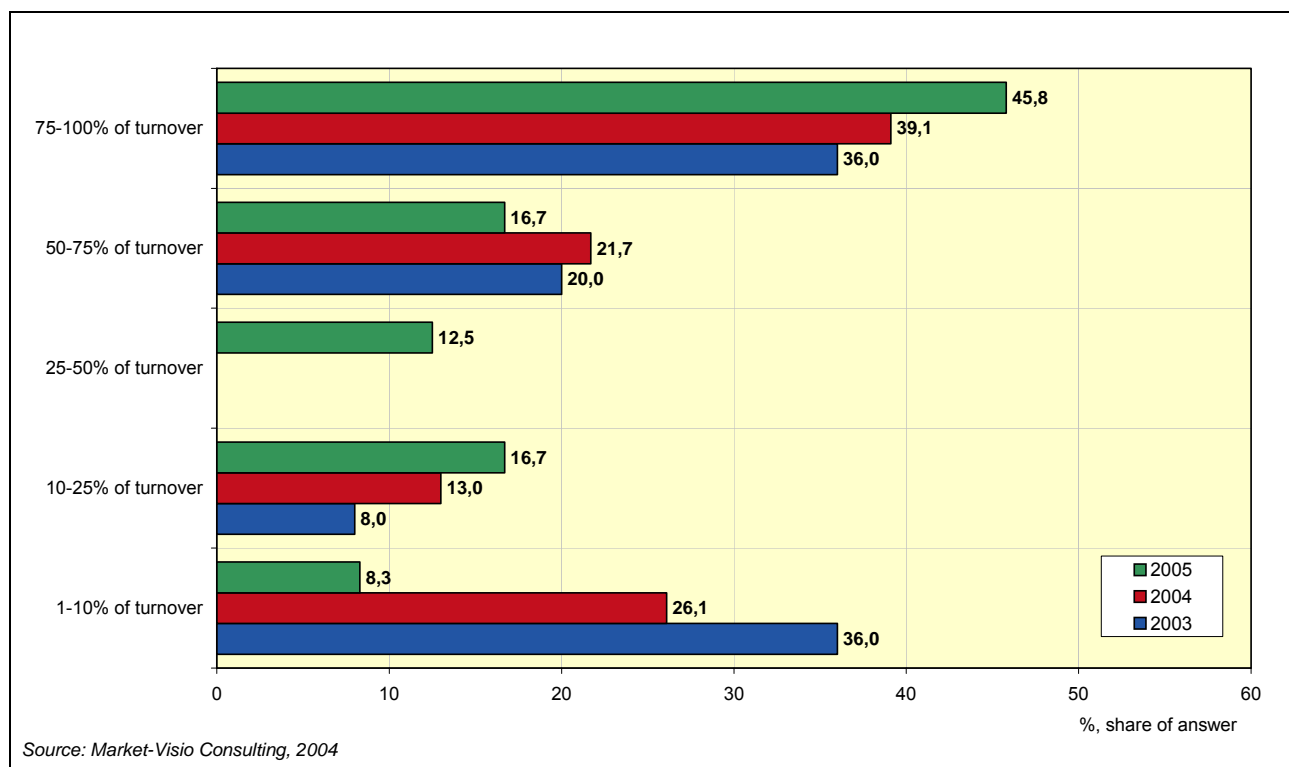


Diagram 2.4. Share of the export of IT-services and products income

The number of companies, oriented on the export of IT-services with the export of 75-100% in general turnover, is increasing and will make up about half of the companies, taking part in the research.

In diagram 2.5 respondents' rate of the dynamics of their business in the sphere of export of IT-services and products is presented.

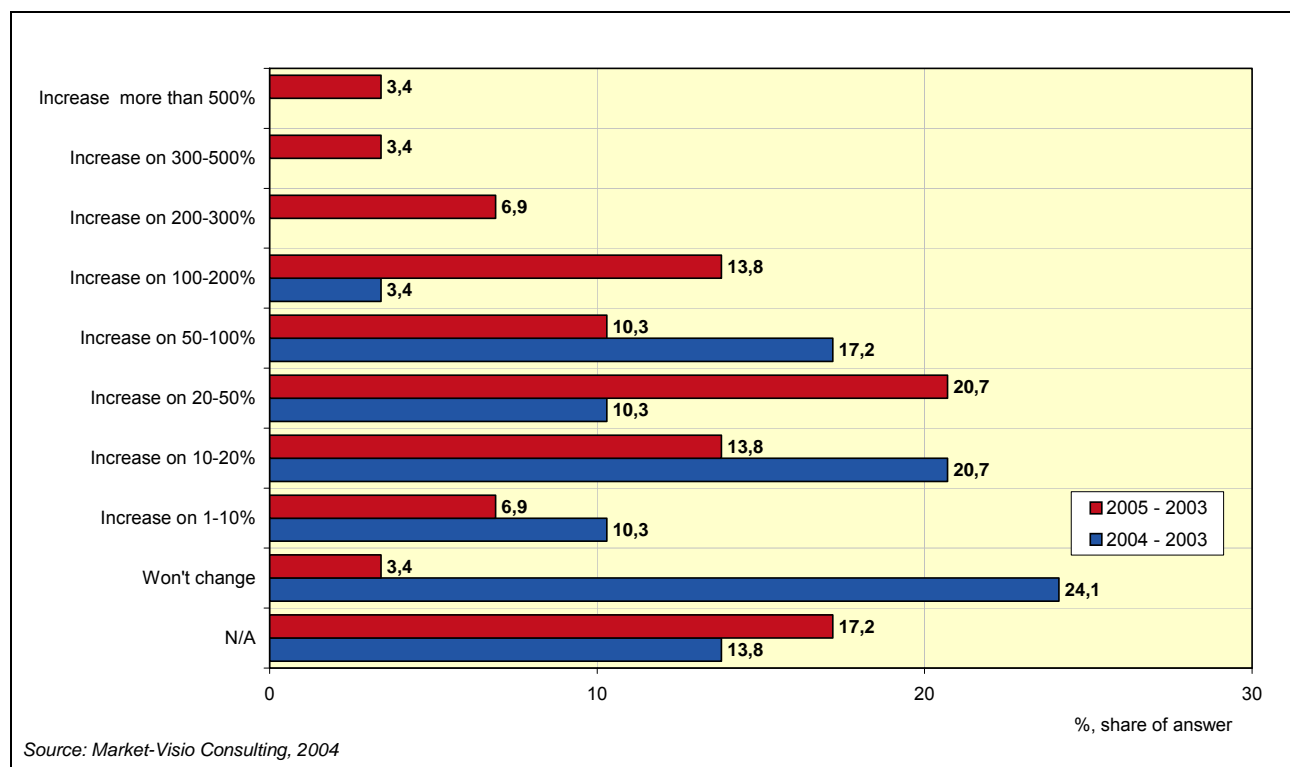


Diagram 2.5. Dynamics of IT services and products export business

The majority of research participants do not make plans about any change of the export volume of IT-services and products until the end of 2004 in comparison with 2003, or they forecast insignificant increase up to 20%.

In fact almost all market operators plan some increase of export volume of IT-services by the end of 2005 in comparison with 2003. A greater amount of operators forecast 20-50% increase.

2.1.2. Specialization of Companies

Within the research market leaders of export-oriented programming were asked to count the amount of specialists in their companies, dealing with export business of IT-services and products. About the half of all the specialists of Belarusian market (2745 people) work for 20 companies, representatives of which mentioned the number personnel working in the sphere of export. The structure of personnel specialization is presented in diagram 2.6.

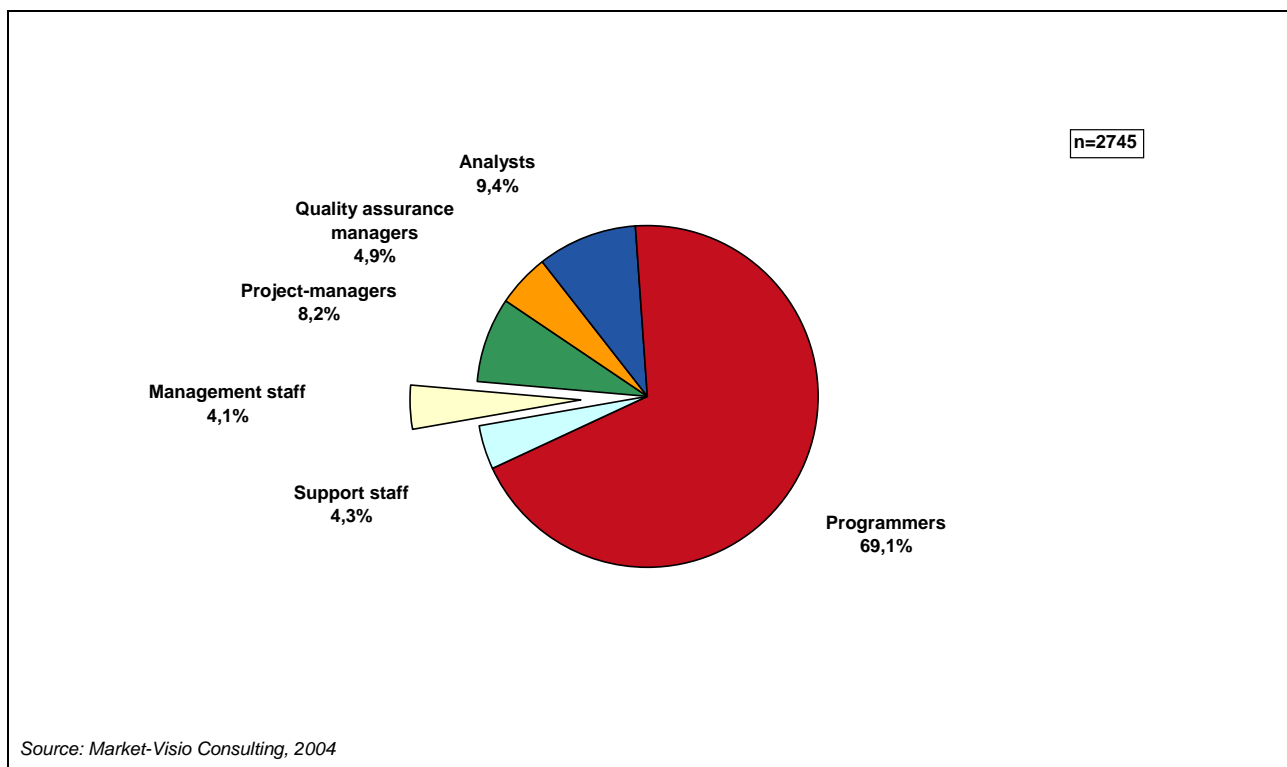


Diagram 2.6. The structure of personnel specialization

About 70% of the specialists of the examined companies, dealing with the export business of IT-services and products, are programmers. Managing personnel is less than 5%.

In diagram 2.7 the distribution of respondents according to the applied business pattern is presented. The amount of companies, providing BPO services is marked in the graph in blue.

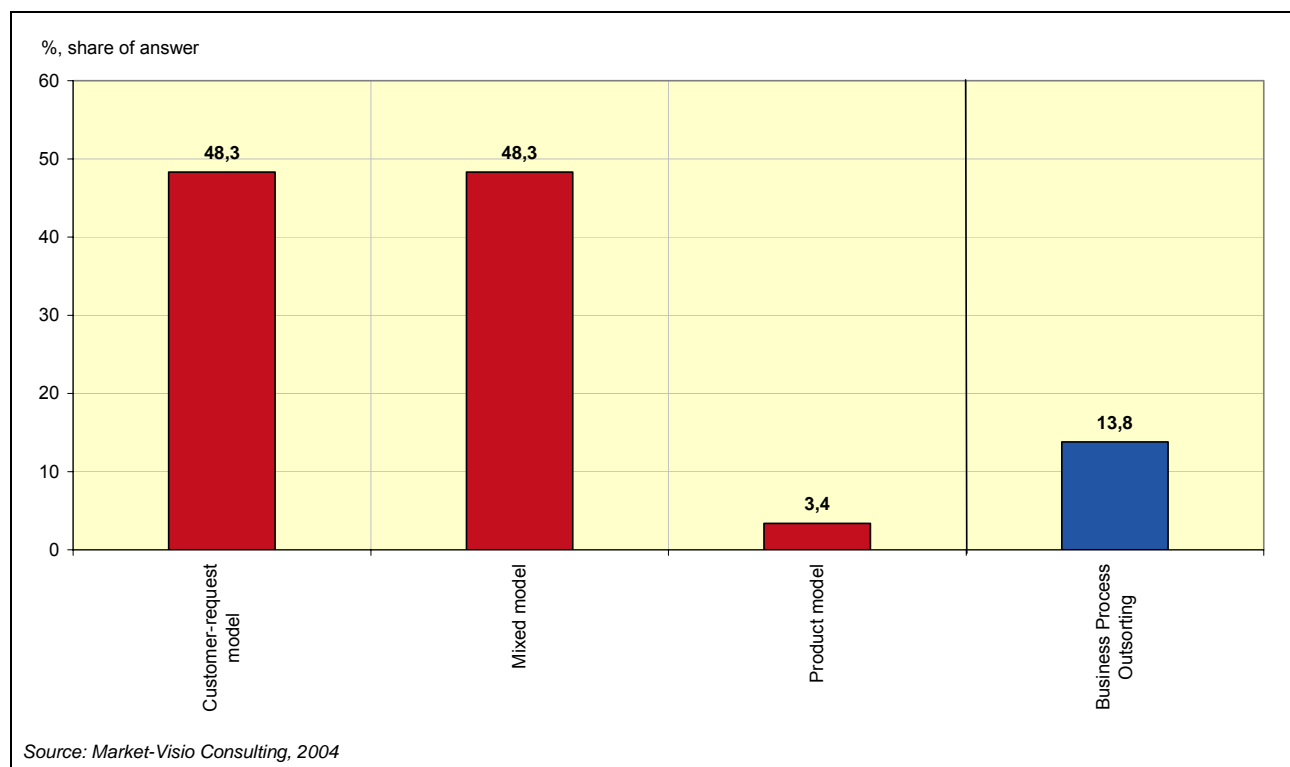


Diagram 2.7. The specialization of Belarusian exporters of IT services and products

The majority of Belarusian developers today (96, 6%) provide services of developing software for customers. About 48% use the mixed pattern. That means they both develop software for customers and sell the software that is already produced.

Only one company, a participant of the research, works using exclusively the producing pattern. Although the majority of big market operators consider this pattern to be the most perspective. 14 % of Belarusian exporters of It-services and products, having taken part in the research, provide BPO-services.

The development and selling of produced software is considered to be the most perspective business pattern and it is mentioned by the experts as one of the tendencies of the export market of IT-services and products. Though only about 20% of Belarusian developers are planning to change their business pattern and about 65% of the respondents will continue working according to the present pattern.

With further growth of Belarusian economy back process is highly possible – increase of software development for home customers. Such a process is going on in Russia right now, where the amount of orders of home customers has recently been increasing.

In diagram 2.8 the distribution of respondents' answers to the questions about the fact, who is dealing with the sphere of export of IT-services and products in the company, is presented.

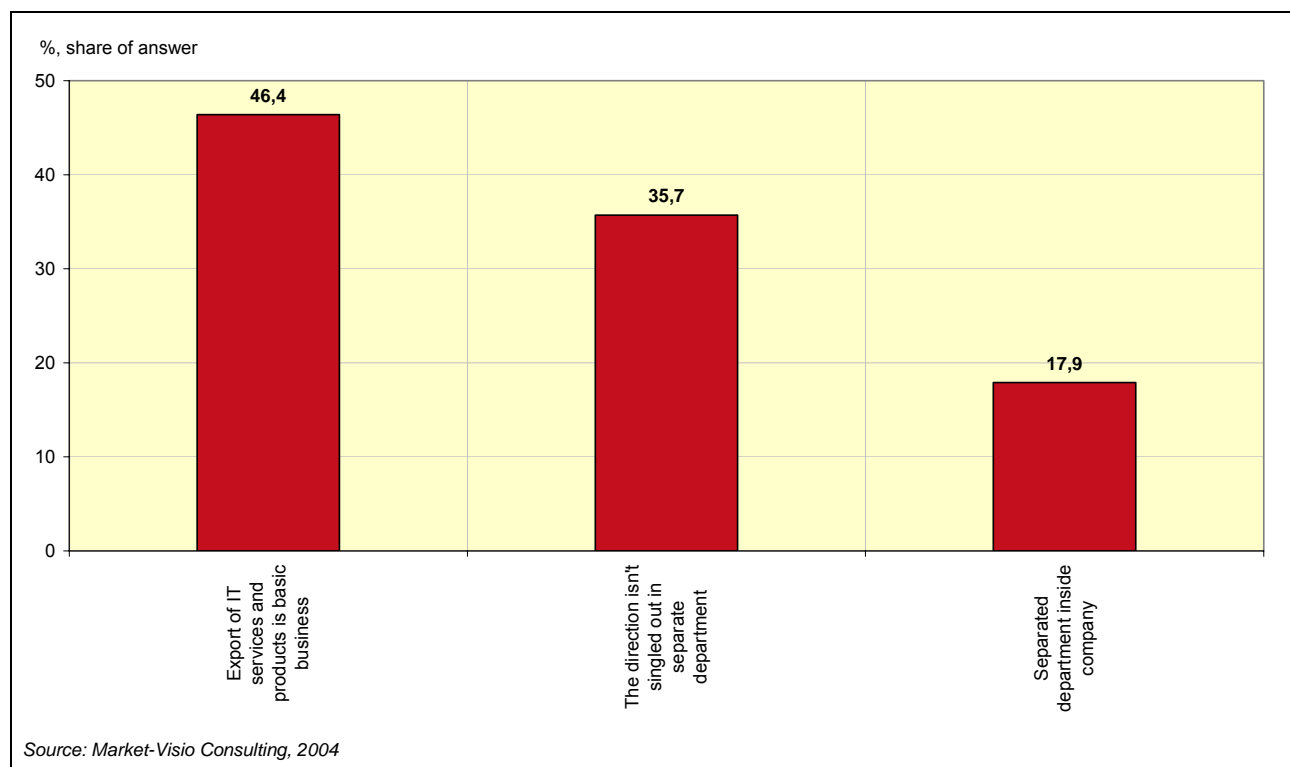


Diagram 2.8. Department responsible for IT services and products export

For the majority of the companies studied (about 50%) the export of IT-services and products is a main business direction, about 37% noticed, that General Department of Software Development provides IT-services, so this direction of export is not singled out as a separate structure.

Prevailing amount of companies (86 %), working at the market of export-oriented programming, are not planning any change of the position of the company or a company unit, dealing with the export of IT-services within 2004 and 2005. Only more than 10 % are planning to change the position of the department, providing company's IT-services.

2.2. Certification of Companies

One of the indicators of the development level of a software company is certificates of quality of the software development processes. Many participants of the research mention the importance of passing inspection certification for the companies of Belarusian export market of IT-services and products.

In diagram 2.9 the data about the number of companies, having got or planning to get ISO and SMM quality certificates and etc.

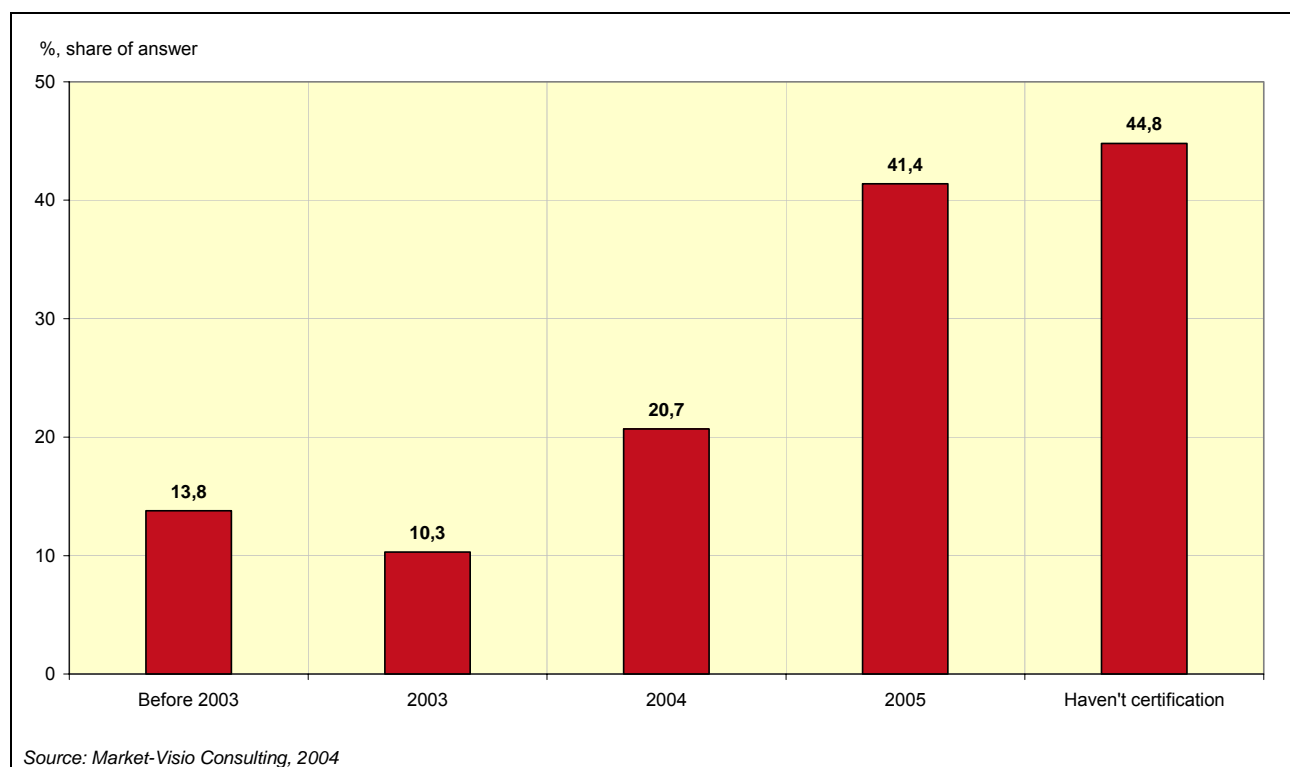


Diagram 2.9. Companies certifications in 2003-2005

Today a great number of non-certified companies (about 45%) are working at Belarusian market of export-oriented software.

In 2005 more than 40 % of companies are planning to pass inspection certification.

In diagram 2.10 the data about the current condition and plans of the research participants of getting in 2004-2005 different kinds of certificates are presented.

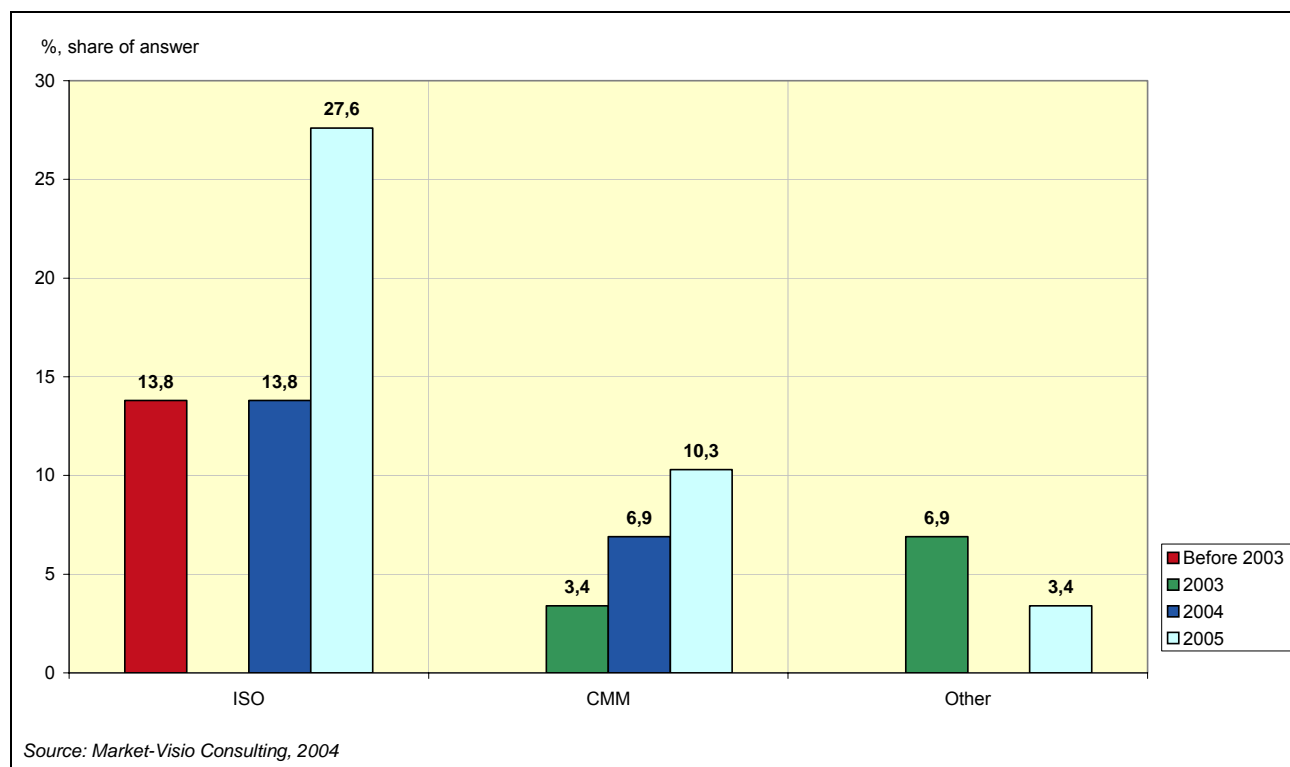


Diagram 2.10. Availability of certificates in 2003-2005

Basically companies are intending to get ISO certificates in 2005, and 10 % of companies are planning to get SMM certificates.

