

## THE INFORMATION TECHNOLOGY SECTOR

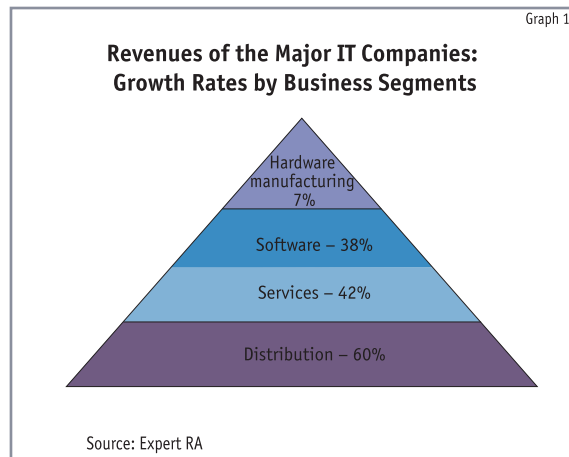
The non-transparent nature of the Russian IT and telecommunications market is a serious barrier to market analysis: even international corporations operating in Russia often refuse to disclose information on the volume of their operations in this market. According to available estimates, the market size was some USD 5.5–6 billion in 2003, having doubled since 2000. Despite these impressive growth rates, the IT market currently accounts for as little as 1.4% of Russian GDP, while in the USA, for example, its share totals 5%. Only 14% of Russian IT products are exported, significantly below the level of exports from Israel (70%) or India (80%).

According to a study published by *Expert RA* Rating Agency and based on survey of market participants, in recent years the annual growth rates of the Russian IT market stood at 23-25%, excluding distribution, hardware, and software sales. Distribution and hardware sales grew by 60% in 2003. According to Vassily Vasin, President of R-Style, the distribution market segment will continue to demonstrate higher than average growth rates in the next five years. "This is explained by low saturation in the market with large scaled turn-key solutions. In addition, the distribution market is a well-structured one."

Market leaders believe that the market will continue to grow in the coming years at the same annual rates of 20-25%, at least as long as oil prices remain high. This growth will be based on increasing technological upgrades in both the private and the public sectors (government procurement accounts for around a quarter of the Russian IT market). The impact of this process has also been seen in government budget trends in recent years: according to RosBusinessConsulting, in the period from 2001 to 2003, executive bodies and government agencies doubled their IT expenses each year, while IT expenses for the period, as quoted by RosBusinessConsulting, totalled almost USD 3 billion

Graph 1 illustrates the growth rates for different IT market segments, based on the study conducted by Expert RA.

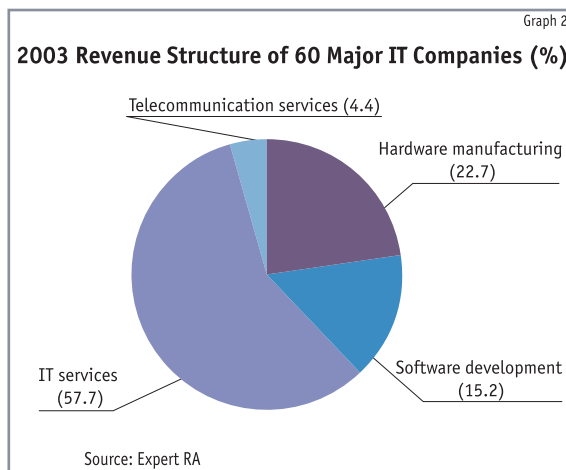
As compared with the previous year, growth in the IT services segment (which includes management consulting, integration, system support, user training, and certification) totalled 42%, while its market share increased 10 points over



the year to almost 58% (see Graph 1). Within the IT services segment, relatively simple maintenance services (mainly, computer maintenance and support of other IT components) demonstrated the highest growth rates, with annual sales increasing by 52% during the year. Market participants believe that such high growth rates are to a great extent explained by the fact that growing numbers of major companies elect to outsource these services rather than maintain in-house IT personnel.

Systems integration services have also demonstrated rather explosive growth – at some 50% per year – and currently account for over 30% of revenue generated by major IT companies. This trend has been driven by huge sales of hardware and software for major systems integration projects. In 2003, such projects included a number of unique undertakings, for example, an intelligent printing centre deployment for the RF Pension Fund and the implementation of a tax reporting consolidation system for the Russian Railways.

The management consulting sector lagged slightly behind the general IT services sector in terms of growth rates (with an annual increase of 45%). Lastly, the training and certification sectors reported the lowest results in terms of both growth rates and sales volumes. Apparently, corporate managers have realized that in addition to purchasing computers, they must also spend money on software and, more importantly, on



systems implementation, but they have yet to realize that they will also need people capable of using these technologies. In this context, training services indicate the actual penetration of sophisticated IT systems into the real business sector. As a rule, the most serious approaches to these services are demonstrated by the subsidiaries of international companies.