According to the received data one may draw a conclusion that in 2005 Belarus will be a perspective market for the companies, providing certification services.

2.3. Use of Development Means

Within the research the respondents were offered to find out what programming languages, means of development, methods and platforms they use in their work and to what extent.

In diagram 2.11 the data about the extent of using different programming languages among Belarusian exporters of IT-services and products.

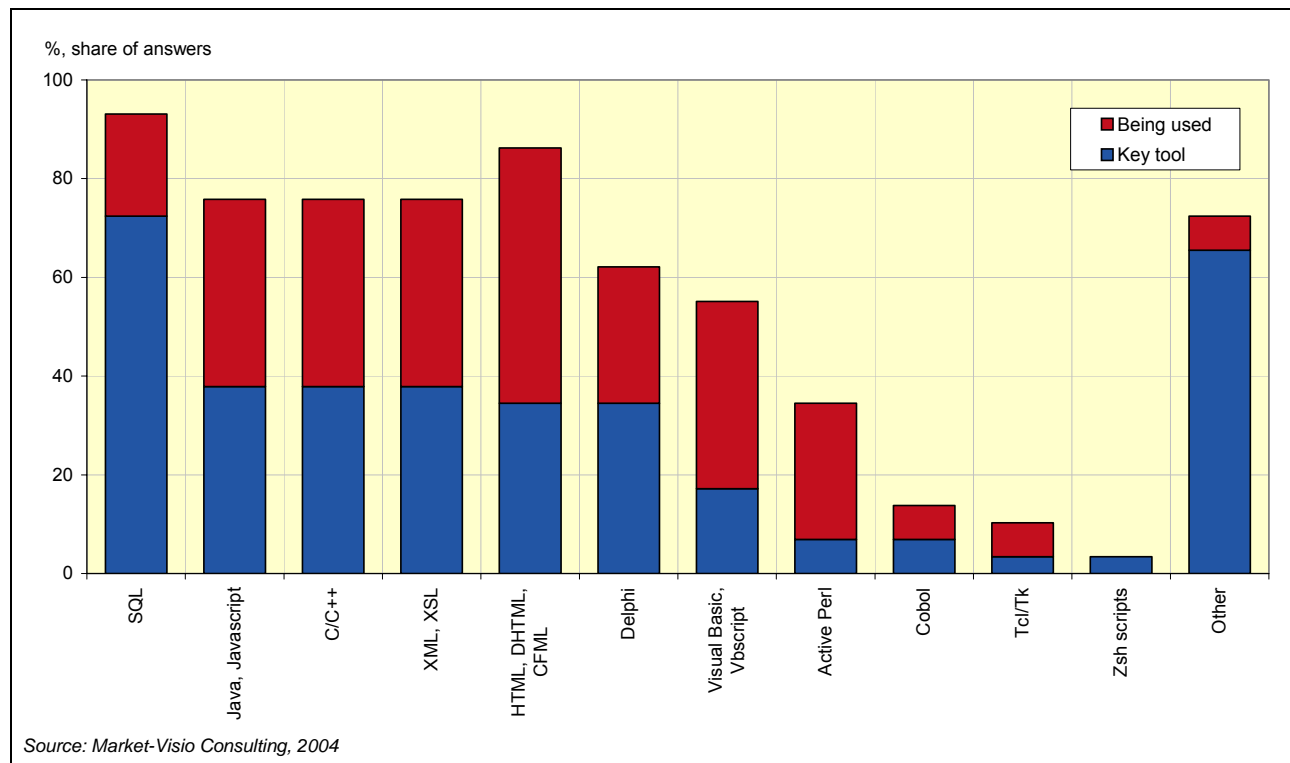


Diagram 2.11. Programming languages

The most widely spread programming language among Belarusian exporters of software is SQL. The key group of programming languages for the majority of Belarusian exporters of IT-services and products include the following languages: Java, C/C++, XML, XSL, HTML, DHTML, CFML, and Delphi.

In diagram 2.12 the data about the use of different CASE-means by Belarusian exporters of IT-services and products are presented.

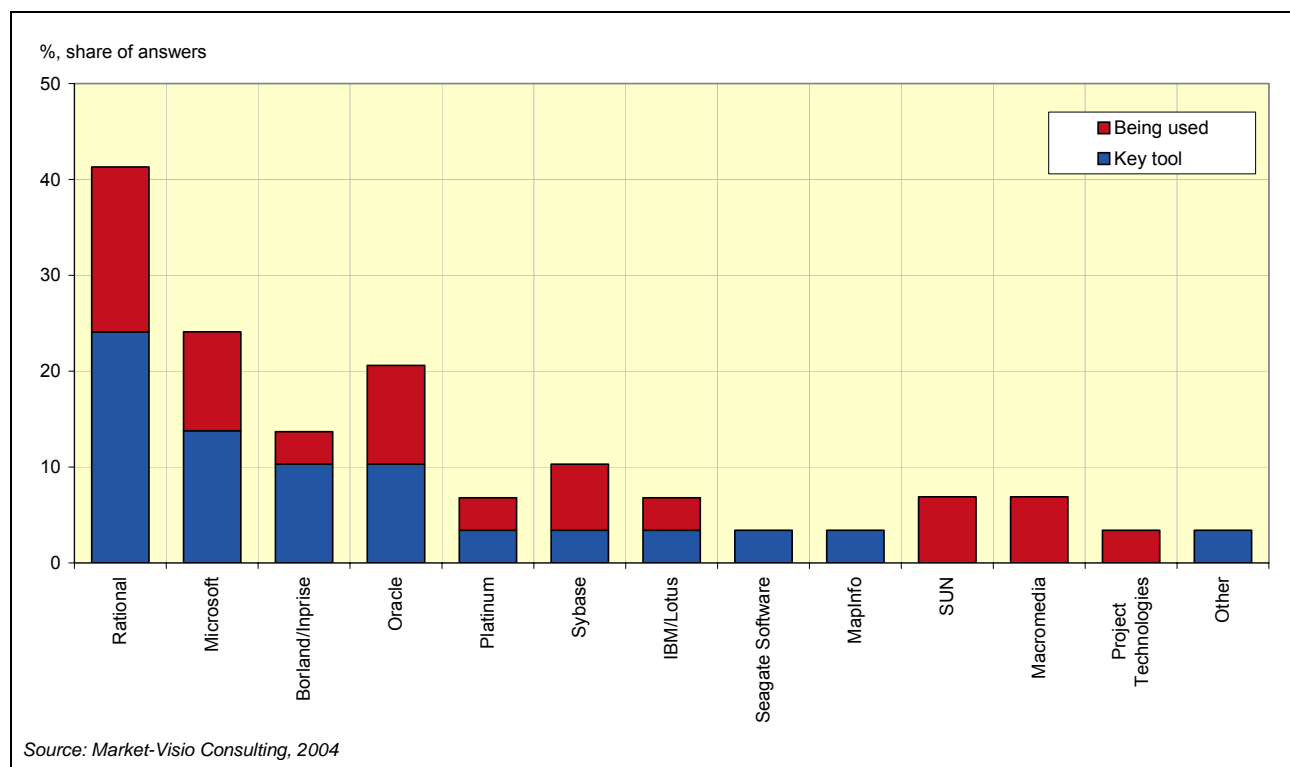


Diagram 2.12. CASE-tools

The majority of companies use as Case-means the products of Rational and Microsoft companies.

In diagram 2.13 the data about the extent of using different means of development among Belarusian exporters of IT-services and products are presented.

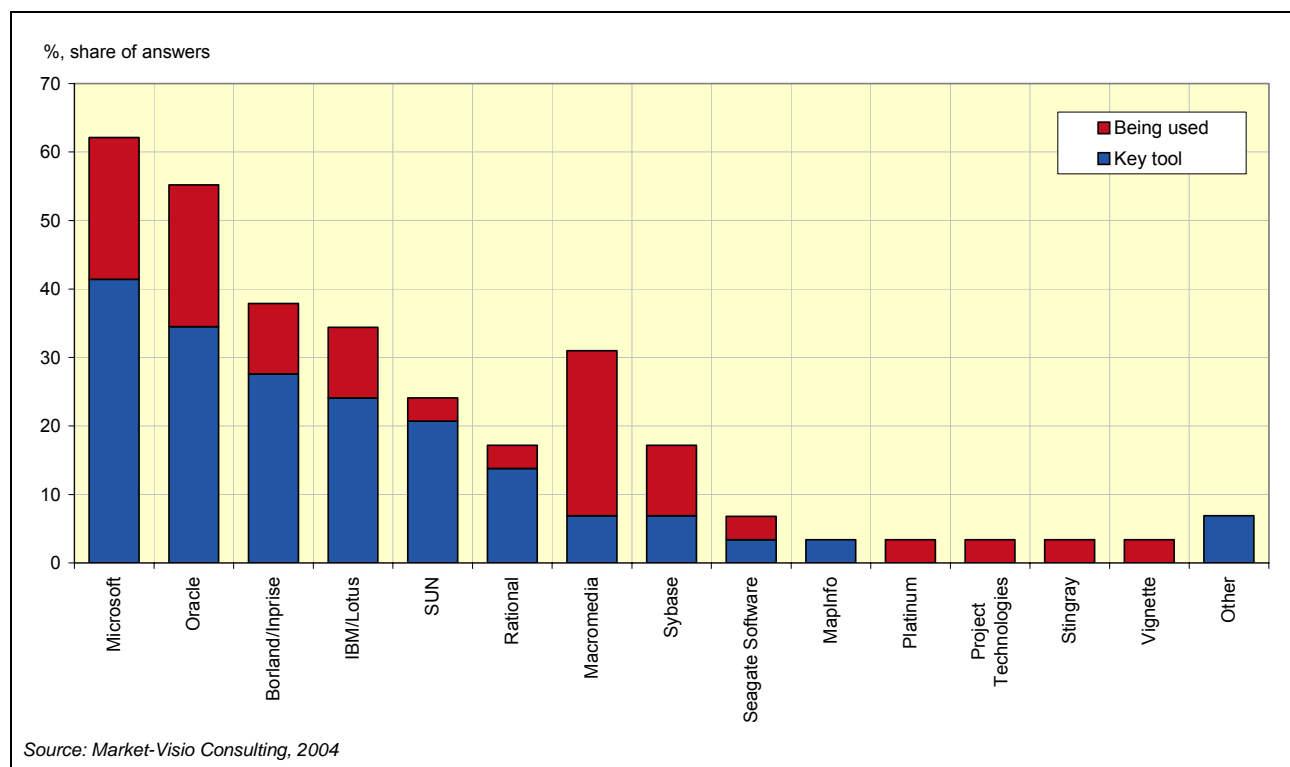


Diagram 2.13. Soft development tools

The majority of companies use as means of development the production of Microsoft and Oracle companies.

In diagram 2.14 the data about the extent of using among Belarusian exporters of IT-services and products different means of testing.

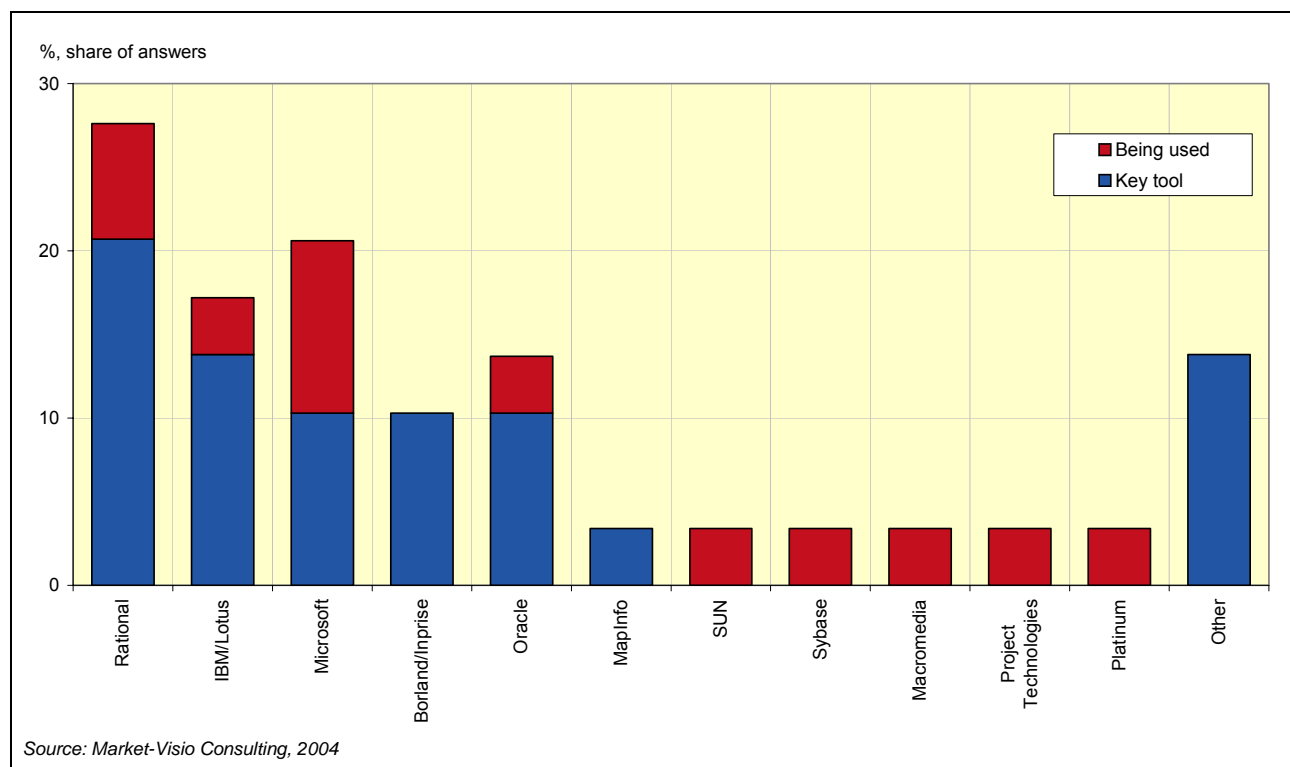


Diagram 2.14. Testing tools

The majority of companies use as means of testing the production of Rational and IBA/Lotus companies.

In diagram 2.15 the data about the extent of using different means of the support of project infrastructure among Belarusian exporters of IT-services and products are presented.

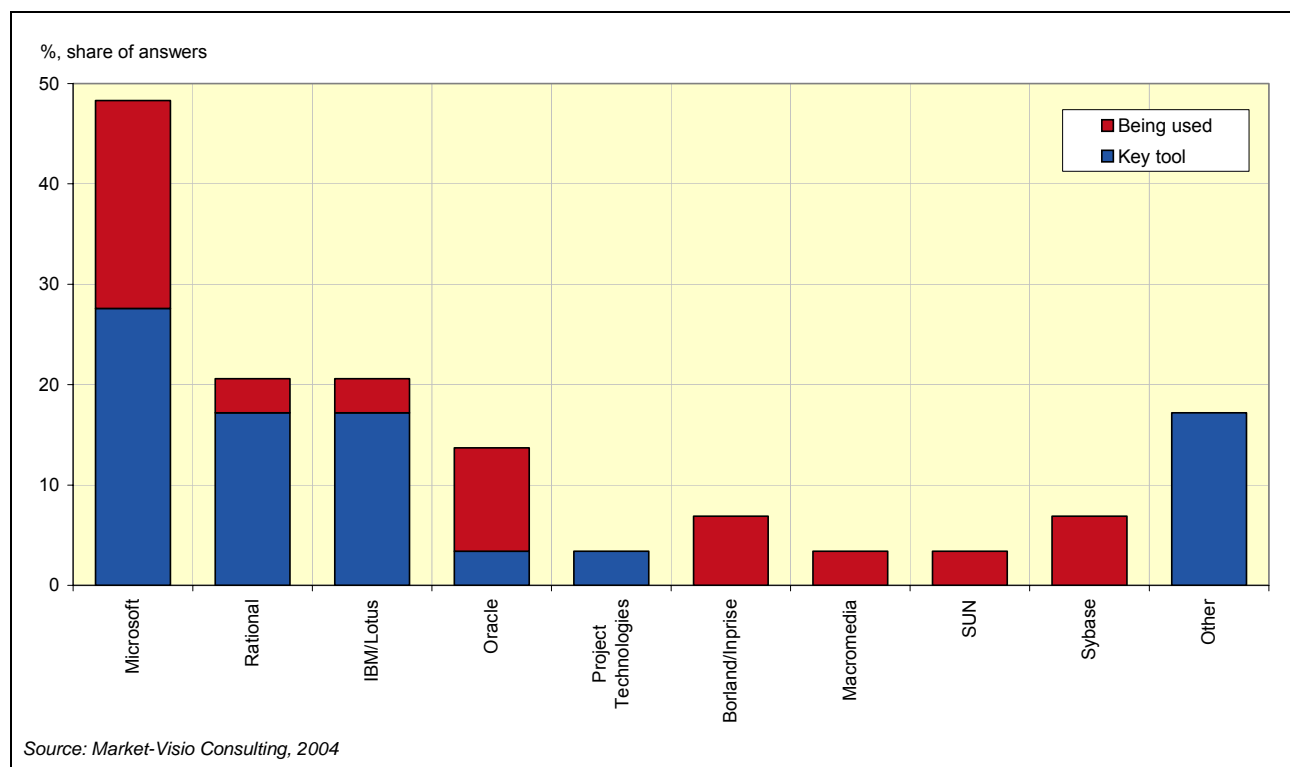


Diagram 2.15. Infrastructure support tools

The majority of companies use as means of the support of project infrastructure the production of Microsoft, Rational and IBA/Lotus companies.

In diagram 2.16 the data about the extent of different methods of software development among Belarusian providers of IT-services and products are presented..

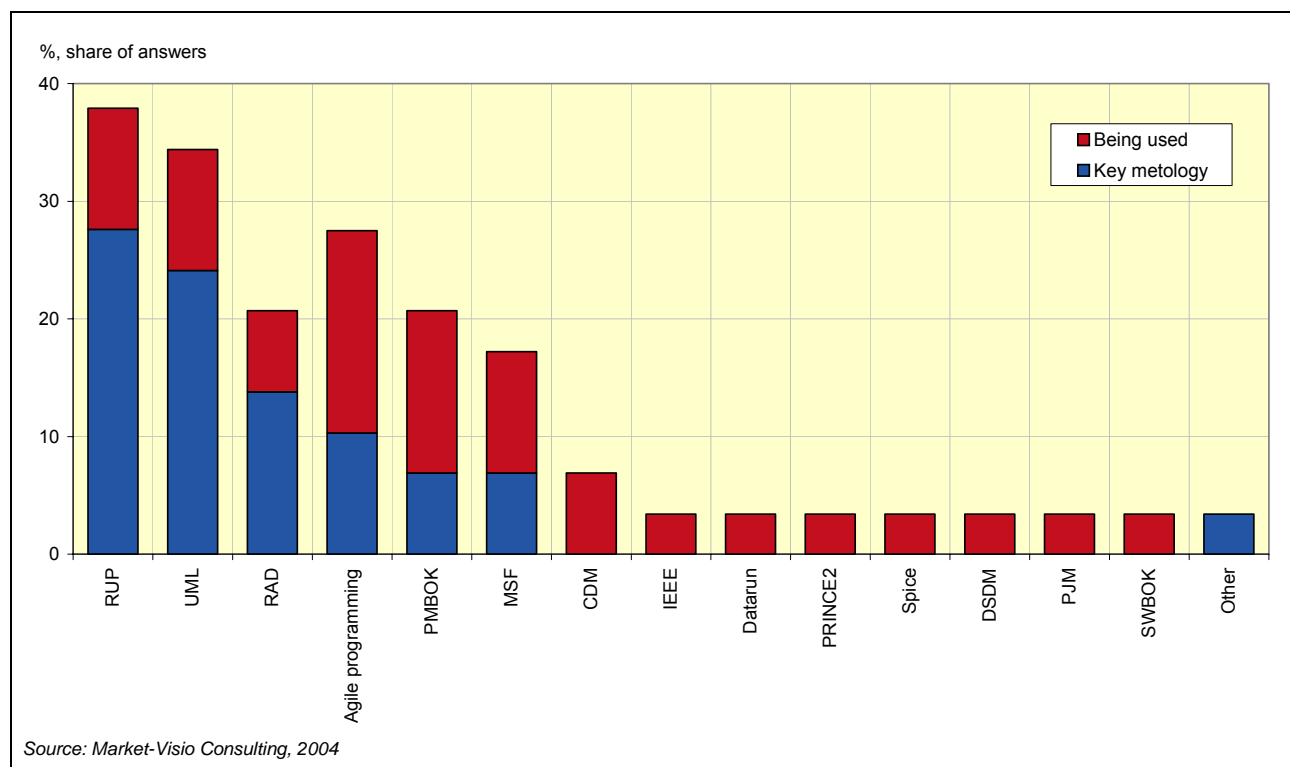


Diagram 2.16. Methodologies

The majority of companies working at the market of export-oriented programming use RUP and UML methods in the software process development.

In diagram 2.17 the data about the extent of different basic platforms among Belarusian providers of IT-services and products are presented.

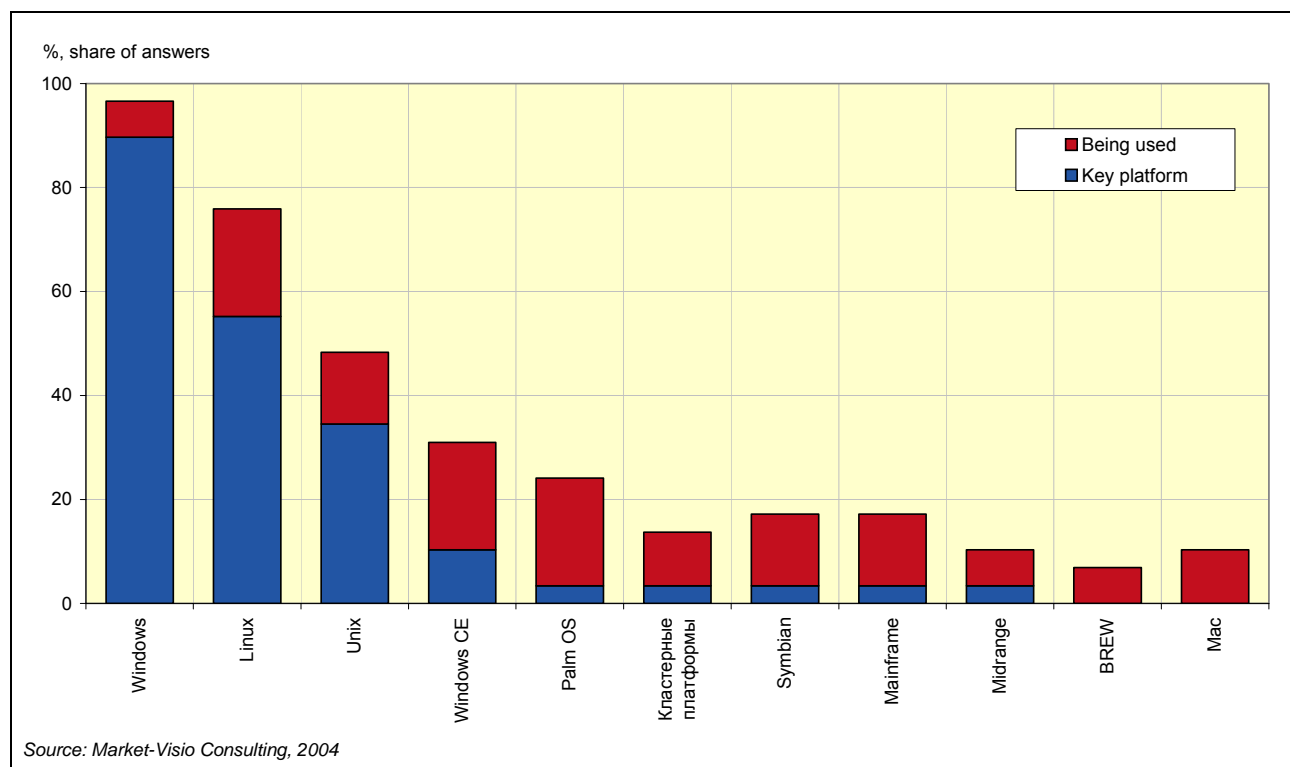


Diagram 2.17. Platforms

The most spread programming platform for Belarusian exporters is Windows, it is used by almost 100% of companies, besides 90 % of them use it as a key one.

Linux platform is used by more than 75 % of Belarusian companies; more than a half use it as a key one.

2.4. Demand on Services and Solutions

Within the research the participants were offered to find out, what services Belarusian exporters of IT-services and products provide to their foreign customers. The information is presented in diagram 2.18.

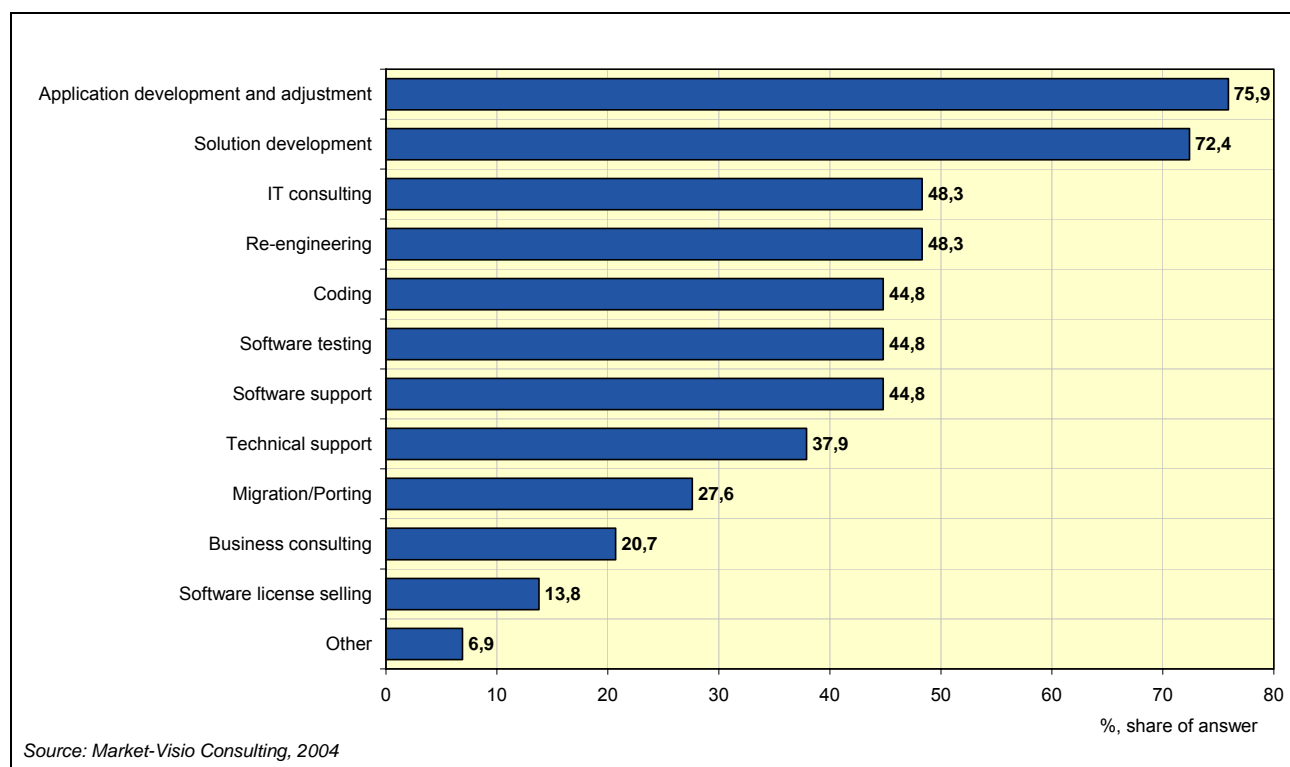


Diagram 2.18. Demand for services

More than 75 % of the examined companies provide to their foreign customers the services of implementation and adaptation of applications, and more than 72 % provide services of decision development.

According to the demand, the services of IT-consulting, reengineering, encoding and testing go further.

A great amount of services in the sphere of IT-consulting prove once more the importance of intellectual part of Belarusian market of software development.

In order to estimate the demand on programming solutions within the present research, the following more developed spheres of software development were singled out according to Gartner classification:

- Back Office Application
- Electronic Commerce Software
- Front Office Application Software
- Internet and Electronic Workplace Software
- Networking and Communications Software
- Software Infrastructure
- Enterprise Application Integration

In diagram 2.19 the directions of the activity of Belarusian companies in the sphere of the export of IT-services and products are presented. The respondents were asked to mark key activity directions of companies, and in which ones there are separate orders. The data are classified according to the number of answers concerning key activity directions.

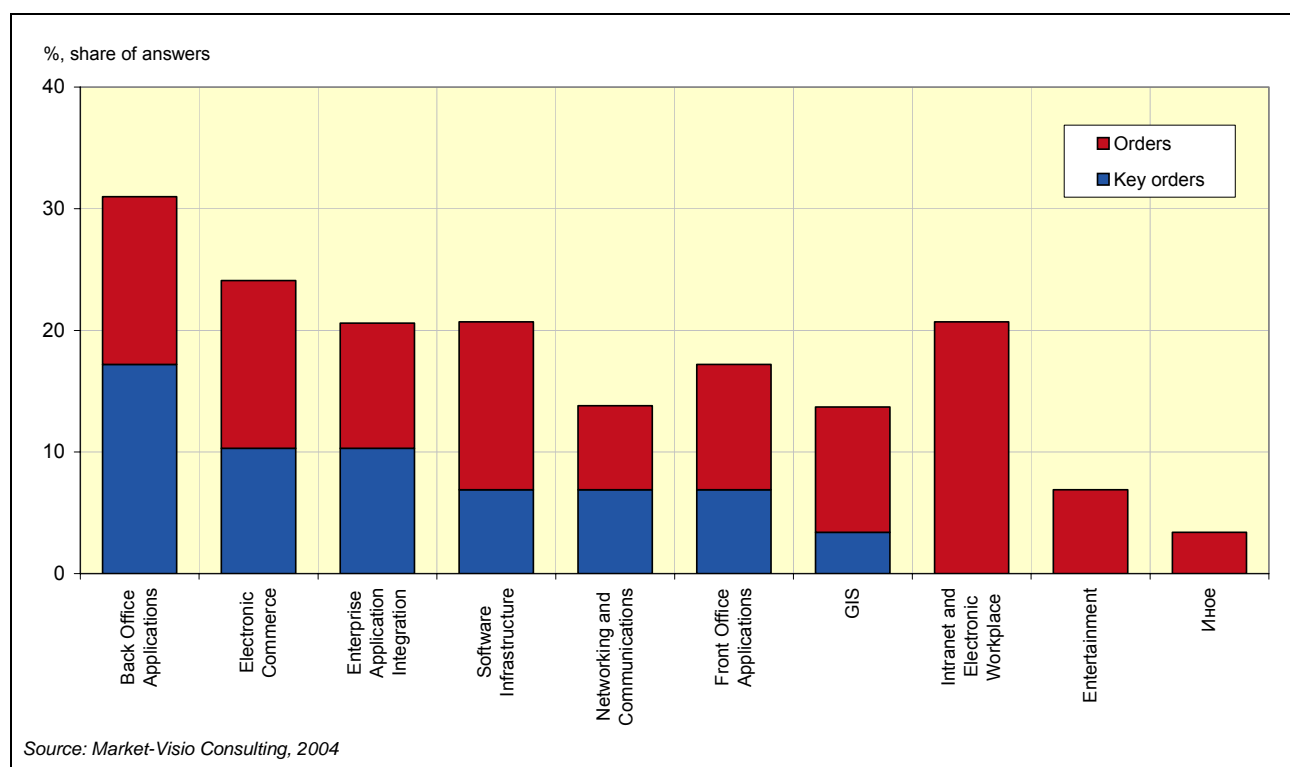


Diagram 2.19. Demand of solutions

The main activity direction for the majority of Belarusian exporters of IT-services and products are the services of the development of Back Office and Electronic Commerce applications, Enterprise Application Integration and Software Infrastructure.

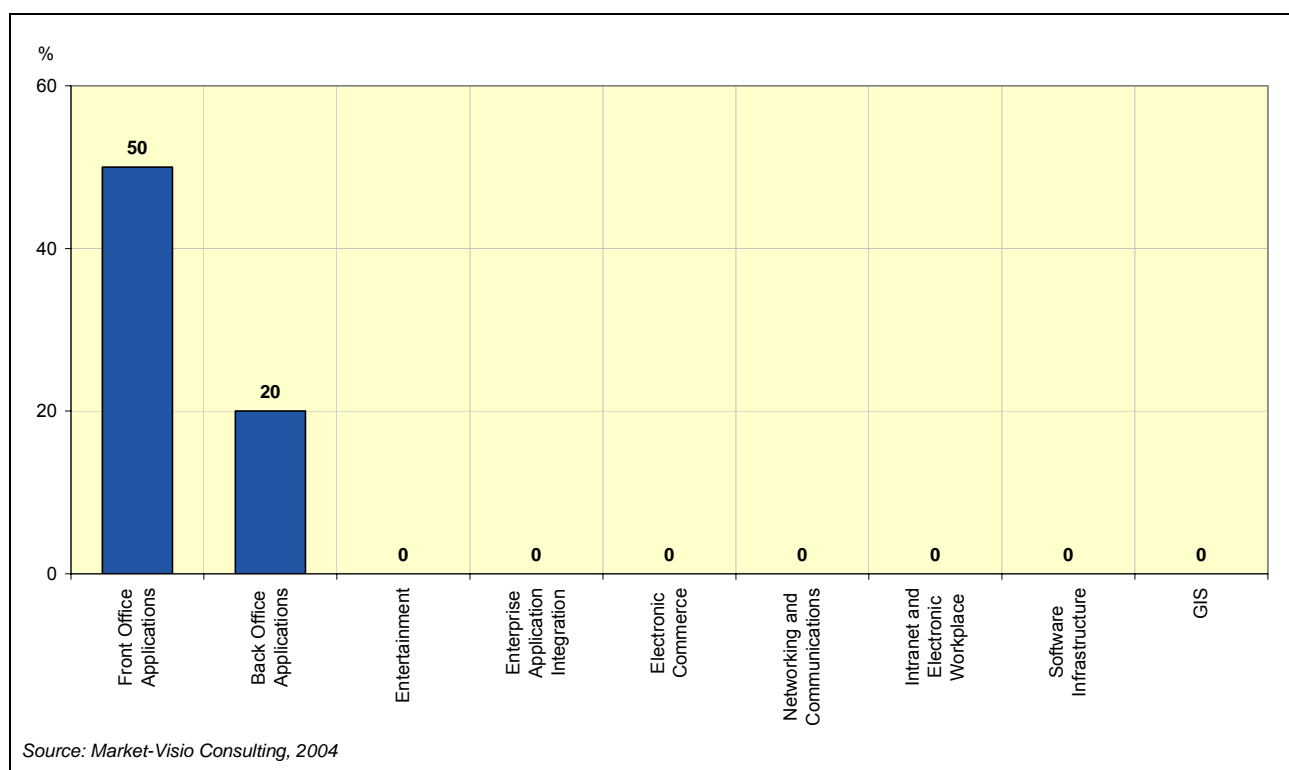


Diagram 2.20. Dynamic of key orders

The participants of the research are planning to increase the number of orders for Front Office and Back Office applications by 2005.

In the opinion of the main market operators there will be no growth of the number of orders in other spheres of export software development in 2005.

In Appendix 1, diagrams A.1. – A.12 more detailed information about the specialization of Belarusian exporters of IT-services and products in every mentioned direction is presented.

Back Office Applications. In this direction the majority of companies develop applications in the spheres of Finance and ERP.

Electronic Commerce. In this direction the majority of companies develop applications in the spheres of Web Development Software, Internet Security and Electronic Marketplaces.

Front Office Applications. In this direction the majority of companies develop applications in the spheres of CRM and Supply Chain Management.

Internet and Electronic Workplaces. In this direction the majority of companies develop Document Systems Applications. Developments for customers in the spheres of Knowledge Management and Office Systems are also in demand.

Networking and Communications. In this direction the majority of companies develop applications in the spheres of Wireless Technologies, WAN and LAN Technologies.

Software Infrastructure. In this direction the majority of companies develop applications in the sphere of Database Management Systems.

2.5. Competitive Ability of Companies

In the opinion of market experts, Belarusian companies have got a number of competitive advantages at the market of export-oriented programming. High level of specialists' qualification and good educational level in IT-sphere, relatively low price of services, favorable geo-political position provide good opportunities for the development of Belarusian export market of IT-services and products.

Within the research Belarusian exporters of IT-services and products were asked to estimate minimal and maximal value of a company's contract and dynamics from 2003 to 2005.

In diagram 2.21 the dynamics of minimal and maximal value of contracts of Belarusian exporters of IT-services and products with foreign customers is presented (average experts' rates are presented as well).

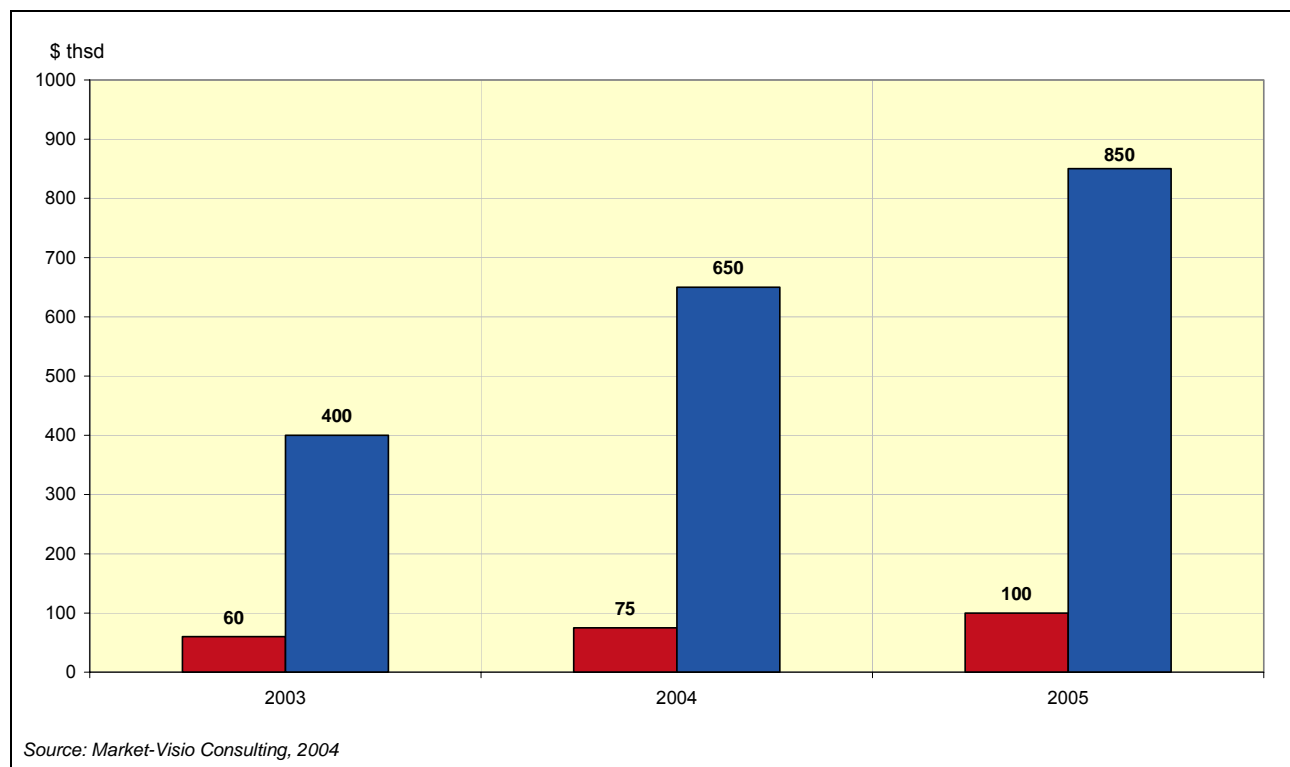


Diagram 2.21. Contracts value

In 2003, according to the experts' rate, the average minimal value of a contract was about 60 thousand \$, maximal value was on average 450 thousand \$ within this period. In 2003 market leading companies signed up contracts for even higher value.

In 2005, 'Market-Visio Consulting' forecasts that maximal contract value of Belarusian companies will almost double. It proves potential flow of orders to Belarus and the tendency of Belarusian exporters providing good IT-services and products as well as more contracts for higher value.

3. Belarusian IT-services and Products Exporters' strategies

This section presents information about major strategies of Belarusian IT-services and products exporters in the sphere of software development and service promotion to international markets.

3.1. Demand structure at the international market of the offshore programming

The market of outsourcing is focused on the regions where there is a demand on such services. In the course of the research the respondents were asked to state the regions, on which the Belarusian market of outsourcing is oriented nowadays and in 2005 in prospect.

The diagram 3.1 shows the foreign countries, that, according to some specialists, Belarusian IT-services and products exporters are oriented on.

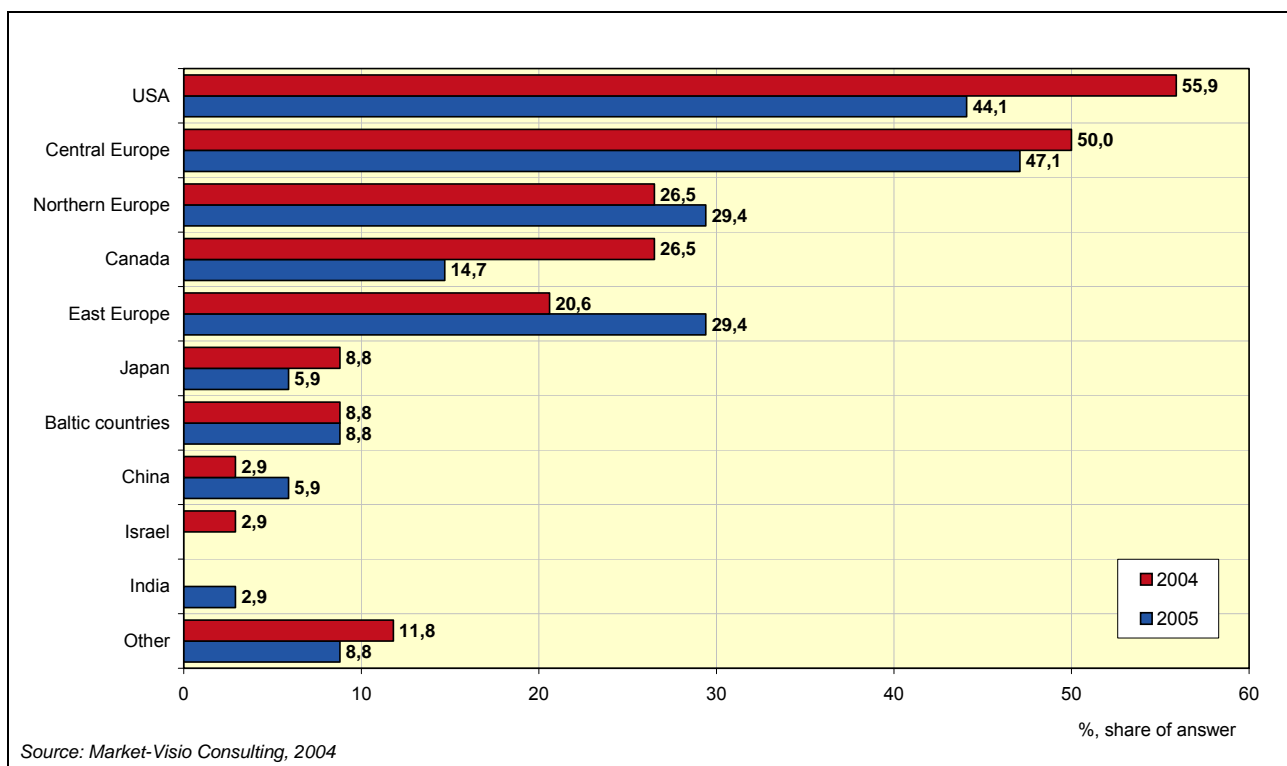


Diagram 3.1. Orientation for the countries

According to the majority of respondents, Belarusian IT-services and products market is oriented on the US, 50% of them also specify the orientation on the countries of Central Europe. In 2005 this orientation can shift to the region of Central Europe.

The diagram 3.2 shows the levels of representation of Belarusian companies abroad.

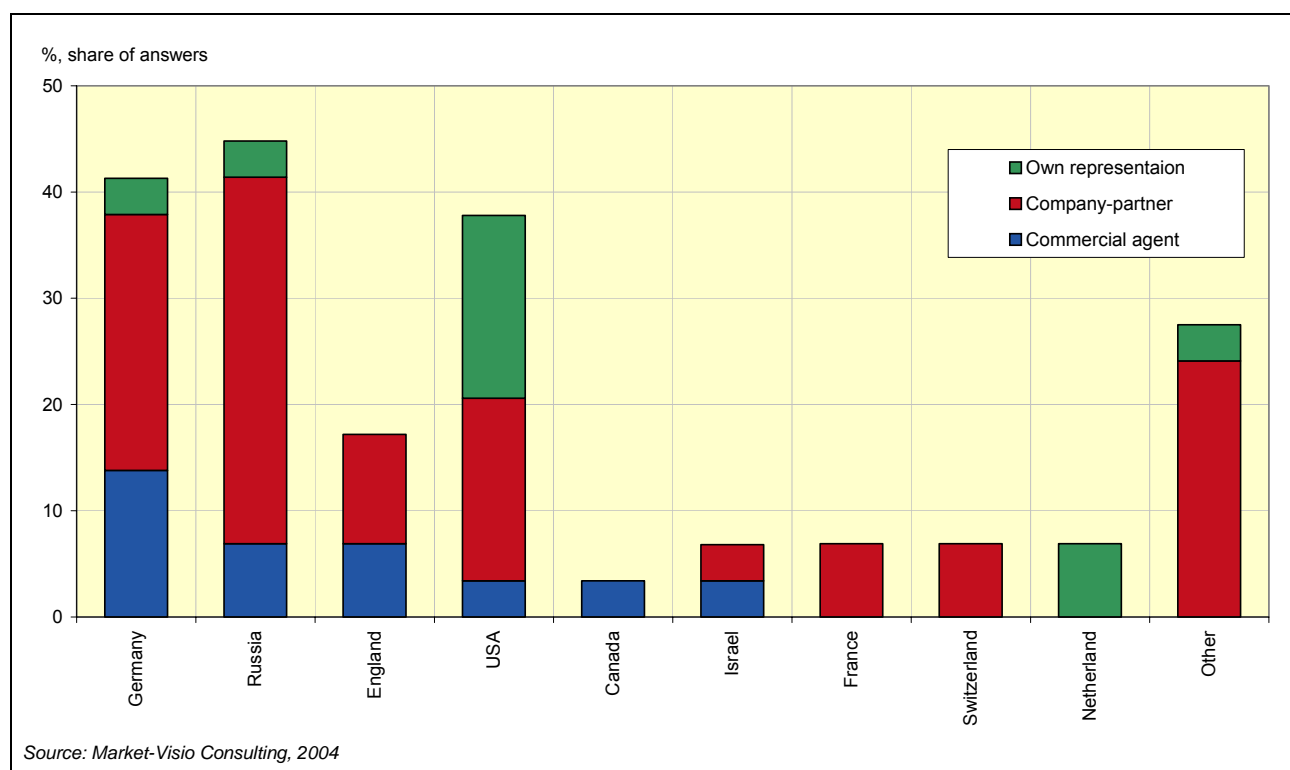


Diagram 3.2. Representations level of Belarusian IT services and product exporters abroad

Most of the companies have got partners or agents in the countries-customers, and only some of them have their own representations. 15 % of the questioned companies have their representations in the US.

The diagram 3.3 presents the information about the activities of the foreign representations of Belarusian IT-services and products exporters.

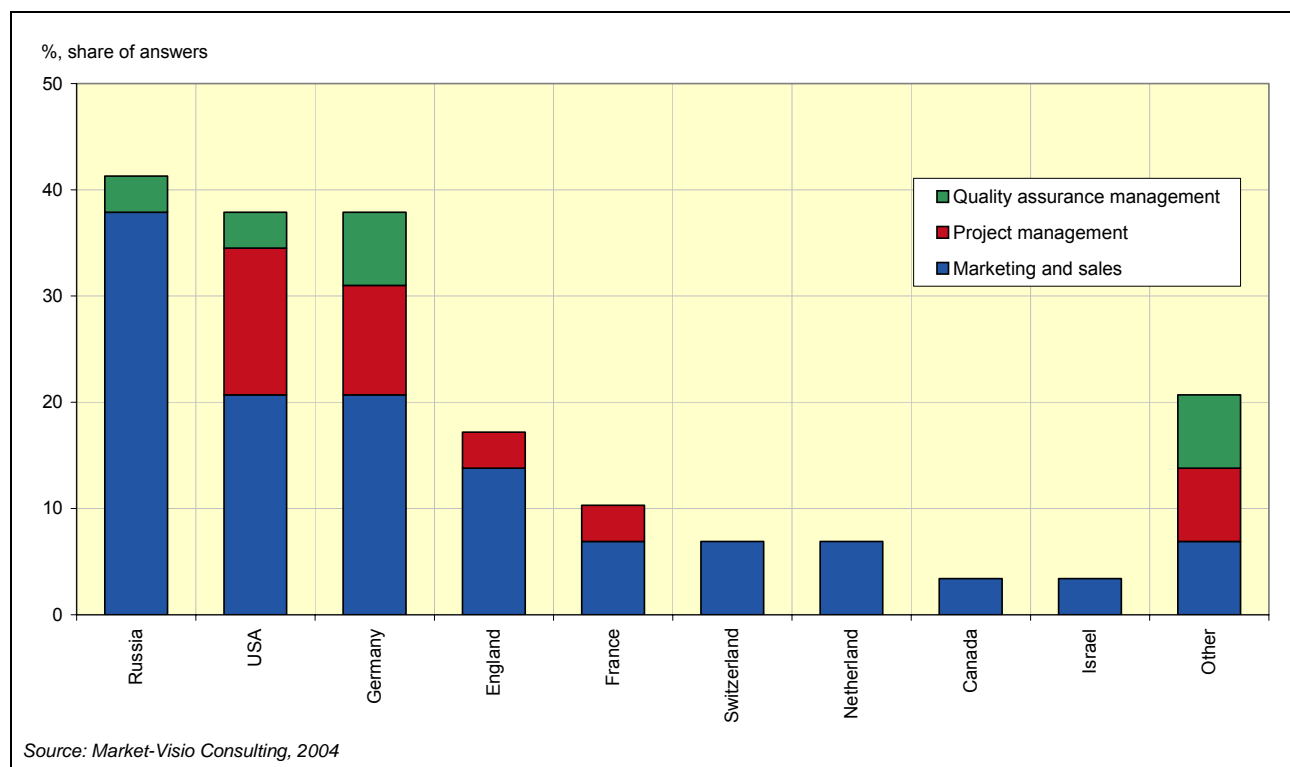


Diagram 3.3. Functions of Belarusian IT services and product exporters

The principal activities of the majority of Belarusian companies' representations are marketing and the company's service sale. The function of project management and quality control is the function of the representations in the key countries-customers mainly.

3.2. Regional/industrial/technological orientation

In the course of the research the participants were asked to specify what countries already became the customers of the companies.

The diagram 3.4 shows the information on the countries-customers of Belarusian IT-services and products companies, and the level of importance of each country and the prospects for 2005.

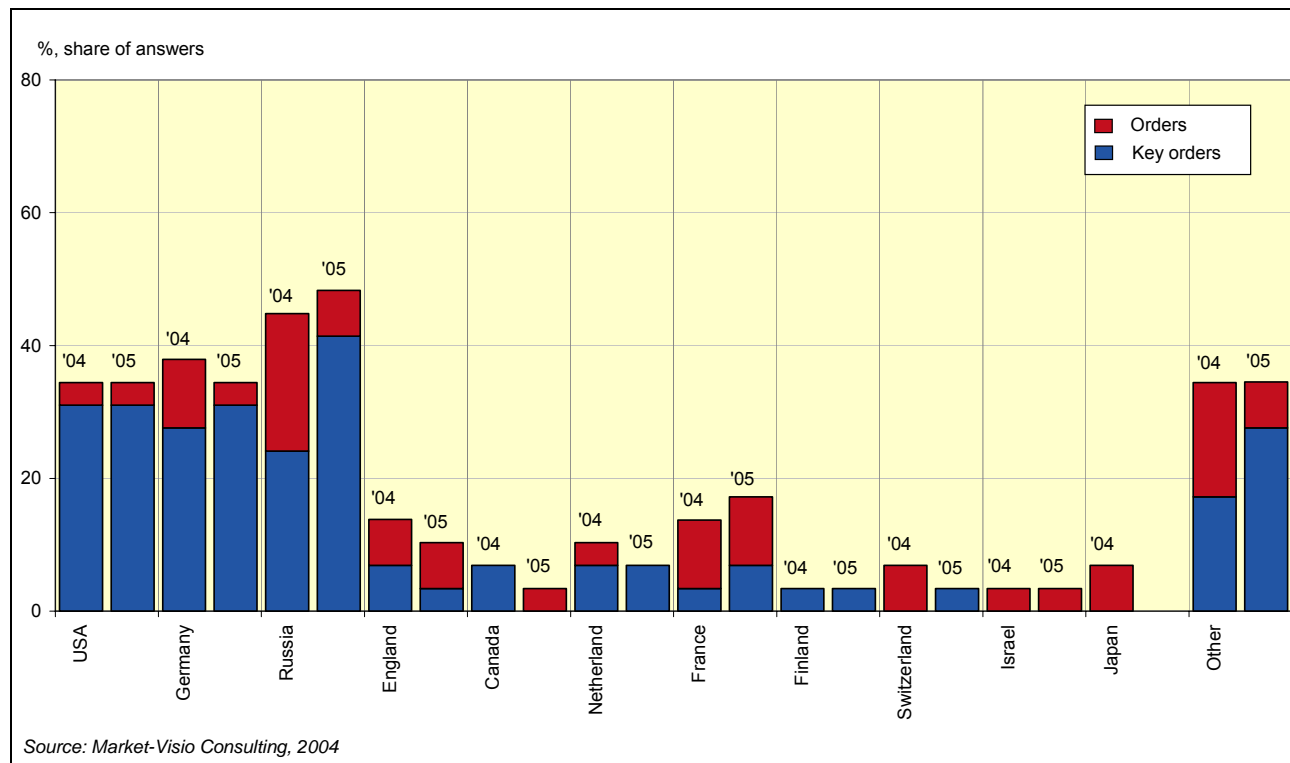


Diagram 3.4. Key regions, 2004-2005

Currently the largest customer of Belarusian IT-companies is the USA. Besides, a considerable part of services are provided for the customers from Germany and Russia.

In 2005 the importance of the customers of IT-services and products from the USA will remain, however a significant growth of the orders from Russia is also expected.

Below there is a list of some companies-customers and final users of IT-services of Belarusian companies:

Table 3.1. Some corporate clients of Belarusian IT services exporters

Corporate clients of Belarusian IT services exporters		
Alcatel	Honda	Strom Telecom
British Telecom	IBM	Whirpool
CareFirst Blue Cross Blue Shield	INTELUS Code Factory	Gazprom
Coca-Cola	Johnson&Johnson	Gornometallurgicheski kombinat
Colgate-Palmolive	Procter&Gamble	IskraUralTel
Datacon	Reuters	Tupolev
Ford	SAP	Ukos
Halliburton	Siemens	

Among the clients and final users of Belarusian IT-services exporters are the biggest companies from Europe, Russia and the USA.

In the course of the research the respondents were asked to state on which out of the three suggested spheres of export software development their companies are oriented on:

- Company's software development is mainly oriented on the technology (i.e. software development for certain technologies/platforms).
- Company's software development is mainly oriented on horizontal solutions (i.e. software development in certain spheres, e.g., CRM-solutions).
- Company's software development is mainly oriented on vertical solutions for separate industries.

The results are represented at the diagram 3.5.

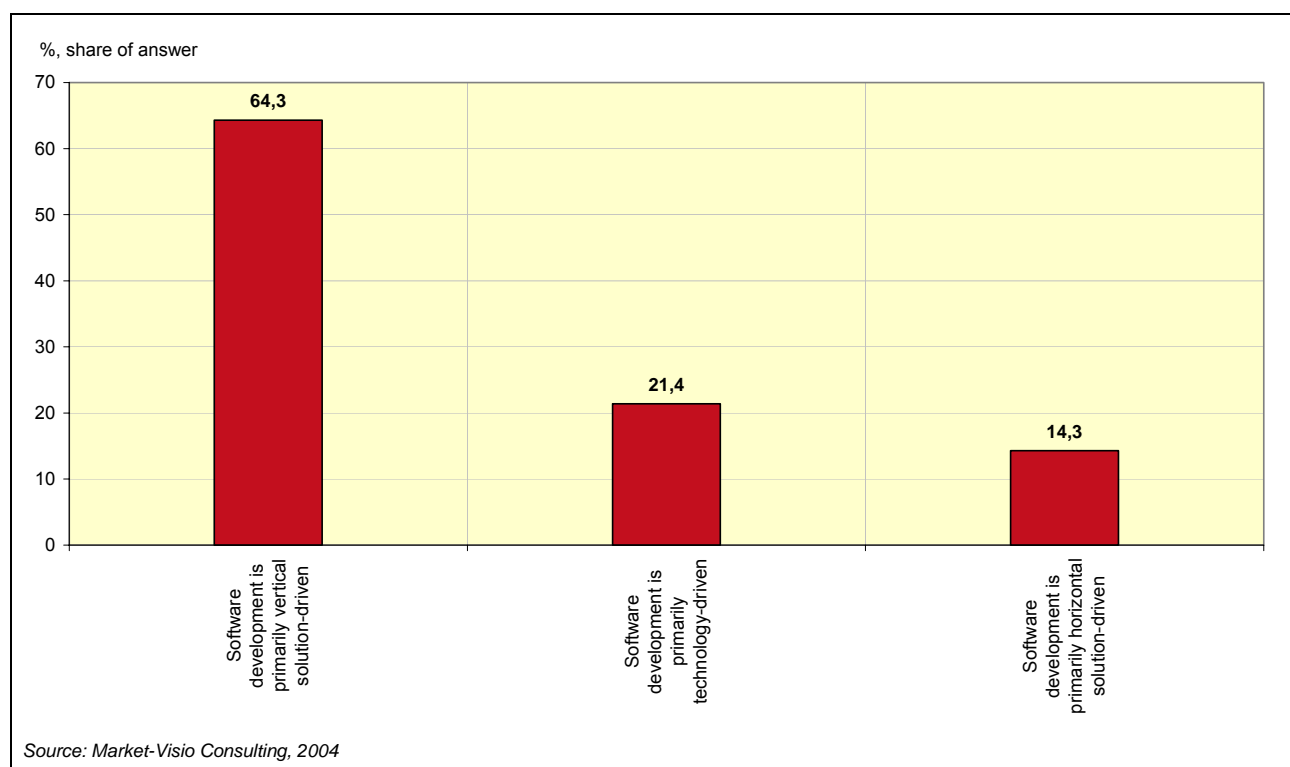


Diagram 3.5. Orientation in export software development

Currently most of Belarusian companies are developing the software for certain spheres. See subsection 3.5 for the more detailed information on the orientation of Belarusian IT-services and products exporters.

The least popular orientation is software development for certain spheres of business automation. Nowadays more than 20% of Belarusian companies provide services on software development oriented on the technology.

3.3. Channels and methods of product/service promotion

In the course of research the respondents were asked to state what channels and methods of product/service promotion at the IT-market they consider to be the most promising for their companies.

The diagram 3.6 shows the priorities of the development of Belarusian companies in the spheres of IT-service and products export business in the near future.

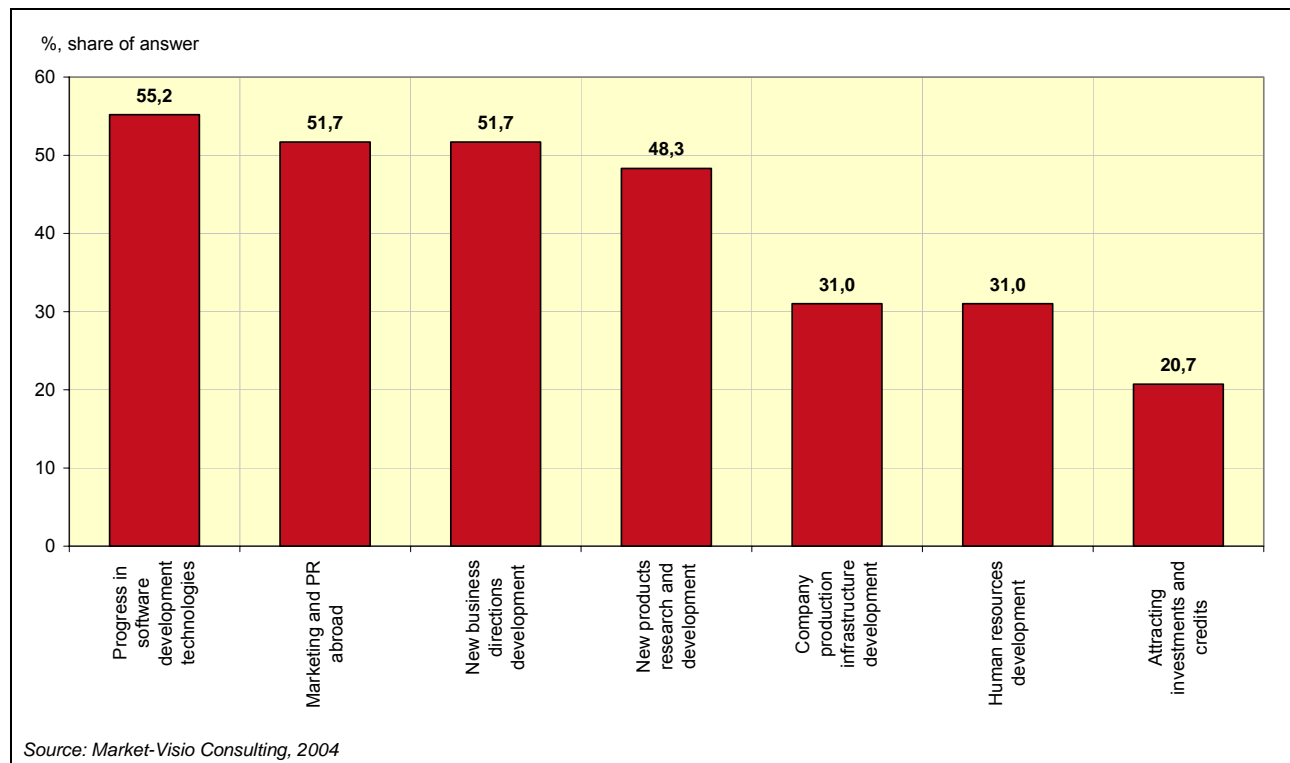


Diagram 3.6. Priorities of the development

Major development priorities for the majority of the Ukrainian IT-services and products exporters are technology growth of software development, foreign marketing and PR, foreign representations and development of new business lines.

Thus, the principal priorities for the Belarusian companies are the growth of product export share and application of new technologies to the spheres of development.

The diagram 3.7 shows the respondents' evaluation of their strategies of extension.

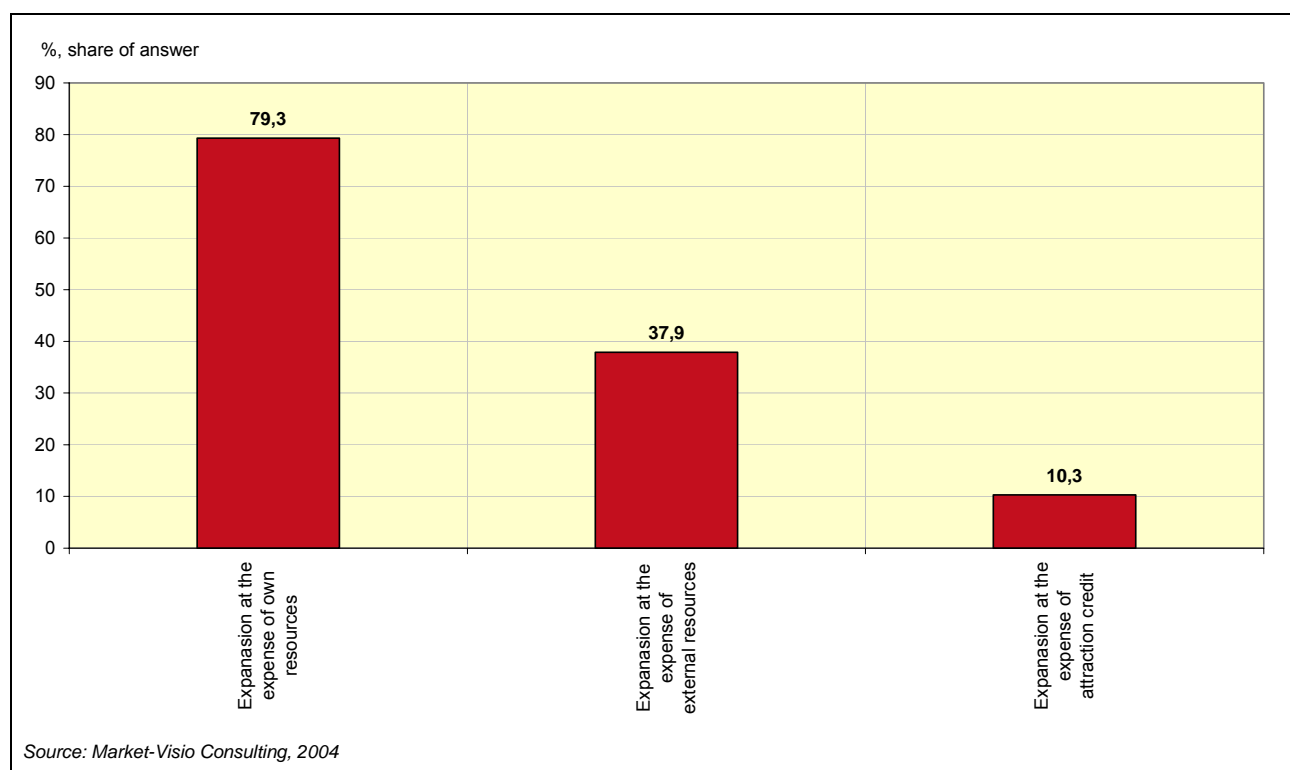


Diagram 3.7. Extension strategies

The majority of the Belarusian market of outsourcing companies are planning to develop export business by means of equity capital. About 40% of the companies are planning to extend their business by means of outward investments and 10% by gaining the credits.

The participants of the research were also asked to specify their thoughts about the improvements in the relations with foreign customers.

The results are presented at the diagram 3.8.

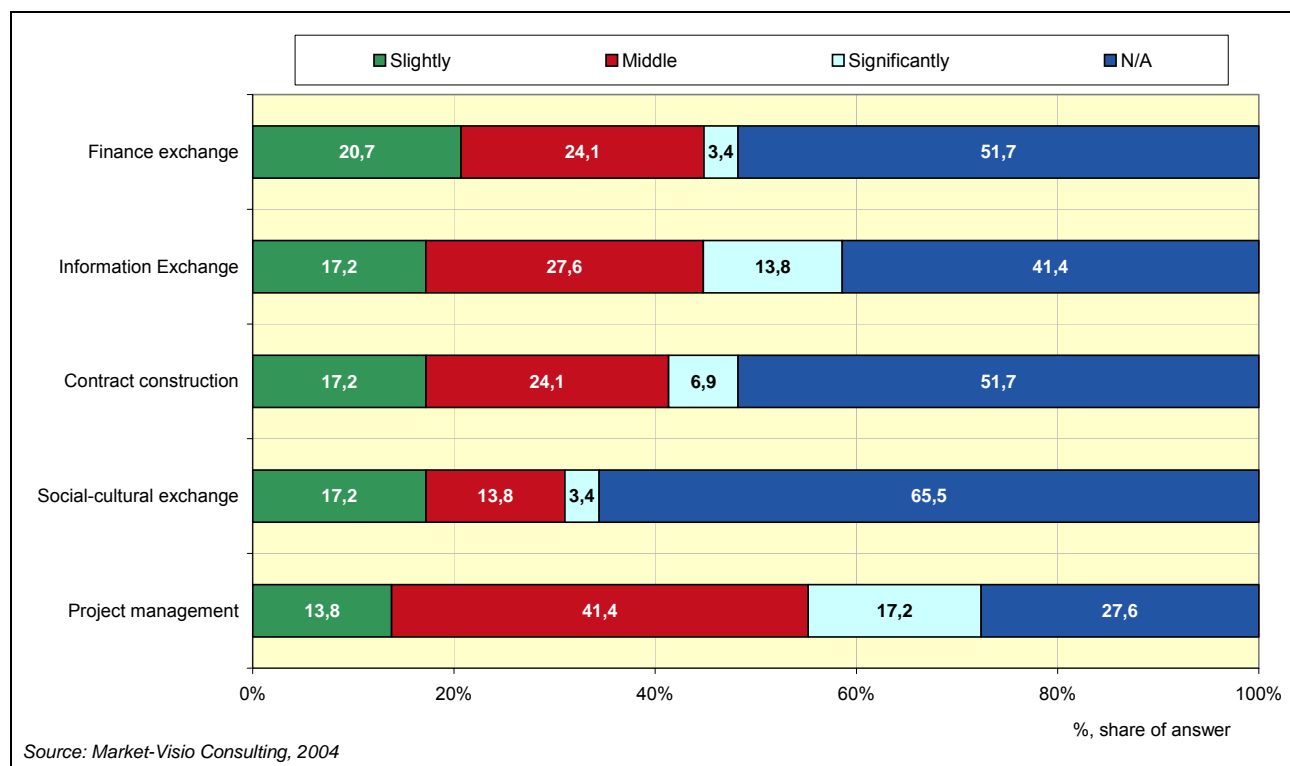


Diagram 3.8. Improvements in the relations with foreign customers

Most of the participants state that on behalf of foreign customers project management should be improved. The positive effect on the outsourcing business can be achieved also by the information exchange with the company-customer, by making contracts and solving the finance matters.

The participants of the research were also asked to rank the most effective methods of promotion of IT – services and products. The results are representing at the diagram 3.9.

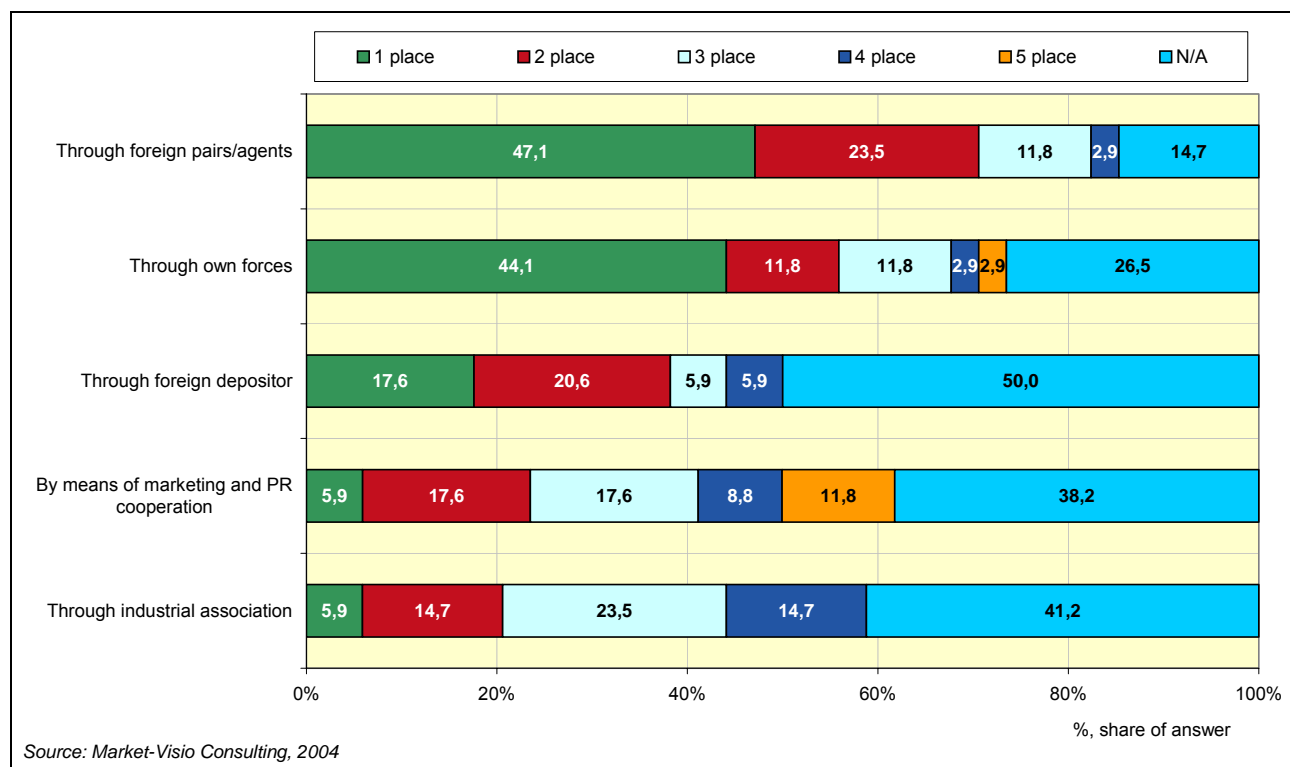


Diagram 3.9. Promotions methods

Most of the companies consider that nowadays Belarusian companies should promote their IT-services and products with the help of foreign partners and agencies. About 45% of the participants think that their IT-services and products' promotion should be implemented by their own forces.

3.4. Compatibility in key niches

According to some experts, at the market of outsourcing Belarus can become a competitor to Russia, Eastern European countries and FSU. It depends on several factors including cultural similarities, similar process of independent state formation, common history.

Nowadays Belarus has dynamically developing market of outsourcing, oriented mostly on software development for certain spheres of enterprise activity automation.

According to experts' rate, Belarus can become a competitor to Russia and countries of Eastern Europe in the sphere of high technology software development. India occupies leading positions in the sphere of outsourcing of business processes, besides BPO model in Belarus is represented not that dynamically at the market of IT services and products export.


4. Information about companies

This section presents information about companies that have supported the present research and that have supplied objective and topical information on outsourcing market in the Republic of Belarus. The contact information, management information, the amount of personnel, the year of formation, certification, general tools and means of development, strategies and priorities of the companies are presented here.


30 leading companies in the sphere of export of IT services and products have taken part in the research quiz. The information was supplied by the managers.

The majority of the companies (73%) dealing with the outsourcing programmes in the Republic of Belarus are based in Minsk, the rest of the companies are spread across the regions. In the course of the research there were 29 Minsk companies questioned and 1 company with the head office in Gomel.


JSC «AltoLan»

	
Contact Information	Ul. Kizhevatova, 7/2, office A1302, Minsk, Belarus Tel: +375 172 752 882, 752 858 Website: www.altolan.com E-mail: company@altolan.com
Head of the Company	A.S. Alymov
Export manager	A.N. Petushkov
Year of formation	1995
Beginning of Software Export	(this is a duty of General Software Development Department)
Dynamics	
Founders	Belarusian company/physical entity
Representations	
Personnel	Amount of employees: 35 - 80
Education level	17 employees having higher education, 2 holding PhD degree, 1 holds master degree
Certification	No
Model	Ordering model
Key industries	Vertical solutions: healthcare service
Specialization	Service types: system of advisory telemedicine Specialization: Document Systems
Tools	Programming Language: Visual Basic, Vbscript, Map Basic, SQL, Lotus NotesScript Development tools: Microsoft, IBM/Lotus Test tools: Microsoft, IBM/Lotus Infrastructure Project Support: Microsoft, IBM/Lotus Basic platforms: Windows, Linux
Extension Strategy	Extension with the help of equity capital and attraction of credit
Development Priorities	<ul style="list-style-type: none"> • Foreign marketing and PR, foreign representations • Research and Development of new products • Development of new business lines


Atlant Telecom

	
Contact Information	Prosp. Pushkina, 39, "Orbita" hotel, G5-1 building, Minsk, Belarus Tel: +375 207 22 07 Website: www.telecom.by E-mail: al@telecom.by
Head of the Company	I.N. Sukach
Export manager	A.V. Lankin
Year of formation	2000
Beginning of Software Export	2001 (the duty of a separate department)
Dynamics	Export volume in 2004 hasn't changed, in 2005 export volume growth is 10-20%
Founders	Foreign company/physical entity (the USA)
Personnel	Amount of employees: 35 - 80
Education level	30 employees have higher education
Model	Ordering model
Key industries	Orientation on horizontal solutions
Specialization	Service types: solution development, IT consulting Specialization: Electronic Catalog, Web Development Software, Bill Presentment and Payment, Electronic Marketplaces, Document Systems, Multimedia Tools, Knowledge Management
Tools	Programming Language: C/C++, XML, XSL, Java, JavaScript, Active Perl, SQL, HTML, DHTML, CFML, PHP Case-tools: Rational Development tools: IBM/Lotus, Macromedia Infrastructure Project Support: Microsoft, IBM/Lotus Methodologies: PMBOK, UML Basic platforms: Windows, Linux, Unix (SCO, Solaris, FreeBSD)
Country Orientation	Russia
Pricing Policy	Medium contract cost \$ 3000
Extension Strategy	Extension with the help of outward investments
Development Priorities	<ul style="list-style-type: none"> • Development of human resources • Development of new business lines


BelSoft

	
Contact Information	Moskovskaya, 18, Minsk, Belarus Tel: +375 172 227 777 Website: www.belsoft.by E-mail: lan@belsoft.by
Head of the Company Export manager	A.I. Eroshevich A.N. Lazarenok
Year of formation Beginning of Software Export Dynamics	1992 2001 (the duty of a separate Department) Export volume in 2004 hasn't changed, in 2005 export volume growth is about 10%
Founders Representations	Belarusian company/physical entity Representations a affiliates: Baranovich, Brest, Vitebsk, Gomel, Grodno, Mogilev, Novopolotsk, Ukraine (Zaporozh'e)
Personnel Education level	Amount of employees: more than 50 Higher education
Certification	Till 2003 - standard ISO
Model Key industries	Ordering Model Technology Orientation (software development for certain technologies)
Specialization	Service types: development of business and technological solutions, application adaptation and porting, reengineering, software encryption and testing, IT-consulting, migration/porting, design, architecture Specialization: Back Office Applications (Finance, Transportation), Web Development Software, Supply Chain Management, Wireless Technologies (mobile), Middleware, Enterprise Application Integration
Tools	Programming Language: C/C++, Java, JavaScript, SQL, XML, XSL, HTML, DHTML, CFML, Python, C# Case-tools: Rational, Platinum, Microsoft, Oracle Development tools: Microsoft, Oracle, SUN, Macromedia Test tools: Rational, Open Source Infrastructure Project Support: Microsoft Project, Project Support System Methodologies: RUP, UML Basic platforms: Windows, Unix (SCO, Solaris, FreeBSD), Linux, Mainframe (z/OS, MVS/ESA (OS/390)), BREW
Clients (companies) Country Orientation	Target, Datacon Germany, the USA, Austria, South-East Asia
Pricing Policy	Medium contract cost \$ 30 000
Extension Strategy	Extension with the help of equity capital
Development Priorities	<ul style="list-style-type: none"> • Foreign Marketing and PR, foreign representations • Development of human resources • Development of software design technologies, project management and quality control, Certification • Development of new business lines


Gross Domain Ltd

	
Contact Information	Prosp. Gazety "Izvestija", 44, Minsk, Belarus Tel: +375 172 842 729 Website: www.gd.by E-mail: Leonid_Makarevich@gd.by
Head of the Company	L.S. Makarevich
Export manager	L.S. Makarevich
Year of formation	2001
Beginning of Software Export	2001 (the duty of General Software Development Department)
Dynamics	Export volume in 2004 won't change, in 2005 export volume growth is 25%
Founders	Belarusian company/physical entity
Personnel	Amount of employees: 15 - 35
Education level	11 employees having higher education, 5 employees hold the certificate of IBM/Lotus R5
Certification	No
Model	Ordering and product model
Key industries	Technology orientation (software development for certain technologies)
Specialization	Service types: solution development, reengineering, encryption Specialization: ERP, Transportation, Warehouse Management Systems, Electronic Commerce (Retail/Point of Sale, Electronic Catalog, Web Development Software, Internet Security, Bill Presentment and Payment, Electronic Marketplaces), Supply Chain Management, Office Systems, Document Systems, Groupware, Data Warehousing, Enterprise Application Integration
Tools	Programming Language: Java, JavaScript, Delphi, SQL, XML, XSL, HTML, DHTML, CFML, Rational Rose, CACHE Case-tools: Rational, Microsoft, IBM/Lotus, SUN, Macromedia Development tools: Rational, Oracle, IBM/Lotus, Macromedia Test tools: Rational, IBM/Lotus Infrastructure Project Support: Rational, Microsoft, IBM/Lotus Methodologies: RUP, UML Basic platforms: Windows, Linux
Extension Strategy	Extension with the help of outward investments
Development Priorities	<ul style="list-style-type: none"> • Research and development of new products • Fund-raising • Development of the company's production infrastructure • Development of new business lines


Generation-P Consulting Ltd

	
Contact Information	Ul. Gikalo, 3-329, Minsk, Belarus Tel: +375 172 845 483, 296 737 435 Website: www.generation-p.com E-mail: info@generation-p.com
Head of the Company Export manager	S. Zubein V. Volodin
Year of formation Beginning of Software Export Dynamics	2000 2000 (Software export is the original business line) In 2004 export volume will have 50-100% growth, in 2005 export volume growth is more than 500%
Founders Representations	Belarusian company/physical entity
Personnel Education level	Amount of employees: less than 15 11 employees have higher education
Certification	No
Model Key industries	Mixed model Vertical Orientation: tourism, air transport service
Specialization	Service types: solution development, application implementation and adaptation, technical support, reengineering, encryption, software testing, software support (out of warranty), IT-consulting, migration/porting, remote administration Specialization: Transportation, Networking and Communications, Travel Industry
Tools	Programming Language: C/C++, Java, JavaScript, Active Perl, SQL, XML, XSL, HTML, DHTML, CFML, PHP Development tools: Oracle, SUN, Eclipse Test tools: Bugzilla Infrastructure Project Support: in-house design Methodologies: Agile programming (extreme) Basic platforms: Windows, Linux
Country Orientation	Germany, Israil
Pricing Policy	Contract cost is from \$ 60 000 per year
Extension Strategy	Extension with the help of equity capital and outward investments
Development Priorities	<ul style="list-style-type: none"> • Research and development of new products • Fund-raising • Development of software design technologies, project management and quality control, Certification

G2X Development Services

	
Contact Information	Ul. Vostochnaya, 133, office 701, Minsk, Belarus Tel: + 375 17 237 20 27 Website: minsk.g2x.com E-mail: vbryl@g2x.com
Head of the Company Export manager	V.S. Bril V.S. Bril
Year of formation Beginning of Software Export	2002 2002 (duty of General Department of Development)
Founders	Foreign company/physical entity (the USA)
Personnel Education level	Amount of employees: 35 - 80 70 employees having higher education
Certification	No
Model Key industries	Mixed model Vertical Solutions: healthcare, research institutes, education, industry, manufacturing, Mass Media, publishing houses, telecommunication, trade, transport, services, finance, insurance
Specialization	Service types: software testing, software support (out of warranty) Specialization: Finance, CRM
Tools	Programming Language: Java, JavaScript, HTML, DHTML, CFML, Visual Basic, Vbscript, Map Basic, SQL, XML, XSL Case-tools: Rational Development tools: Oracle, SUN Infrastructure Project Support: IBM/Lotus Methodologies: RUP, UML, PMBOK Basic platforms: Palm OS, Unix (SCO, Solaris, FreeBSD), Linux, Windows
Country Orientation	USA
Extension Strategy	Extension with the help of equity capital
Development Priorities	<ul style="list-style-type: none"> • Development of human resources • Development of software design technologies, project management and quality control, certification • Development of the company's production infrastructure


INIS-SOFT Ltd

	
Contact Information	Ul. Kollektornaja, 20, office 400, Minsk, Belarus Tel: +375 172 275 038 Website: www.inissoft.by E-mail: market@ inissoft.by, pjw@inissoft.by
Head of the Company Export manager	D.M. Klebanovich U.V. Pinchuk
Year of formation Beginning of Software Export Dynamics	1994 1996 (duty of General Software Development Department) Dynamics of export volume: in 2004 the volume won't change, 2005 – 20 - 50% growth
Founders Representations	Belarusian company Subsidiary company in Russia
Personnel Education level	Amount of employees: 15- 35 15 employees with higher education, 1 holding PhD degree, 1 holding master degree
Certification	2005 (planning) - standard ISO
Model Key industries	Mixed Model Vertical Solutions: Research Institutes, education
Specialization	Service types: solution development, applications implementation and adaptation Specialization: Finance, Multimedia Tools, Knowledge Management
Tools	Programming Language: Delphi, SQL, HTML, DHTML, CFML Development tools: Microsoft, Borland/Inprise Infrastructure Project Support Microsoft Methodologies: RAD Basic platforms: Windows
Country Orientation	Russia
Pricing Policy	Medium contract cost \$10 000 - 20 000.
Extension Strategy	Extension with the help of equity capital
Development Priorities	<ul style="list-style-type: none"> • Foreign Marketing and PR, foreign representations • Research and development of new products • Development of software design technologies, project management and quality control, Certification

JV "Impet"

IMPET	
Contact Information	Ul. Kazintsa, 90/3, Minsk, Belarus Tel: +375 172 784 310, +375 172 125 060 Website: www.impet.com E-mail: mail@impet.com
Head of the Company Export manager	I.I. Davydik N.I. Davydik.
Year of formation Beginning of Software Export Dynamics	1991 1997 (Software export is the original business line) Dynamics of export volume is 10 - 20%
Founders Representations	Belarusian and foreign founders (Ireland) Ireland (Herbst Manufacturing Ltd. Kilpoole Hill, Wicklow town, co. Wicklow, Ireland)
Personnel Education level	Amount of employees: 15 – 35 12 having higher education, 1 holding PhD degree
Model Key industries	Ordering Model Horizontal solutions Vertical solutions: industry, manufacturing, trade, agriculture
Specialization	Service types: solution development, applications implementation and adaptation, technical support, reengineering, encryption, software testing, software support (out of warranty), IT-consulting Specialization: Back Office Applications (Human Resources, Finance, Warehouse Management Systems), Electronic Commerce (Retail/Point of Sale, Web Development Software), CRM, Supply Chain Management, Sales Force Automation, Customer Service/Call Center, Intranet and Electronic Workplace (Office Systems, Document Systems, Groupware, Knowledge Management), Networking and Communications (WAN and LAN Technologies, Remote Access Technologies, Wireless Technologies (mobile)), Software Infrastructure (Database Management Systems)
Tools	Programming Language: C/C++, Delphi, SQL, XML, XSL, HTML, DHTML, CFML, C# Case-tools: Rational Development tools: Microsoft, Borland/Inprise Infrastructure Project Support Microsoft, Borland/Inprise, CVS Methodologies: Agile programming (extreme) Basic platforms: Windows, Windows CE
Country Orientation	Ireland
Pricing Policy	Medium contract cost \$ 50 000-60 000
Extension Strategy	Extension with the help of equity capital
Development Priorities	<ul style="list-style-type: none"> • Development of human resources • Development of software design technologies, project management and quality control, Certification • Development of new business lines


iTransition/BelHard Group

	
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Head of the Company	S.A. Gvardejtsev
Year of formation	1998
Beginning of Software Export Dynamics	1998 (Software export is the original business line) Dynamics of export volume - 100 - 200%
Founders	Belarusian company/physical entity
Personnel	Amount of employees: more than 150
Education level	140 having higher education
Certification	2004 - standard ISO 2005 (planning) – standard SEI CMM
Model	Ordering Model
Key industries	Vertical solutions: healthcare, Research Institutes, education, mass media, publishing houses, telecommunication, finance, insurance
Specialization	Service types: solution development, applications implementation and adaptation, technical support, reengineering, encryption, software testing, software support (out of warranty), IT-consulting, migration/porting
Tools	Programming Language: C/C++, Java, JavaScript, Delphi, Visual Basic, Vbscript, Map Basic, Active Perl, SQL, XML, XSL, HTML, DHTML, CFML, C#, PHP Case-tools: Rational Development tools: Microsoft, Oracle, IBM/Lotus, Borland/Inprise, SUN, Macromedia Test tools: Rational, Microsoft Infrastructure Project Support Rational, Microsoft, Borland/Inprise, SUN Methodologies: RUP, MSF, PMBOK, UML, Agile programming (extreme) Basic platforms: Windows, Linux, Windows CE
Country Orientation	USA, England, Germany, France, Sweden, Norway, Ireland, Benelux
Extension Strategy	Extension with the help of equity capital
Development Priorities	<ul style="list-style-type: none"> • Foreign Marketing and PR, foreign representations • Development of human resources • Development of software design technologies, project management and quality control, certification


«Kompaud»

Contact Information	Ul. Pritytskogo 60/1, office 130, Minsk, Belarus Tel: +375 259 45 26, 259 48 26 Website: no E-mail: kompau@rambler.ru
Head of the Company Export manager	A.B. Nazarenko S.L. Martinovsky
Year of formation Beginning of Software Export Dynamics	2002 2002 (Software export is the original business line) Export volume growth in 2004 is 50-100%, in 2005 export volume growth - 100-200%
Founders	Belarusian company/physical entity
Personnel Education level	Amount of employees: less than 15 5 employees having higher education
Certification	No
Model Key industries	Mixed Model Vertical orientation: industry, manufacturing, trade, services
Specialization	Service types: solution development, applications implementation and adaptation, technical support, software support (out of warranty), business consulting
Tools	Programming Language: C/C++, Java, JavaScript, Delphi, Visual Basic, Vbscript, Map Basic, SQL, HTML,DHTML,CFML
Extension Strategy	Extension with the help of equity capital
Development Priorities	<ul style="list-style-type: none"> • Development of software design technologies, project management and quality control, Certification


Designing Bureau of System Programming

	
Contact Information	Rechitskoje shosse, 135, Gomel, Belarus Tel: +375 232 452 121 Website: no E-mail: kbsp@mail.ru
Head of the Company Export manager	U.A. Gavrilov A.V. Koval
Year of formation Beginning of Software Export Dynamics	1969 1992 (Software export is the original business line) In 2004 export volume growth will be 10-20%, in 2005 export volume growth - 30%
Personnel Education level	Amount of employees: more than 150 150 having higher education, 2 holding PhD degree
Certification	2005 (planning) - standard ISO
Model Key industries	Ordering Model Vertical orientation: healthcare, research institutes, education, telecommunication
Specialization	Service types: solution development Specialization: ERP, Engineering, Scientific software, Human Resources, Finance, Data Mining
Tools	Programming Language: C/C++, Java, JavaScript, Delphi, Visual Basic, Vbscript, Map Basic, SQL, XML, XSL, HTML, DHTML, CFML Development tools: Microsoft, Oracle Borland/Inprise, SUN Basic platforms: Windows, Linux, Unix (SCO, Solaris, FreeBSD)
Country Orientation	Russia, China
Pricing Policy	Medium contract cost \$ 250 000
Extension Strategy	Extension with the help of equity capital
Development Priorities	<ul style="list-style-type: none"> • Foreign marketing and PR • Development of new business lines


Qulix Systems

	
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Head of the Company	I.V. Mamonenko
Year of formation	2000
Beginning of Software Export	2000 (Software export is the original business line)
Dynamics	Dynamics export volume is 20-50 %
Founders	Belarusian company/physical entity
Personnel	Amount of employees: 35 - 80
Education level	All specialists have higher education, 5 holding PhD degree
Certification	No
Model	Ordering Model
Key industries	Technology orientation (software development for certain technologies/ platforms)
Specialization	Service types: solution development, reengineering, encryption, software testing, IT-consulting, migration/porting. Specialization: ERP, Human Resources, Finance, Data Mining, Internet Security, Electronic Marketplace, CRM, Supply Chain Management, Document Systems, Multimedia Tools, Call Processing and related technologies, Network Security / Protocols, Remote Access Technologies, Data Warehousing, Systems and Network Management
Tools	Programming Language: C/C++, Java, JavaScript, Visual Basic, Vbscript, Map Basic, SQL, XML, XSL, HTML, DHTML, CFML. Case-tools: Rational, Microsoft Design tools: Rational, Microsoft, Oracle, IBM/Lotus Test tools: Oracle, Microsoft Infrastructure Project Support: Rational, Microsoft, Oracle, Sybase Methodologies: RUP, UML, Agile programming (extreme) Basic platforms: Windows, Unix (SCO, Solaris, FreeBSD), Linux
Country Orientation	USA, England, Germany, Russia
Extension Strategy	Extension with the help of equity capital
Development Priorities	<ul style="list-style-type: none"> • Foreign Marketing and PR, foreign representations • Development of software design technologies, project management and quality control, Certification • Development of new business lines


Mebius

	
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Head of the Company Export manager	V.V. Karabanova S.N. Konopatskiy
Year of formation Beginning of Software Export	1992 1993
Founders	Belarusian company/physical entity
Personnel Education level	Amount of employees: more than 80 40 have higher education
Certification	No
Model Key industries	Ordering model Vertical solutions: finance, insurance
Specialization	Service types: Solution development, encryption, software testing, software support (out of warranty), migration/porting Specialization: Finance
Tools	Programming Language: C/C++, Java, JavaScript, SQL, XML, XSL Case-tools: Rational Development tools: Rational, Microsoft, Oracle, IBM/Lotus, SUN Test tools: Rational Infrastructure Project Support: IBM/Lotus Methodologies: RUP, UML Basic platforms: Windows, Unix (SCO, Solaris, FreeBSD), Linux, Mainframe (z/OS, MVS/ESA (OS/390)), Cluster platforms
Country Orientation	Russia
Extension Strategy	Extension with the help of equity capital
Development Priorities	<ul style="list-style-type: none"> • Development of human resources • Development of software design technologies, project management and quality control, certification • Development of the company's production infrastructure


IBA

	
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Head of the Company Export manager	S.V. Levteev V.M. Kazan
Year of formation Beginning of Software Export Dynamics	1993 1993 (Software export is the original business line) In 2004 export volume growth is 10-20%, in 2005 export volume growth will be 20-50%
Founders	Belarusian and foreign founders (Cyprus)
Personnel Education level	Amount of employees: more than 1500 1250 employees have higher education, 30 hold PhD degrees, degrees IBM, Lotus, Microsoft are possessed by 200
Certification	Till 2003 – standard ISO, 2003 – standard SEI CMMI level 4
Model Key industries	Ordering, product, mixed model, outsourcing of business processes Technology orientation Orientation on horizontal solutions
Specialization	Service types: solution development, applications implementation and adaptation, technical support, reengineering, encryption, software testing, software support (out of warranty), software license sale, IT-consulting, business consulting, migration/porting Specialization: Back Office Applications, Electronic Commerce, Front Office Applications, Intranet and Electronic Workplace, Networking and Communications, Software Infrastructure, Entertainment, GIS
Tools	Programming Language: C/C++, Tcl/Tk, Java, JavaScript, HTML, DHTML, CFML, Delphi, Visual Basic, Vbscript, Map Basic, PL/1, Active Perl, ABAP/4, SQL, XML, XSL, Cobol Case-tools: Rational Development tools: IBM/Lotus, Rational, Microsoft, Oracle, Vignette Test tools: IBM/Lotus, Rational Infrastructure Project Support: IBM/Lotus, Rational Methodologies: RUP, MSF, UML Basic platforms: Palm OS, Unix (SCO, Solaris, FreeBSD), Symbian, Linux, Mainframe (z/OS, MVS/ESA(OS/390)), Windows CE, Midrange (AS/400), cluster platforms, Windows
Clients (companies)	IBM, Tupolev, Coca-Cola, mining-and-metallurgical integrated works, Alcatel
Country Orientation	Germany, Russia, the USA, the Czech Republic
Extension Strategy	Extension with the help of equity capital
Development Priorities	<ul style="list-style-type: none"> • Foreign Marketing and PR, foreign representations • Development of human resources • Development of software design technologies, project management and quality control, Certification

Micro Express Int'l

	
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Head of the Company	M.L. Markhasin
Year of formation	1993
Beginning of Software Export Dynamics	2003 (duty of General Software Development Department) In 2004 volume export growth is 10-20%, in 2005 volume export growth will be 200-300%
Founders	Foreign company/physical entity (the USA)
Personnel	Amount of employees: 15 - 35
Education level	19 employees have higher education
Certification	2005 (planning) – standards ISO, QS9000
Model	Ordering model и outsourcing of business processes
Key industries	Vertical orientation: industry, manufacturing, trade, services
Specialization	Service types: solution development, reengineering, encryption, IT-consulting, business consulting, CAD/CAE Engineering Specialization: Back Office Applications (ERP), Web Development Software, Electronic Marketplaces, CRM, Enterprise Application Integration
Tools	Programming Language: C/C++, SQL, XML, XSL, HTML, DHTML, CFML, Java2 Case-tools: Borland/Inprise Development tools: Microsoft, Borland/Inprise, Macromedia Test tools: Borland/Inprise Infrastructure Project Support: CVS Methodologies: RUP, RAD, Agile programming (extreme) Basic platforms: Windows, Linux
Country Orientation	USA, Germany
Extension Strategy	Extension with the help of equity capital
Development Priorities	<ul style="list-style-type: none"> • Foreign Marketing and PR, foreign representations • Development of software design technologies, project management and quality control, certification • Development of new business lines


ScienceSoft

	
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Head of the Company Export manager	N.A. Kuraev B.J. Shiklo
Year of formation Beginning of Software Export Dynamics	1989 1989 (Software export is the original business line) Export volume growth in 2004 is 50-100%, in 2005 Export volume growth will be 200-300%
Founders Representations	Belarusian company/physical entity Subsidiary firms in the USA, Netherlands
Personnel Education level	Amount of employees: > 170 170 employees have higher education, 9 holding PhD degree, 2 holding Doctor degree, 2 are professors
Certification	2005 (planning) – standards ISO, SEI CMM
Model Key industries	Ordering and mixed model Technology orientation (software development matching certain technologies)
Specialization	Service types: solution development, applications implementation and adaptation, technical support, reengineering, encryption, software testing, software support (out of warranty), IT-consulting Specialization: Back Office Applications, Electronic Commerce, Front Office Applications, Intranet and Electronic Workplace, Networking and Communications, Software Infrastructure, Enterprise Application Integration, Entertainment, GIS
Tools	Programming Language: C/C++, Java, JavaScript, Delphi, Visual Basic, Vbscript, Map Basic, Active Perl, SQL, XML, XSL, Cobol, Tcl/Tk, HTML, DHTML, CFML, Zsh scripts Case-tools: Rational Rose, Visio, ErWin/BpWin Development tools: MS, Visio, Rational Rose, ErWin/BpWin, Oracle Designer, UML, IDEF1X, IDEF0 Test tools: Microsoft Project, Mercury TestDirector, LogiGear TrackGear Infrastructure Project Support: MS Project, MS Portal Server Methodologies: RUP, MSF, CDM, RAD, DSDM, PJM, Datarun, PMBOK, UML, IEEE, SWBOK, Agile programming (extreme), Spice, PRINCE2 Basic platforms: Windows, Unix (SCO, Solaris, FreeBSD), Linux, Mainframe (z/OS, MVS/ESA (OS/390)), Cluster platforms, Palm OS, Symbian, BREW, Windows CE, Midrange (AS/400)
Clients (companies) Country Orientation	Johnson & Johnson, Ford, Honda, Procter&Gamble, Whirlpool, Colgate-Palmolive USA, England, the Netherlands, Canada, Israil, Japan, Germany, Russia, Finland, Switzerland
Pricing Policy	Fixed price, Time&Material
Extension Strategy	Extension with the help of equity capital
Development Priorities	<ul style="list-style-type: none"> Research and development of new products

NILITIS

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Head of the Company Export manager	S.V. Kozlovsky S.V. Kozlovsky
Year of formation Beginning of Software Export Dynamics	1998 2003 (duty of General Software Development Department) Dynamics export volume is about 10%
Founders	Physical entity
Personnel Education level	Amount of employees: > 25 29 employees have higher education, 3 hold PhDdegree
Certification	No
Model Key industries	Product model Vertical orientation: finance, insurance
Specialization	Service types: business consulting Specialization: Finance, Data Mining
Tools	Programming Language: C/C++, Java, JavaScript, Active Perl, SQL, HTML, DHTML, CFML Development tools: Microsoft, Oracle Infrastructure Project Support: Microsoft Methodologies: MSF Basic platforms: Windows, Unix (SCO, Solaris, FreeBSD), Linux
Country Orientation	USA
Extension Strategy	Extension with the help of outward investments
Development Priorities	<ul style="list-style-type: none"> Research and development of new products


UIIP NASB

	
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Head of the Company Export manager	S.V. Ablamejko V.V. Anischenko
Year of formation Beginning of Software Export Dynamics	1965 1976 (duty of General Software Development Department) Export volume in 2004 won't change, in 2005 export volume growth will be 1-10%
Founders	Belarusian company/State Scientific Institution
Personnel Education level	Amount of employees: more than 300 275 employees have higher education, 2 are corresponding member, 21 hold Doctor degree, 64 hold PhDdegree
Certification	2005 (planning) #8211, standard ISO
Model Key industries	Mixed model Vertical orientation: healthcare, research institutes, education, industry, manufacturing
Specialization	Service types: solution development, applications implementation and adaptation Specialization: Engineering, Scientific software, Data Mining, Internet Security, Multimedia Tools, Knowledge Management, Information Security, Operating Systems Software, GIS
Tools	Programming Language: C/C++, Java, JavaScript, Delphi, Visual Basic, Vbscript, Map Basic, Active Perl, SQL, XML, XSL, HTML, DHTML, CFML Case-tools: Platinum, Microsoft, Oracle, IBM/Lotus, Borland/Inprise, SUN, Sybase, MapInfo, Project Technologies Development tools: Platinum, Microsoft, Oracle, IBM/Lotus, Borland/Inprise, SUN, Sybase, MapInfo, Project Technologies Test tools: Platinum, Microsoft, Oracle, IBM/Lotus, Borland/Inprise, SUN, Sybase, MapInfo, Project Technologies Basic platforms: Windows, Unix (SCO, Solaris, FreeBSD), Linux, cluster platforms, Windows CE
Country Orientation	Germany, Russia, USA, France, Denmark
Pricing Policy	Medium contract cost is \$ 60 000
Extension Strategy	Extension with the help of outward investments
Development Priorities	<ul style="list-style-type: none"> Foreign Marketing and PR, foreign representations Research and development of new products

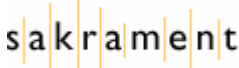
PION Ltd

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Head of the Company Export manager	A.G. Zhilkin V.V. Sidorik
Year of formation Beginning of Software Export	1991 1991 (duty of General Software Development Department)
Founders	Belarusian company/physical entity
Personnel Education level	Amount of employees: more than 15 18 employees have higher education, 5 hold PhDdegree, 1 holds Doctor degree
Certification	No
Model Key industries	Product model Vertical orientation: research institutes, education
Specialization	Service types: software support (out of warranty)
Tools	Programming Language: C/C++, Java, JavaScript, Delphi, Visual Basic, Vbscript, Map Basic, SQL Basic platforms: Windows
Extension Strategy	Extension with the help of outward investments
Development Priorities	<ul style="list-style-type: none"> • Research and development of new products • Fund-raising • Development of new business lines


Applied Systems Ltd

	
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Head of the Company Export manager	O.E. Bulat O.E. Bulat
Year of formation Beginning of Software Export Dynamics	1998 1998 (Software export is the original business line) Dynamics of export volume is 50-100%
Founders Representations	Belarusian company/physical entity Representations: Germany.
Personnel Education level	Amount of employees: 35 35 employees have higher education, 1 holds PhD degree
Certification	2004 - standard ISO 2004 – standard SEI CMM
Model Key industries	Ordering and mixed models Orientation on horizontal solutions
Specialization	Service types: solution development, applications implementation and adaptation, technical support, reengineering, software testing, software support (out of warranty), software license sale, IT-consulting, migration/porting Specialization: Engineering, Scientific software, Web Development Software, Wireless Technologies (mobile), GIS
Tools	Programming Language: C/C++, Java, JavaScript, Delphi, Visual Basic, Vbscript, Map Basic, Active Perl, SQL, XML, XSL, HTML, DHTML, CFML Development tools: Microsoft, Stingray, Macromedia Infrastructure Project Support: Serena Software Methodologies: UML Basic platforms: Windows, Symbian, Windows CE
Clients (companies) Country Orientation	AVL, Kraner GmbH Germany, Russia, Switzerland, Sweden
Extension Strategy	Extension with the help of equity capital
Development Priorities	<ul style="list-style-type: none"> • Foreign Marketing and PR, foreign representations • Research and development of new products • Development of human resources • Development of software design technologies, project management and quality control, Certification • Fund-raising • Development of new business lines


Sakrament Ltd

	
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Head of the Company Export manager	V.N. Egorov I.E. Hejdorov
Year of formation Beginning of Software Export Dynamics	1994 1999 (the duty of a separate Department) In 2004 export volume growth is 10-20%, in 2005 export volume growth will be 20-50%
Founders	Belarusian company/physical entity
Personnel Education level	Amount of employees: more than 80 All the employees from the Department of Export have higher education, 3 holding PhD degree, 2 hold Doctor degree
Certification	2005 (planning) - standard ISO
Model Key industries	Ordering, product and mixed model Orientation on technology Horizontal orientation Vertical orientation: research institutes, education, industry, manufacturing, telecommunication, services
Specialization	Service types: solution development, applications implementation and adaptation, software support (out of warranty), software license sale , migration/porting Specialization: Engineering, Scientific software, Internet Security, Multimedia Tools, Call Processing and related technologies, Wireless Technologies (mobile), Middleware
Tools	Programming Language: C/C++, XML, XSL Case-tools: Microsoft, Oracle Development tools: Microsoft, Oracle Test tools: Microsoft, Oracle Infrastructure Project Support: Microsoft, Oracle Basic platforms: Windows, Linux, Unix (SCO, Solaris, FreeBSD), Palm OS, Symbian, Windows CE
Clients (companies) Country Orientation	Alcatel Business Systems, Code Factory, TNT production, SPIC, ASV, Iskauraltel CIS countries, Western Europe
Pricing Policy	Medium contract cost \$ 2 000-3 000
Extension Strategy	Extension with the help of equity capital and outward investments
Development Priorities	<ul style="list-style-type: none"> • Foreign Marketing and PR, foreign representations • Research and development of new products • Fund-raising • Development of software design technologies, project management and quality control, Certification • Development of the company's production infrastructure


SaM-Solutions

	
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Head of the Company Export manager	A.R. Zhivitsky Martin Mauersberg
Year of formation Beginning of Software Export Dynamics	1993 1993 (Software export is the original business line) In 2004 export volume growth is 20-50%, in 2005 export volume growth is 50-100%
Founders Representations	Foreign company/physical entity (Germany) Representations: Ukraine
Personnel Education level	Amount of employees: more than 400 400 employees have higher education, 14 hold PhD degree, 2 hold Doctor degree
Certification	Till 2003 – standard ISO, 2005 (planning) – standard SEI CMM
Model Key industries	Ordering model Orientation on technology Orientation on horizontal solutions
Specialization	Service types: applications implementation and adaptation, reengineering, encryption, software testing, software support (out of warranty), IT-consulting Specialization: Back Office Applications, Electronic Commerce, Front Office Applications, Intranet and Electronic Workplace, Software Infrastructure, Enterprise Application Integration, Networking and Communications
Tools	Programming Language: C/C++, C#, Java, JavaScript, HTML, DHTML, NET, SAP, Lotus, Delphi, Visual Basic, Vbscript, Map Basic, Active Perl, SQL, XML, XSL, COBOL, Tcl/Tk Case-tools: Rational Development tools: Rational, IBM/Lotus, Microsoft, Oracle, Borland/Inprise, SUN, Sybase, Macromedia Test tools: Rational Infrastructure Project Support: Microsoft, Rational Methodologies: RUP, MSF, RAD, UML, Agile programming (extreme) Basic platforms: Palm OS, Unix (SCO, Solaris, FreeBSD), Symbian, Linux, Windows CE, Windows, Mac
Clients (companies) Country Orientation	SIEMENS, CSC, EPO England, Germany, Russia, USA, The Netherlands
Extension Strategy	Extension with the help of equity capital
Development Priorities	<ul style="list-style-type: none"> • Foreign Marketing and PR, foreign representations • Development of software design technologies, project management and quality control, Certification • Development of the company's production infrastructure


System Labs

 System Labs	
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Head of the Company	E.V. Kuchuk
Export manager	E.V. Kuchuk
Year of formation	2001
Beginning of Software Export	2001 (Software export is the original business line)
Dynamics	Export volume won't change
Founders	Belarusian company/physical entity
Personnel	Amount of employees: less than 15
Education level	5 employees have higher education
Certification	No
Model	Ordering model
Key industries	Vertical orientation: finance, insurance
Specialization	Service types: solution development, applications implementation and adaptation, technical support, reengineering Specialization: Finance, Warehouse Management Systems, Electronic Marketplaces, Sales Force Automation, Database Marketing, Document Systems, Software Infrastructure (Database Management Systems)
Tools	Programming Language: Java, JavaScript, XML, XSL, Delphi, SQL, XML, XSL, HTML, DHTML, CFML, PHP Case-tools: Open Source Development tools: Borland/Inprise, Open Source Test tools: Open Source Infrastructure Project Support: Open Source Basic platforms: Windows, Linux
Clients (companies)	JV «Vest», Academy of Ministry of Internal Affairs of the Republic of Belarus
Country Orientation	Russia
Pricing Policy	Medium contract cost is \$ 2 000
Extension Strategy	Extension with the help of equity capital
Development Priorities	<ul style="list-style-type: none"> • Research and development of new products • Development of new business lines • Development of the company's production infrastructure

SOFTCLUB Ltd

	
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Head of the Company Export manager	V.G. Sirotko O.L. Kernogo
Year of formation Beginning of Software Export Dynamics	1993 1996 (duty of General Software Development Department) Export volume won't change
Founders Representations	Belarusian company/physical entity Representations: Grodno, Brest, Gomel, Mogilev, Vitebsk, Polotsk, Bobrujsk, Nesvizh, Miadel.
Personnel Education level	Amount of employees: about 70 54 employees have higher education, 12 hold academic degrees.
Certification	2004 – standard ISO
Model Key industries	Ordering и product model Horizontal solutions Vertical solutions: education, trade, services, finance, insurance companies
Specialization	Service types: solution development, applications implementation and adaptation, software support (out of warranty) Specialization: Finance, Electronic Commerce (Retail/Point of Sale), CRM
Tools	Programming Language: C/C++, Delphi, SQL, PL/SQL, XML, XSL, HTML, DHTML, CFML Case-tools: Oracle Development tools: Microsoft, Oracle, Borland/Inprise Test tools: Oracle Infrastructure Project Support: Microsoft, Oracle, IBM/Lotus Methodologies: not classical Basic platforms: Windows, Linux
Clients (companies) Country Orientation	«Petro-Aero-Bank» Ltd. (St. Petersburg), «UkrSotsBank» Ltd. (Kiev) CIS countries
Pricing Policy	\$ 20 per hour
Extension Strategy	Extension with the help of outward investments
Development Priorities	<ul style="list-style-type: none"> • Foreign Marketing and PR, foreign representations • Fund-raising • Development of new business lines

ST Soft Ltd

	
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Head of the Company	N.M. Valuev
Export manager	S.V. Nosan
Year of formation	2004
Beginning of Software Export	2004 (the duty of a separate Department)
Founders	Foreign company/physical entity (England)
Representations	No
Personnel	Amount of employees: 15 - 35
Education level	Higher education
Certification	2005 (planning) – standard ISO
Model	Ordering model
Key industries	Vertical solutions: finance, insurance
Specialization	Service types: applications implementation and adaptation, IT-consulting, business consulting Specialization: Data Mining, CRM, Customer Service/Call Center, Intranet and Electronic Workplace (Office Systems), Software Infrastructure (Database Management Systems, Information Security)
Tools	Programming Language: C/C++, Java, JavaScript, Delphi, Visual Basic, Vbscript, Map Basic, SQL, XML, XSL, HTML, DHTML, CFML Case-tools: Sybase Development tools: Microsoft, Oracle, Sybase Infrastructure Project Support: Microsoft, Sybase Methodologies: PMBOK Basic platforms: Windows, Unix (SCO, Solaris, FreeBSD), Linux, Mainframe (z/OS, MVS/ESA (OS/390)), Midrange (AS/400)
Clients (companies)	Belarusian and Russian banks
Country Orientation	Belarus, CIS countries
Pricing Policy	Flexible
Extension Strategy	Extension with the help of equity capital
Development Priorities	Development of the company's production infrastructure

TOP SOFT

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Head of the Company Export manager	G.U. Gatsko V.I. Basalyga
Year of formation Beginning of Software Export Dynamics	1993 1993 (the line has not been given a separate structure) Dynamics export volume is 20 - 50 %
Founders	Foreign company/physical entity (Russia)
Personnel Education level	Amount of employees: more than 80 5 employees hold PhD degrees
Certification	No
Model Key industries	Mixed model Orientation on horizontal solutions (certain spheres)
Specialization	Service types: solution development, technical support, software license sale , IT-consulting Specialization: Back Office Applications (ERP, Human Resources, Finance), Front Office Applications (CRM)
Tools	Programming Language: C, C#, Delphi, Java, Visual Basic etc, own languages Case-tools: Rational Rose, Aris Toolset Basic platforms: OC Windows, СУБД Oracle, MS SQL, Pervasive SQL
Clients (companies) Country Orientation	Gazprom, Yukos Russia
Pricing Policy	License supply
Extension Strategy	Extension with the help of equity capital
Development Priorities	Research and development of new products


RUP «CNIITU»

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Head of the Company Export manager	A.V. Pribylskij L.L. Rodtsevich
Year of formation Beginning of Software Export Dynamics	1961 1961 (the line has not been given a separate structure) Dynamics export volume is no more than 10%
Founders	Belarusian and foreign founders
Personnel Education level	Amount of employees: more than 190 194 employees have higher education, 8 hold PhD degree, 3 hold Doctor degree
Certification	2005 (planning) – standard ISO
Model Key industries	Ordering model Vertical solutions: industry, manufacturing
Specialization	Service types: solution development, applications implementation and adaptation, technical support, reengineering, encryption, software testing, software support. Specialization: ERP, Finance (Back Office Applications), Office Systems.
Tools	Programming Language: C/C++, Java, JavaScript, Delphi, SQL, XML, XSL, HTML, DHTML, CFML, Oracle Developer Case-tools: Rational, Microsoft, Oracle (key language) Design tools: Oracle, IBM/Lotus Test tools: Oracle Infrastructure Project Support: Oracle Methodologies: CDM, RAD Basic platforms: Windows
Extension Strategy	Extension with the help of equity capital, attraction of outward investments and gaining of credit
Development Priorities	<ul style="list-style-type: none"> • Research and development of new products • Development of human resources • Development of software design technologies, project management and quality control, Certification • Development of the company's production infrastructure • Development of new business lines


«Ecsat-Bel» JV

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Head of the Company Export manager	A.G. Batiukov D.S. Kuprin
Year of formation Beginning of Software Export Dynamics	1993 1993 (duty of General Software Development Department) In 2004 export volume growth is 1-10%, in 2005 export volume growth is 50-100%
Founders	Belarusian and foreign founders (France)
Personnel Education level	Amount of employees: 15 - 35 20 employees have higher education
Certification	No
Model Key industries	Ordering model Vertical orientation: finance, insurance
Specialization	Service types: encryption, software testing Specialization: Finance, Office Systems
Tools	Programming Language: C/C++, Java, JavaScript, Delphi, Visual Basic, Vbscript, Map Basic, SQL, XML, XSL, HTML, DHTML, CFML Case-tools: Microsoft, Borland/Inprise, Sybase, Seagate Software Development tools: Microsoft, Borland/Inprise, Sybase, Seagate Software Test tools: Microsoft, Borland/Inprise Infrastructure Project Support: Microsoft Methodologies: RAD Basic platforms: Windows, Linux
Country Orientation	Germany, France, Latvia
Pricing Policy	Medium contract cost is \$ 7 000-10 000
Extension Strategy	Extension with the help of equity capital and outward investments
Development Priorities	<ul style="list-style-type: none"> • Development of software design technologies, project management and quality control, Certification • Development of the company's production infrastructure

ActiveUnit

	
Contact Information	Minsk, Belarus Tel: +375 296 763 203, +1 917 591 42 37 Website: www.activeunit.com E-mail: info@activeunit.com
Head of the Company	D.A. Varivonchik
Year of formation	1999
Beginning of Software Export	2000 (Software export is the original business line)
Dynamics	Dynamics export volume is 10 - 20 %
Founders	Foreign company/physical entity (the USA)
Personnel	Amount of employees: 35 - 80
Education level	95% of the staff have higher education, 1 holds PhD degree
Certification	2004 – standard ISO 2004 – standard SEI CMM
Model	Mixed model
Key industries	Orientation on horizontal solutions (certain spheres)
Specialization	Specialization: Back Office Applications (ERP), Electronic Commerce (Retail/Point of Sale, Electronic Catalog, Web Development Software, Internet Security, Bill Presentment and Payment, Electronic Marketplaces), Front Office Applications (CRM, Supply Chain Management, Sales Force Automation, Customer Service/Call Center), Intranet and Electronic Workplace (Document Systems, Groupware, Knowledge Management), Software Infrastructure (Database Management Systems)
Tools	Programming Language: C/C++, Java, JavaScript, Visual Basic, Vbscript, Map Basic, SQL, XML, XSL, HTML, DHTML, CFML, PHP, ASP, NET, C# Tools: Rational, Microsoft, Oracle, Macromedia Methodologies: RUP Basic platforms: Windows, Unix (SCO, Solaris, FreeBSD), Palm OS
Country Orientation	England, Germany, Canada, Russia, USA, France, Switzerland
Extension Strategy	Extension with the help of equity capital
Development Priorities	<ul style="list-style-type: none"> • Foreign Marketing and PR, foreign representations • Research and development of new products • Development of software design technologies, project management and quality control, Certification • Development of new business lines

EPAM Systems

	
Contact Information	Ul. V. Horuzhej, 29, Minsk, Belarus Tel: + 375 172 10 16 62 Website: www.epam.com, www.epam.by E-mail: info@epam.com
Head of the Company Export manager	A.M. Dobkin A.M. Dobkin
Year of formation Beginning of Software Export Dynamics	1993 1993 (Software export is the original business line) In 2004 export volume growth is 100%, in 2005 export volume growth is 150%
Founders Representations	Foreign company/physical entity (the USA) Representations: Russia, Hungary, the USA
Personnel Education level	Amount of employees: more than 1200 1180 employees have higher education, 25 hold PhD degree
Certification	Till 2003 – standard ISO, 2003 – standard SEI CMM level 4
Model Key industries	Ordering, mixed models Orientation on technology Orientation on horizontal solutions Vertical orientation: healthcare, insurance, finance, education, industry, manufacturing, publishing, telecommunication, trade (wholesale and retail sale), transport, services
Specialization	Service types: solution development, applications implementation and adaptation, technical support, reengineering, migration/porting, encryption, software testing, software support (out of warranty), IT-consulting, business consulting Specialization: Back Office Applications, Electronic Commerce, Front Office Applications, Intranet and Electronic Workplace, Software Infrastructure, Enterprise Application Integration
Tools	Programming Language: Java, C/C++ (including ANSI C), C#, Visual Basic, VB.NET, Scripting Languages (Javascript, VBScript, Perl, etc.), ABAP/4, RPG/400, COBOL, FORTRAN, PL/1 Case-tools: UML, IDEF1X, IDEF0, IBM Rational Rose, CA ERwin, Microsoft Visio, Oracle Designer, CA BPWin, Borland Together Edition for JBuilder Development tools: Microsoft Visual Studio, Borland Jbuilder, TogetherSoft VisualCafe, ABAP/4 Workbench Tools, Oracle Development Suite, Sybase PowerBuilder, Borland Delphi, Eclipse, Visual Age, IntelliJ IDEA Test tools: Segue, Mercury, IBM, Empirix, SeaPine, EPAM Project Management Center Infrastructure Project Support: EPAM Project Management Center, Microsoft Project Methodologies: PMI PMBOK, ISO 9000, ISO 12207, CMMI, RUP Basic platforms: Microsoft Windows, Unix (Sun Solaris, HP-UX, IBM AIX), Linux, Mac OS, IBM OS/390, IBM VSE, IBM VM, IBM OS/400, IBM Z/OS
Clients (companies) Country Orientation	SAP, Halliburton, CareFirst Blue Cross Blue Shield, Reuters, Colgate-Palmolive, British Telecom England, Germany, Russia, USA, France, Japan, Hungary
Pricing Policy	Medium contract cost is \$ 300 000
Extension Strategy	Extension with the help of equity capital, outward investments, attraction of resources

<i>Development Priorities</i>	<ul style="list-style-type: none">• Foreign Marketing and PR, foreign representations• Development of human resources• Fund-raising• Development of new business lines
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5. The successful projects of Belarusian IT companies

EPAM Systems

EPAM Systems is the largest and most experienced provider of outsourced software engineering in Europe. With over 1200 software engineers across development centers in Minsk, Grodno, Gomel and Mogilev (Belarus), Moscow, St. Petersburg and Saratov (Russia), Budapest (Hungary), EPAM leads in technical excellence, quality assurance and experience of delivering leading edge services for product development, testing and maintenance, as well as solution customization and deployment.

EPAM is a private US corporation, based in Princeton, with an 11-year record of profitability giving potential clients the financial and IPR security that is uncommon with many vendors. The company uses the most mature and proven methodology and processes to mitigate the potential risks from outsourcing. Moreover, it is the most financially stable provider in the region.

Clients can choose from several tailored delivery models to provide the perfect fit for their specific technology and contractual needs from an outsourcing partner that guarantees the best possible return on their investment. Combining the best development processes, the leading horizontal technology expertise with proven vertical domain knowledge, gained from complex projects for the globally recognized clients, makes EPAM the most balanced choice to ensure the outsourcing goals are achieved.

Delivery and Commercial Models

- Fixed Project Delivery
- Managed Services
- SLA based
- T&M
- ODC Operation

Industry Practices

- Healthcare and Insurance
- Financial Services
- Software Providers and ISVs
- Telecommunications
- Travel and Entertainment
- Oil, Gas, Utilities

Horizontal Application Specialization

- Portals (JSR-168 & 183, SOA)
 - *Enterprise Information
 - *Self-service, Customer Service
 - *Service provisioning
 - *Marketplaces
- Content Management Systems
- Rule Engines & Workflows
- Knowledge Management
- Business Intelligence, Data Warehousing/Mining
- EAI, Transaction & Messaging Hubs
- Data, Transaction, Web Services, WSA, XML, EDI, X12
- Security (LDAP, AD, Passport, Identity Management)

EPAM at a Glance

- US corporation founded in Princeton, 1993
- #1 software engineering services provider with ODCs in Central & Eastern Europe
- Over 1200 software engineers
- First CMMI Level 4 assessment in Europe
- The only company in Europe with multiple CMM assessments
- Geo-diverse delivery: US, Russia, Hungary, Belarus
- 96% of work is application/product development, support or deployment
- 100% focus on J2EE (WebLogic, WebSphere, NetWeaver) and .NET
- Successful projects deployed in over 30 countries in 13 languages
- 5+ million hours development experience

Major Technology Focus

- J2EE (EJB, SOA, Portlets)
- NET/C# (SOA, MSMQ, INDIGO)
- SAP NetWeaver

Sample Customers

Global business leaders such as Reuters, CareFirst BC/BS, Empire BC/BS, Colgate-Palmolive, Halliburton, London Stock Exchange, SBLI, British Telecom, Encorus (First Data Corp.), AeroMexico, West Group, Lasvegas.com, Samsung.

Global technology leaders such as SAP, Microsoft, BEA Systems, Hyperion, Sun Microsystems.

EPAM Success Story

Customer Profile

LasVegas.com (www.lasvegas.com) is a partnership of Mandalay Resort Group and Caesars Entertainment, owners and operators of Las Vegas hotels, casinos, restaurants, shops, and a variety of shows and attractions recognized around the world.

Uniting all the renowned city has to offer, LasVegas.com provides the most direct route to the 36 million visitors to Las Vegas annually, with content and booking capability for 140 hotels, 300 restaurants, 160 tours, 100 shows, 40 wedding chapels, 30 top spas and major golf courses. The travelers enjoy the convenience of one-stop access to all of Las Vegas travel components through a single dedicated site, without the tedious effort of researching multiple web sites.

Situation

Originally, the Las Vegas site was not geared towards its target audience. In 2001 the new owners of the LasVegas.com domain name, fueled by the conviction that Las Vegas needs to steer its own identity and visitor-access, while informing long-time and new travelers through the fast-pace evolution of Las Vegas (with new rooms, themes, entertainment, events, facilities, and incomparable resort services), decided to create a new website offering the opportunity to research, plan and book amenities they want and quickly make reservations.

It was decided that the name will remain the same, but the approach to the way the information is presented and the touch points through which it tries to reach the audience should be radically changed.

The owner company needed a new system to manage content (over 5,000 pages) and a booking engine for on-line reservations.

Solution

To support the LasVegas.com portal, EPAM has successfully completed the custom EPAM Content Management System implementation and integration with some of the third party web services.

CMS core development included:

- Site story boards creation
- Category scheme definitions creation
- Presentation templates creation
- Dynamic content elements development

Integration services spanned:

- Content publishing system setup
- Integration with Datalex Booking Engine
- Integration with ListServ mailing lists software

- Integration with online Marketing DB for producing dynamic reports
- Data Transformation services and content feeds setup
- Content publishing (to one or several different target web sites)
- Content feeds from 3d-party content providers

Results

www.LasVegas.com was re-launched in November 2002 and is now the major online Las Vegas representation promoting all the excitement and glamour of the city, and its unparalleled recreation opportunities as well as bringing tremendous value to the city through increased employment opportunities and profits.

EPAM Content Management System together with its valuable plug-ins that were crucial to the successful website launch made it possible to electronically consolidate diverse content from a number of sources under LasVaegas.com to augment the information provided by the hotels, restaurants and attractions. By using EPAM CMS, management of daily content updates to the 5,000+ page site can be handled by a staff of a few non-technical people. The technical support for the portal is provided by EPAM specialists.

LasVegas.com is a noteworthy example of a destination marketing website that utilizes advanced technology and a user-friendly design to deliver on the promise of 'One City', 'One Site'. All that combined with the innovative marketing methods enables www.LasVegas.com to deliver versatile and extensive destination content and unprecedented values to online travel consumers.

www.LasVegas.com became the biggest travel destination portal deployed in 2002.

International Business Alliance (IBA)

IBA is the largest IT service provider in Eastern Europe and the CIS, offers consulting, development, migration, maintenance, and 24X7 support to its clients. IBA dominates the market in mainframe systems and applications, Internet technologies and e-business solutions, SAP solutions and other ERP systems, and Lotus technologies. With custom software development as our principal line of business, we are capable of covering the entire project lifecycle, from concept and implementation to maintenance, support and upgrade. As a major player in the IT outsourcing market, IBA was profiled by IDC, a world-leading provider of IT industry analysis. IBA holds DIN EN ISO 9001:2000 Certificates, and is at SEI Process Maturity Level 4 for Systems Engineering and Software Engineering as judged by Gartner and TeraQuest.

IBA Group

IBA is a group of privately owned companies located in Europe and the US. Headquartered in Minsk (Belarus), IBA's development centers are in Minsk, Gomel (Belarus), and Prague (Czech Republic) and its representative offices are in the US (Melbourne), Germany (Düsseldorf), and Belarus (Mogilev and Novopolotsk).

Background

IBA was founded in 1993 by IBM Corp. and the two leading Belarusian IT enterprises: the Computer Research Institute (NIIEVM) and the Minsk Computer Production Association (MPOVT). In 1999, IBM withdrew as a part owner of IBA, however, remains a strategic business partner.

Mission

The IBA mission is to provide its customers with high quality and cost-effective solutions.

Team

Of the 1,500 people employed by IBA, more than 1,000 are university-educated programmers with around 30 holding a PhD in computer science. The IBA staff is composed of leading industry professionals who combine creative resourcefulness, strategic business thinking, and technical expertise. Our specialists have been educated at the IBM Training Centers in the US, Germany, Great Britain, Slovenia, and Russia; the Sun Microsystems Training Center in the South African Republic; and the training centers of Lotus, SAP, SAS, Sun, Microsoft, Novell, and IC.

Customers

IBA serves customers in more than 30 countries across diverse markets and industries, including banking, railway, telecommunications, manufacturing, healthcare, trade, and government institutions.

Partners

Our partner base includes IBM Corp. (Premier Business Partner for Software, Premier Business Partner for Systems and Services, Business Partner authorized as Reseller, Solution Provider and Warranty Service Provider, and TotalStorage Solution Center), as well as Lotus Development Corp., Microsoft, SAP, Tivoli, BETA Systems Software AG, Internet Security Systems, Novell (Gold Partner), Check Point (Authorized Business Partner), Alcatel, Sun Microsystems, Philips, AT&T, Notes Development, Wincor-Nixdorf (Qualified Partner, Banking Division), Hypercom, and IFS.

Quality Management

Underscoring its commitment to the highest quality products and services, IBA was among the first in Europe to achieve SEI CMMI Level 4 for Systems Engineering and Software Engineering. In addition, IBA holds DIN EN ISO 9001:2000 certificates issued by TGA, a world known German appraisal agency.

Competitive edge

- More than 1,500 well-educated multilingual employees
- More than 1,000 professional programmers
- Offices in the US, Germany, Czech Republic, and Belarus
- Various computer platforms from mainframe to PC

- Specialists certified by IBM, Lotus, Sun, Novell or 1C
- 11-year experience in software outsourcing
- 35-year experience on the local IT market
- SEI CMMI Level 4
- DIN EN ISO 9001:2000
- Advanced IT infrastructure
- High speed connectivity via landlines and satellite links
- Unbeatable prices
- Multiple delivery models
- Flexible contract terms and payment methods
- Customers in more than 30 countries

The example of an export project: Modernization of a bank application

Customer: NORD/IT - NORD/LB Informationstechnologie GmbH

General information

A project goal was to develop a new multilevel solution with an interface based on a browser instead of out-of-date bank application based on an operational system OS/2. The application was responsible for information gathering and storage about clients, credits, loan guarantees and deposits. Approximately 250 types of documents are generated both for bank clients and internal bank needs in this connection.

Project performance

The project was performed in working partnership with the customer. IBAs' obligations were a system analysis, application engineering with its further realization, block and functional testing, system tests, guarantee of quality and guarantee maintenance. The project was performed in Minsk (Belarus) with short trips to Germany (customer residency).

Result

A new solution is based on high technology. In addition to earlier existed functions a user now gets visual user interface for credit operations, an option of graphical navigation while choosing records, tree-structured hierarchical structure and context help. The new application supports at the same time more than 3000 users and is compatible with Word and Adobe Acrobat Reader/PDF. The project was performed on term and exceeded customer requirements on quality.

According to Mr. Alex Conrad (OE Leiter Software Engineering, NORD/IT - NORD/LB Informationstechnologie GmbH) the system got very positive references from clients: «The application works without problems, with high efficiency and users like to deal with this system, what is a very important aspect»

Appendix 1. Specialization of Belarusian exporters of IT services and goods

This section is an attachment to Subsection 2.4. *Demand for Services and Solutions*. It presents detailed information on specialization of Belarusian exporters of IT services and goods grouped into six main categories: Back Office Applications, Electronic Commerce, Front Office Applications, Intranet and Electronic Workplace, Networking and Communications, Software Infrastructure.

Information is presented in the form of charts, which demonstrate the current specialization levels for each of the categories.

Diagram A.1 presents the specialization of the companies under the category Back Office Applications.

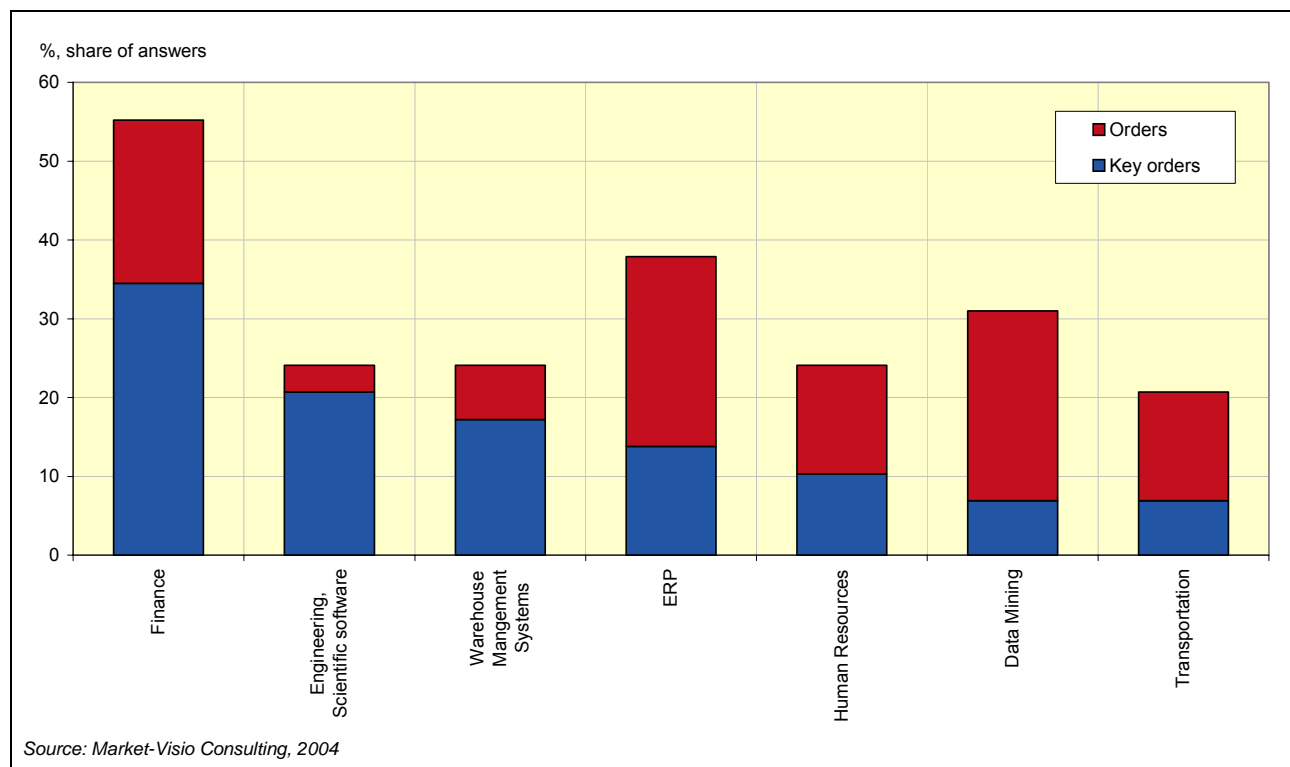


Diagram A.1. Specialization in Back Office Applications

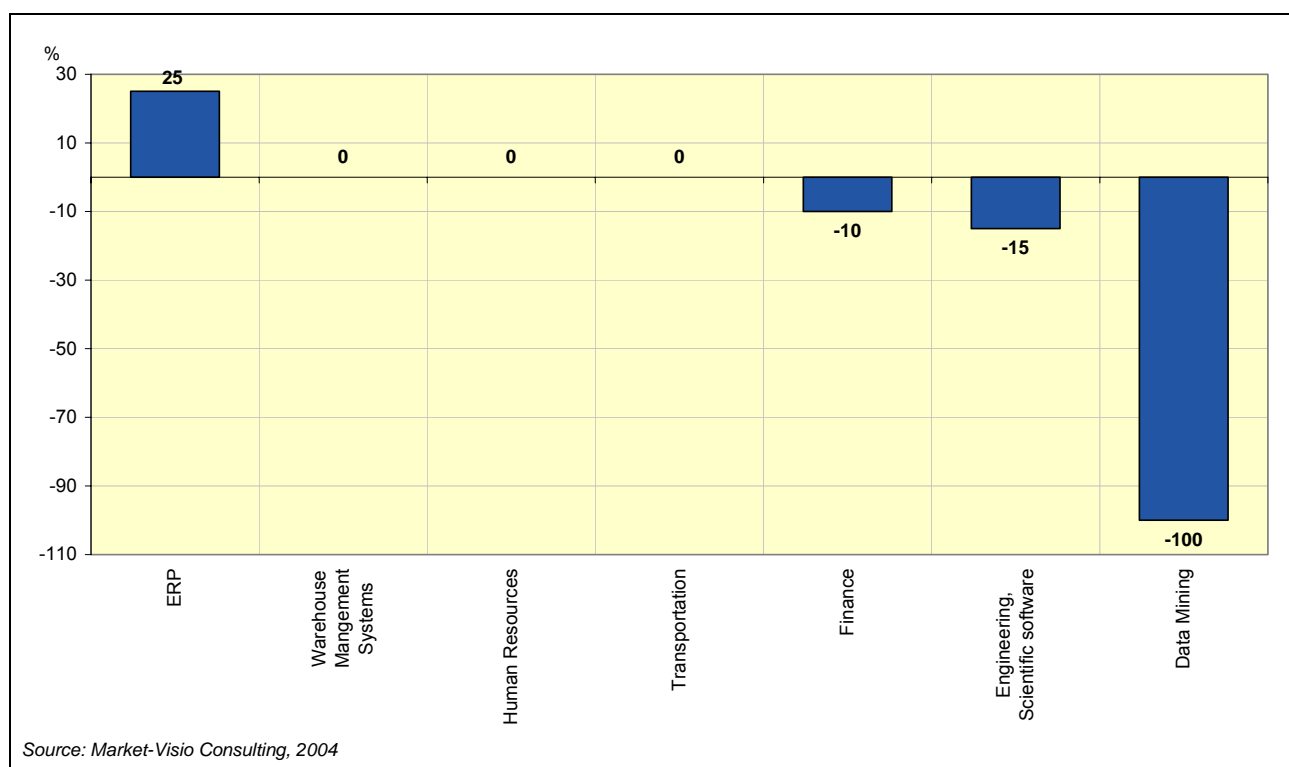


Diagram A.2. Dynamic of key order in Back Office Applications development area in 2005

Diagram A.3 presents the specialization of the companies under the category Electronic Commerce.

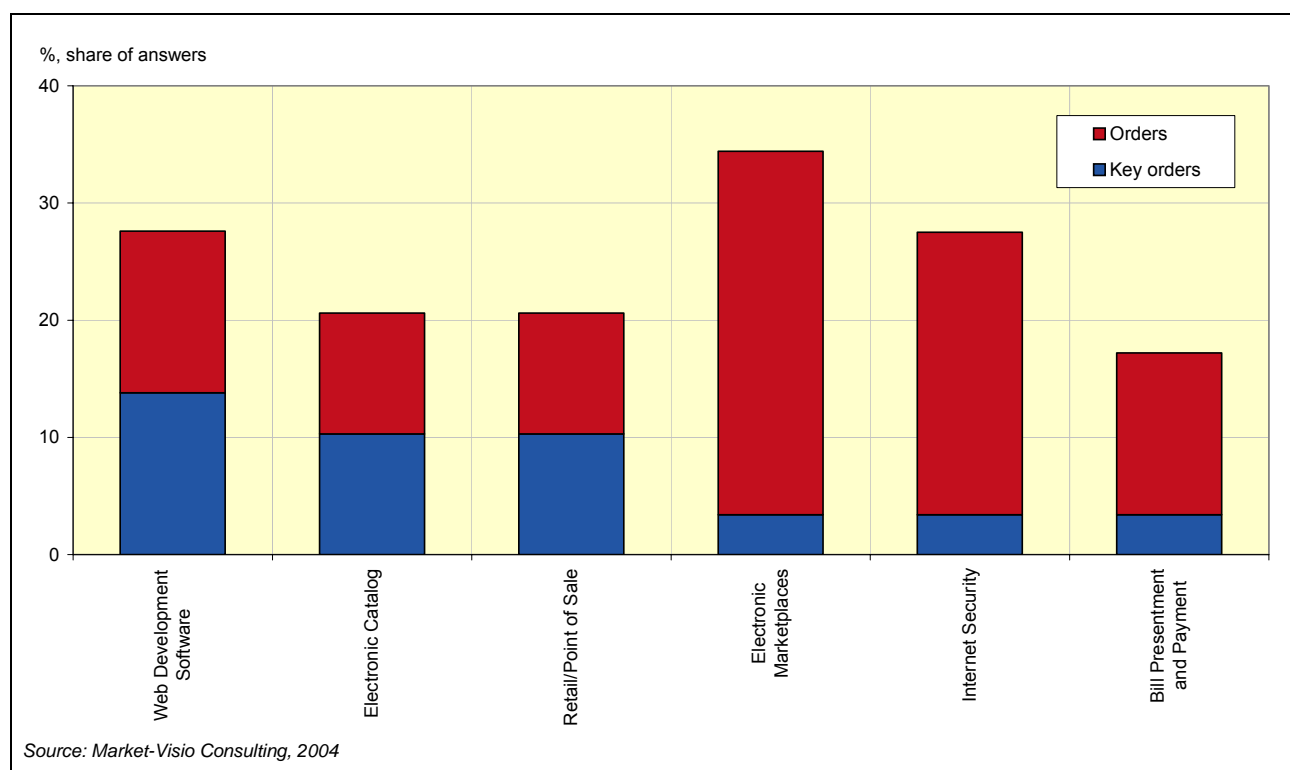


Diagram A.3. Specialization in Electronic Commerce

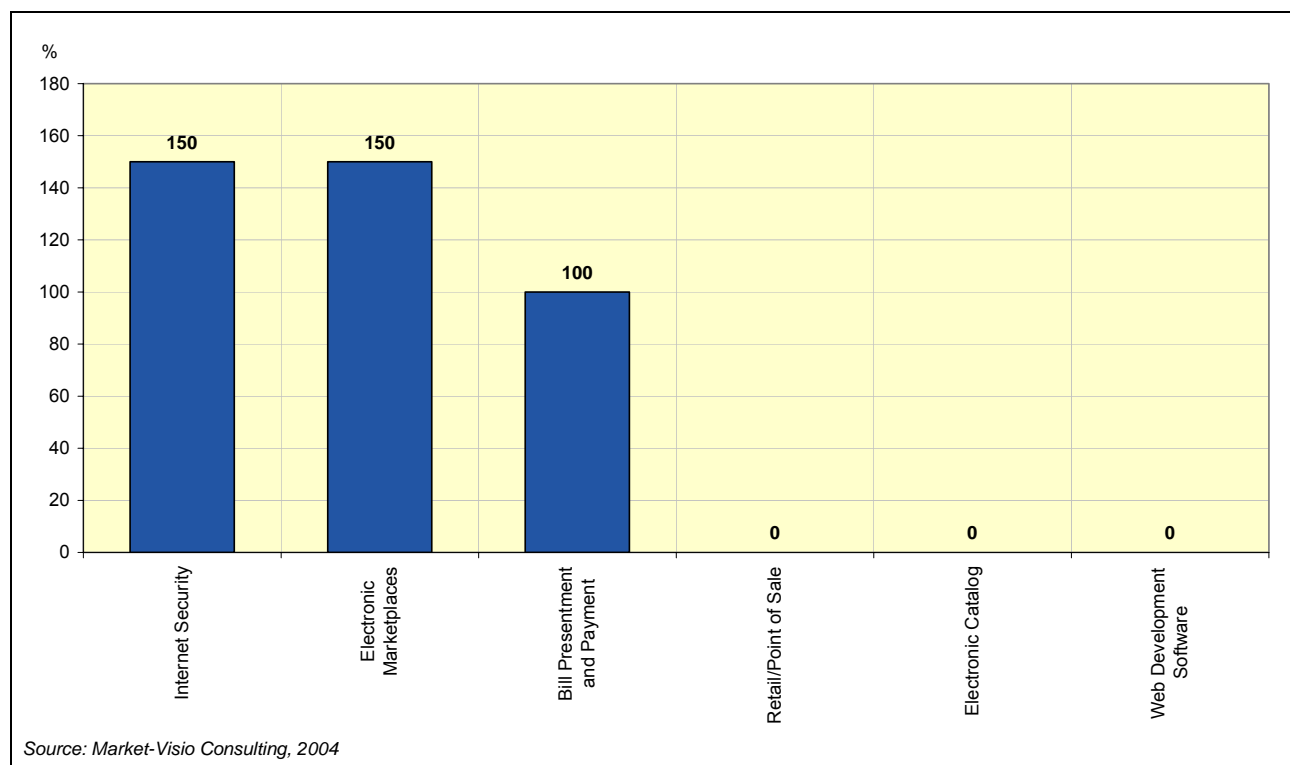


Diagram A.4. Dynamic of key order in Electronic Commerce area in 2005

Diagram A.5 presents the specialization of the companies under the category Front Office Applications.

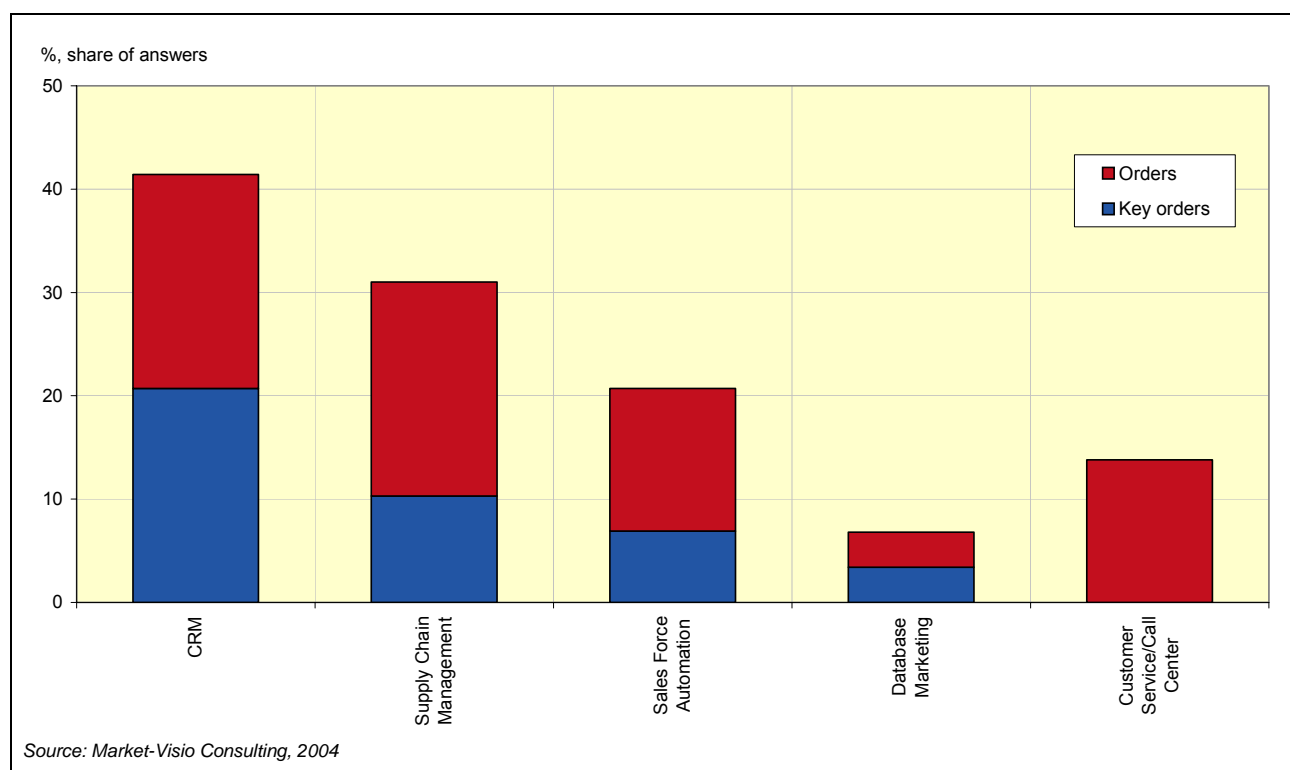


Diagram A.5. Specialization in Front Office Applications

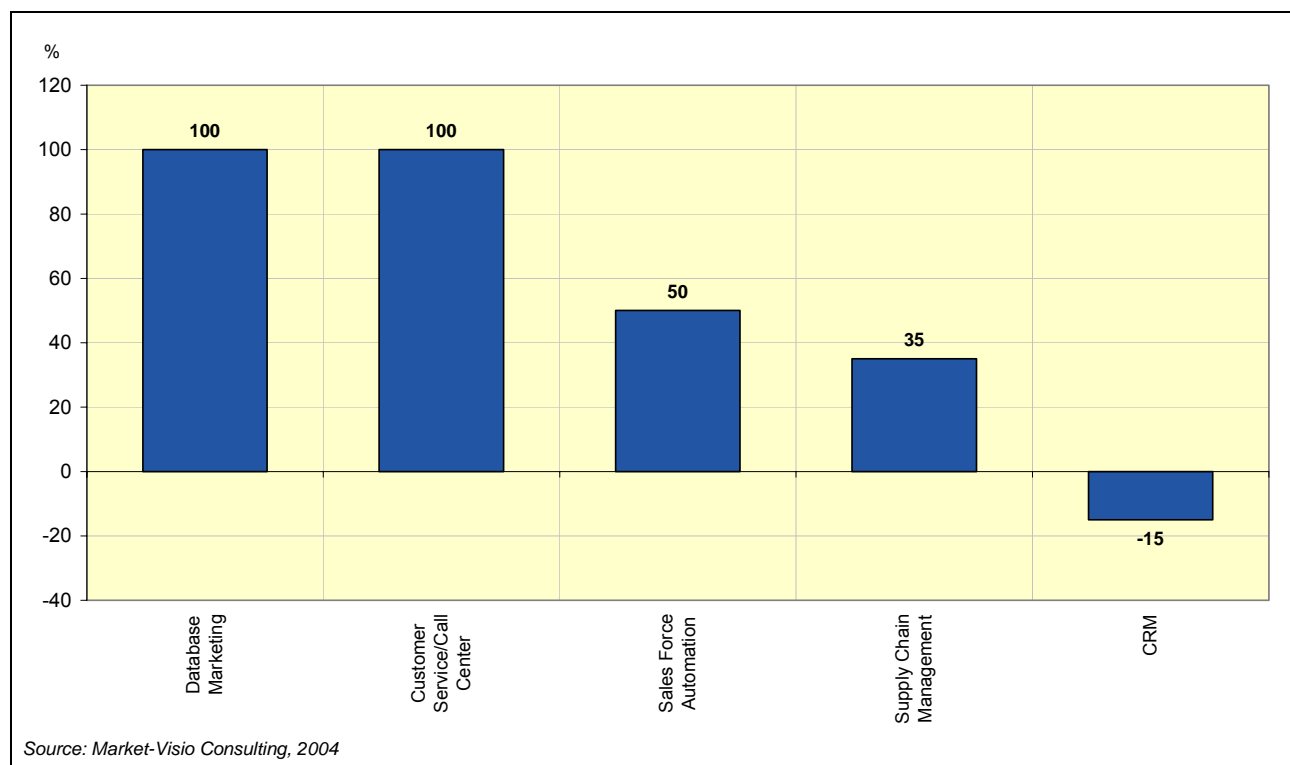


Diagram A.6. Dynamic of key order in Front Office Applications area in 2005

Diagram A.7 presents the specialization of the companies under the category Intranet and Electronic Workplace.

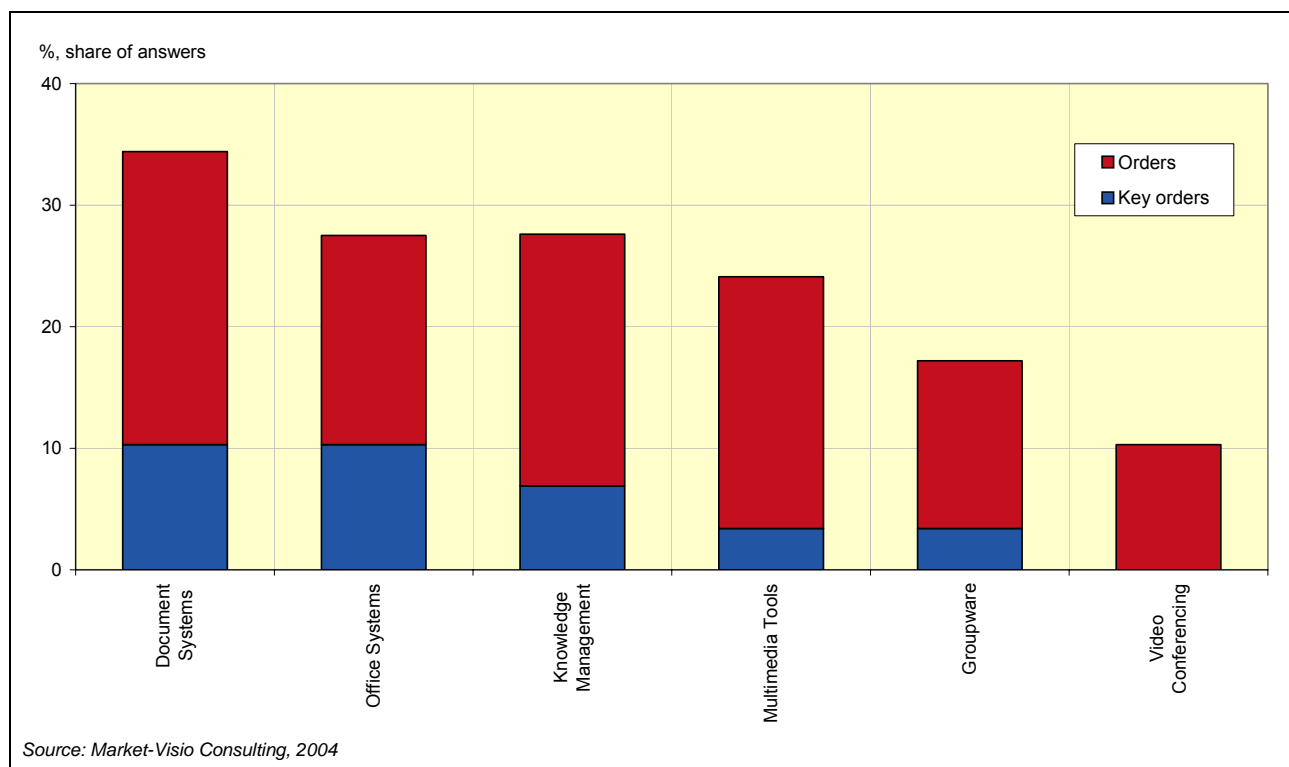


Diagram A.7. Specialization in Intranet and Electronic Workplace

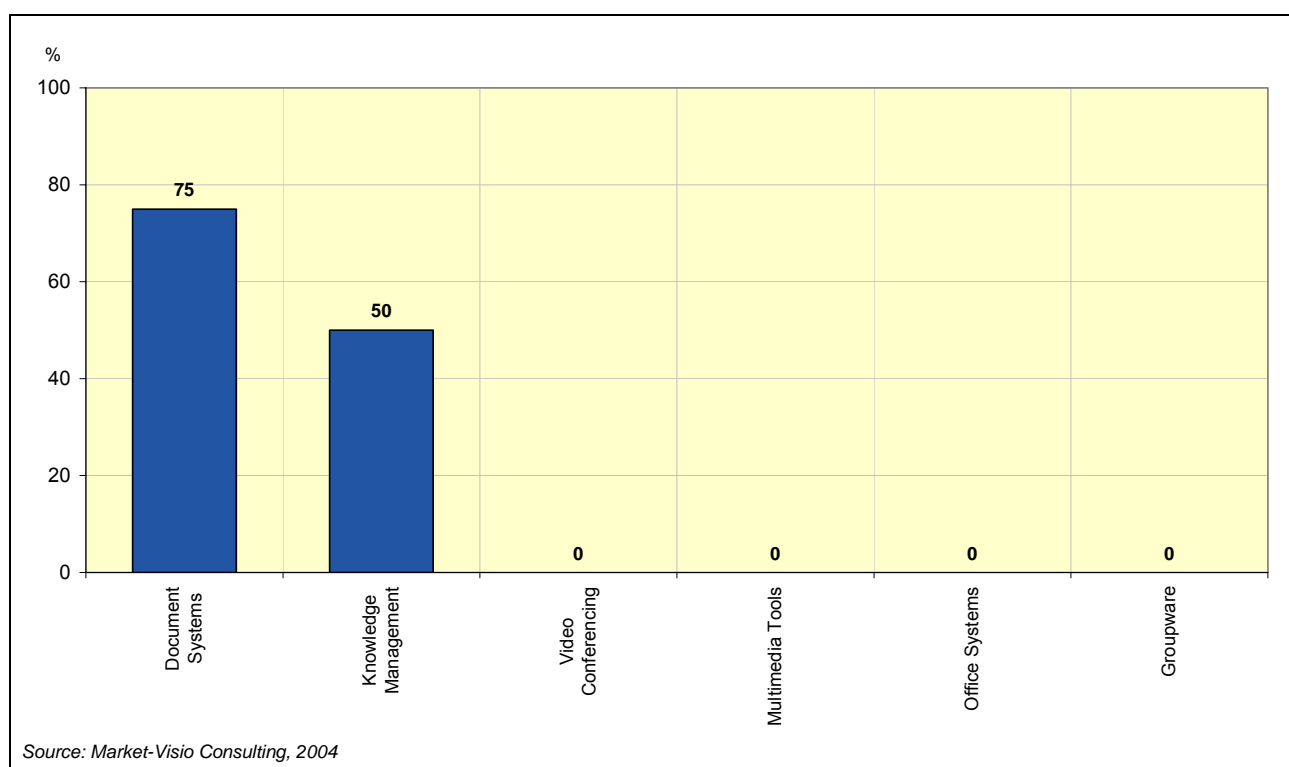


Diagram A.8. Dynamic of key order in Intranet and Electronic Workplace area in 2005

Diagram A.8 presents the specialization of the companies under the category Networking and Communications.

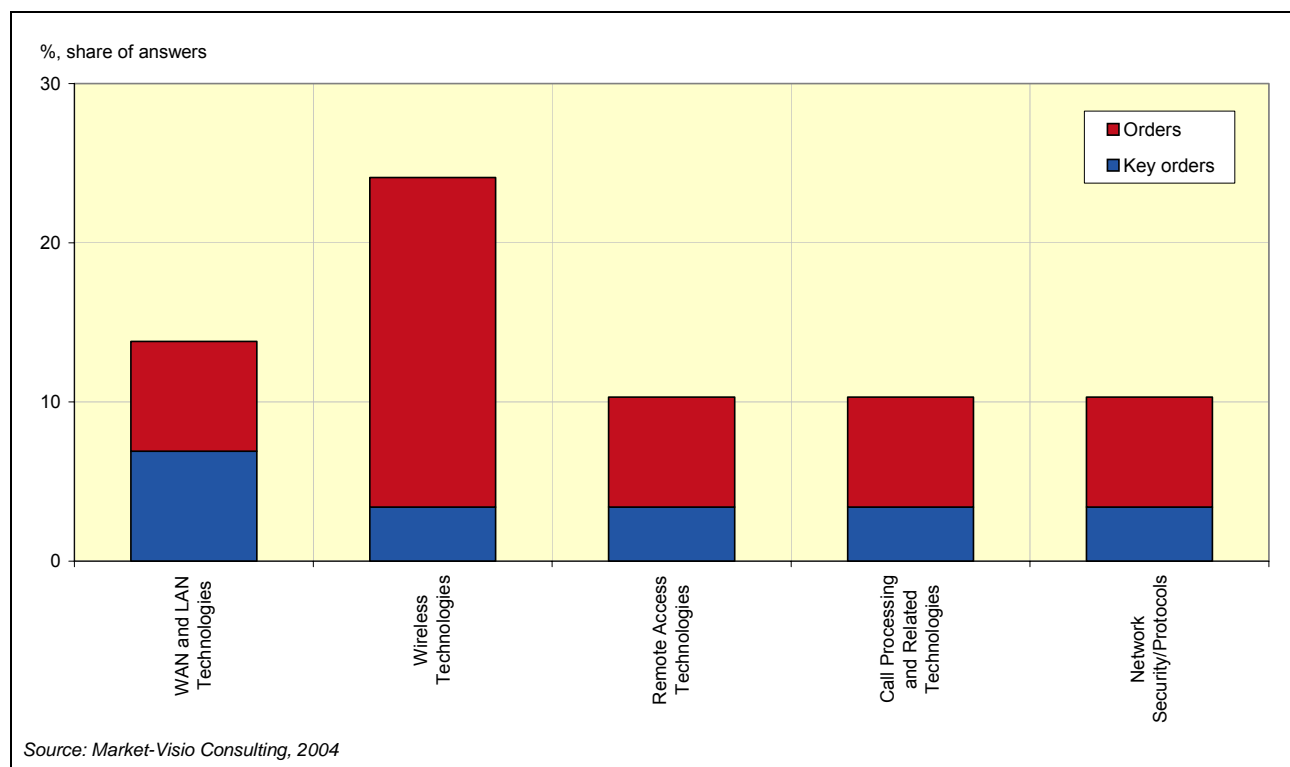


Diagram A.9. Specialization in Networking and Communications

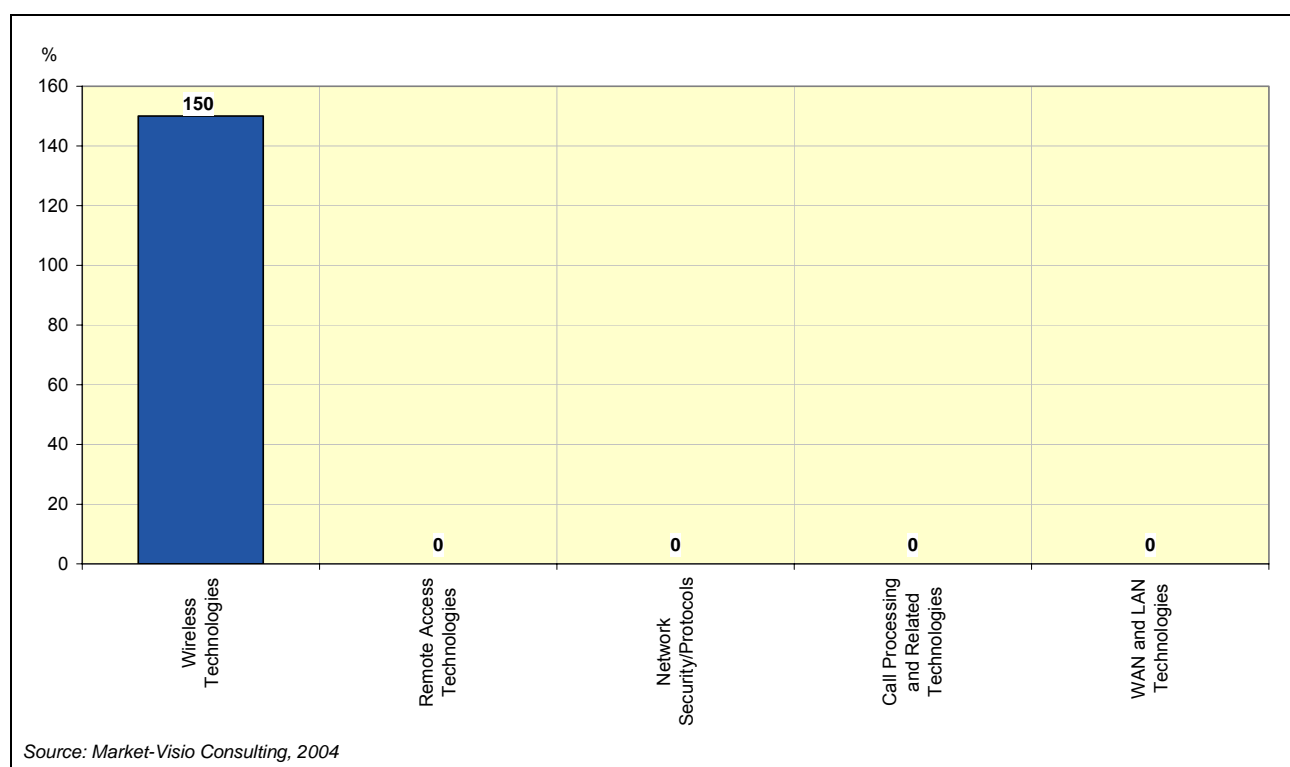


Diagram A.10. Dynamic of key order in Networking and Communications area in 2005

Diagram A.11 presents the specialization of the companies under the category Software Infrastructure.

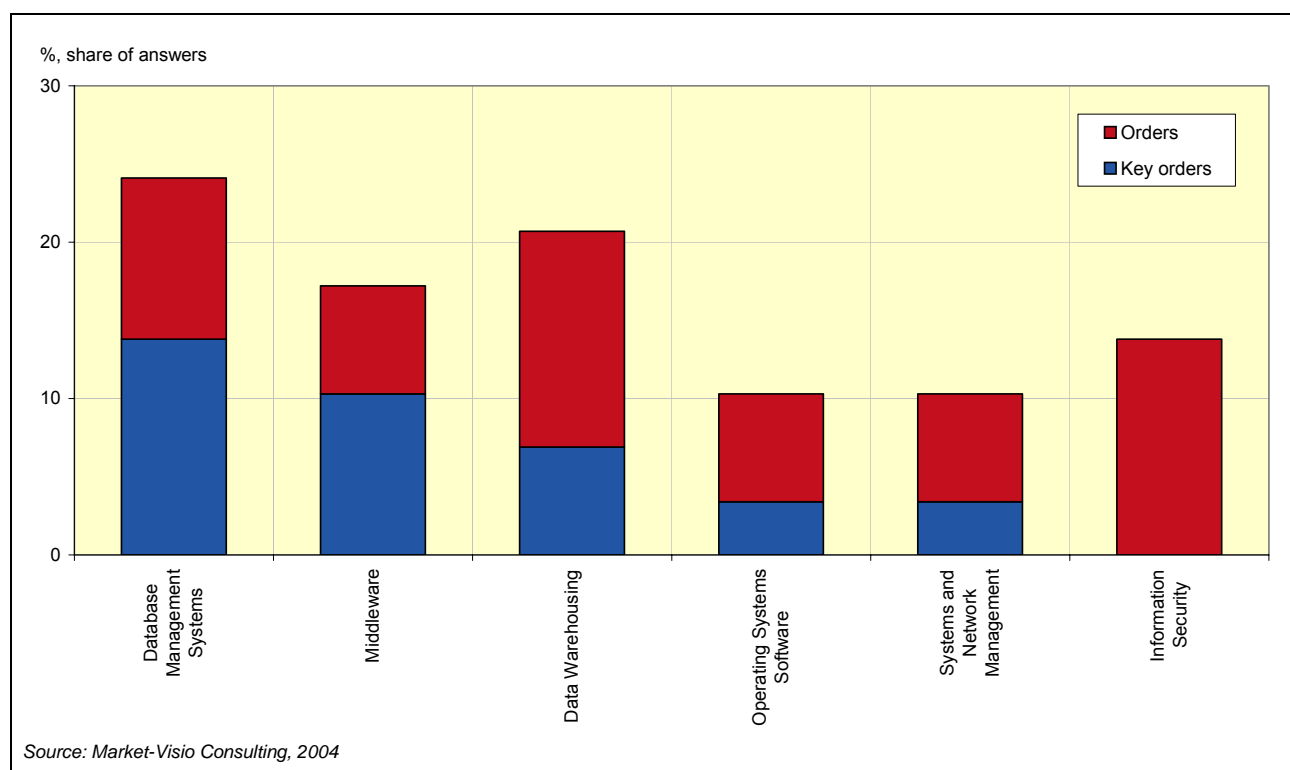


Diagram A.11. Specialization in Software Infrastructure

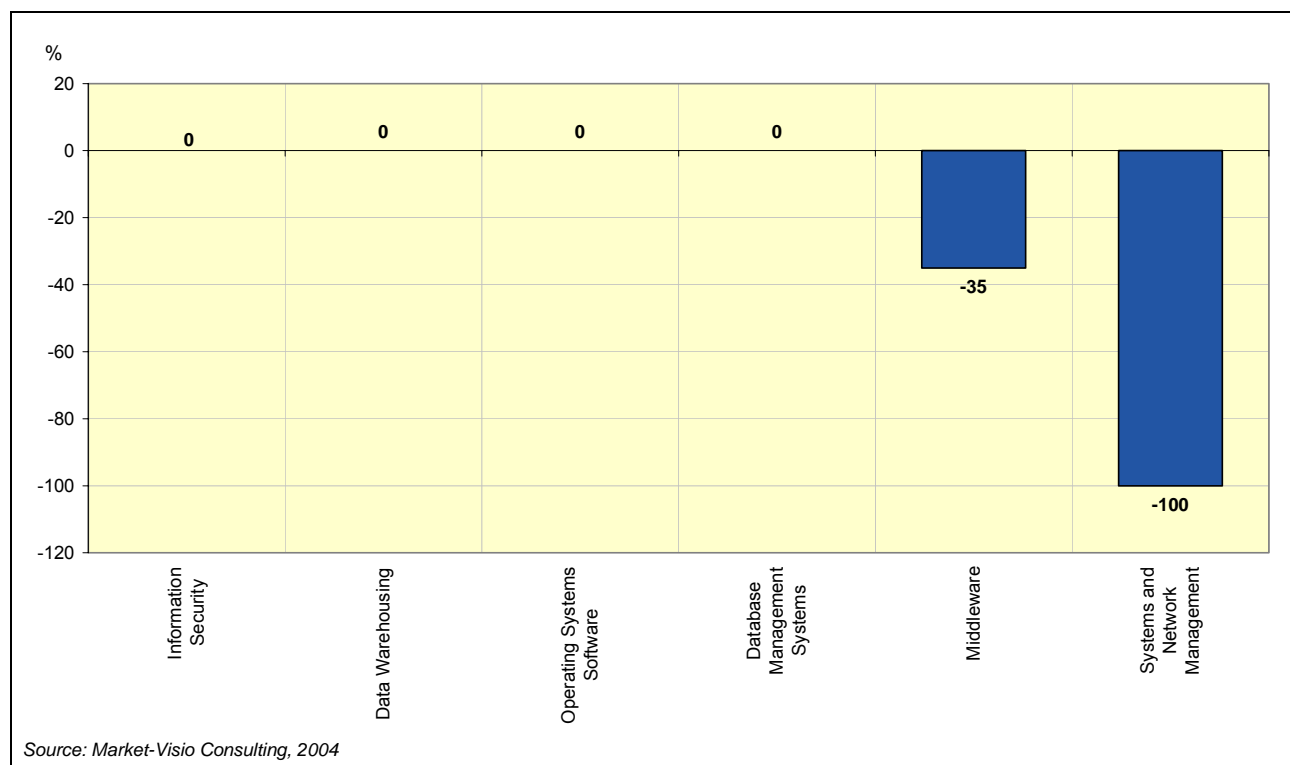


Diagram A.12. Dynamic of key order in Software Infrastructure area in 2005