The software development sector grew by 38% over the year, and its share in the IT market increased by 3.2 to over 15%. Both off-the-shelf solutions and custom development projects demonstrated high growth rates. Here again, the accelerating economic modernization, particularly in the banking sector, became the key driver of the boom. In this area, Russian software developers enjoy an important competitive advantage because they offer system packages customized to the specific market requirements in Russia combined with significantly lower prices for software development in comparison with other foreign companies.

The computer hardware manufacturing sector has been growing at the lowest rate, at some 7%. According to representatives of Aquarius, some of the blame for these low results lies with government institutions that fail to meet their procurement plans though the volume of financing is rising at a fast pace. If this had not been the case, the growth rate in this segment could have exceeded 20%. A gradual increase in the market share for major Russian manufacturers of computers will become a key factor driving further growth in this sector. Aquarius estimates that in the last few years the share of Russian manufacturers and major hardware assemblers went up

from 15-20% to 45%, while the share of Western brands dropped from 20-25% to 10%, and other companies dropped similarly from 60% down to 40-45%.

While profit margins in the PC assembly sector have been declining, the leaders in the IT sector have shifted their focus towards the production of more advanced hi-tech servers. According to Alexei Kravtsov, General Director of Kraftway Computers, "In the absence of equal access to financing, only the major Russian companies with high intellectual potential will be able to survive and to continue successful development. Therefore, on one hand, we are going to focus on the highly profitable sector of heavy multiprocessor EPR systems where there are no Russian competitors and we can work head on with international manufacturers, while on the other hand, we will also expand our product range by moving to such new and promising niches as data storage systems and mobile equipment."

In the near future, competition in this market is likely to develop along two lines: expanding production capacity and building partner and service networks (where vendor and service centres are as close to clients as possible). Today, the possession of extensive service networks has already given major Russian companies an important competitive advantage over smaller local players and Western manufacturers. In the future, the inability to invest in their own service centres will be a factor driving many medium and smaller sized companies out of the market.

### **National computer corporation – a leader in the Russian IT market**

The National Computer Corporation (NCC) was established in 2001 through the merger of four major companies operating on the domestic IT market, each being a leader in its own business sector. Today, NCC is the largest corporation operating on the Russian IT market: according to the Expert-400 ratings, NCC is the first-ranked company in the Russian IT sector and is 73rd among major Russian companies. In 2003, the company reported a turnover of approximately USD 470 million, with an annual growth rate of 45%. According to NCC data, the corporation's market share increased from 6.9% in 2002 to

8.1% in 2003. NCC operates six offices in Moscow, three in St. Petersburg, eight regional offices with warehouses, a computer manufacturing facility, and over 280 authorized service centres across Russia. As of mid-2004, NCC employs more than 1200 staff. Today the corporation is in the process of active restructuring aimed at improving performance across all of its business lines. It also plans to ensure more efficient utilization of resources through a targeted focus on three core business areas: computer hardware manufacturing and maintenance; distribution; and systems integration and management consulting. NCC is composed of the following companies:

The Aquarius Group is the largest computer hardware manufacturer in Russia. The first computers with the Aquarius logo entered the market as far back as 1990. In 2003, the company sold over 165,000 PCs and 8,000 servers. According to various surveys, Aquarius is rated first in Russia for sales of PCs and servers under its proprietary brand. Its quality management is certified in accordance with the international standard ISO 9001-2001. Since 1996, the company has operated a research laboratory with its investments into R&D totalling 10% of its revenue. Aquarius is the only Russian computer hardware manufacturer admitted into the 20-member Intel Server Channel Council, which brings together the leading server manufacturers worldwide.

The company has two production facilities, one in Shuya (Ivanovo region) and the other in Moscow. Aquarius's Shuya factory is a mass-scale production facility (with an annual capacity of 120,000 with single shift operation). This Greenfield project was commissioned in autumn 1990 and made the company the first non-governmental organization in Russia to launch its own production of personal computers. Prior to assembly, all components go through preliminary inspections. When assembly is completed, computers are sent for functional testing, with 24-hour tests in thermal testing chambers. In June 2001, Aquarius commissioned its Moscow production facility designed with an annual capacity of 36,000 computers (for single shift operation). The factory specializes in small-scale production, primarily servers.

Aquarius Service provides hardware maintenance services through 286 authorized service centres in 107 cities across Russia.

The AND Project is one of the leading Russian business solution development companies which ranks among the top ten companies in its business sector. According to Expert RA, the company ranks first in Information Technologies – Management Consulting in such areas as telecommunications, engineering, and metals processing, and second in the food industry. AND Project specializes in developing industry-specific ERP solutions based on Microsoft Business Solutions-Axapta and FINECHAIN-based collaborative manufacturing systems, as well as implementing iMaint enterprise asset management systems. The company develops management systems based on SiTex, a proprietary software product series.

The company currently employs over 160 professionals; with over 80% of its personnel certified as experts in finance, logistics, manufacturing, EPR systems, and IT project management methodologies. The AND Project has offices in Moscow and St. Petersburg.

Sistematica is a systems integration company that focuses on providing corporate clients with comprehensive IT solutions custom-tailored to their business needs.

Sistematica has extensive experience implementing comprehensive large scale projects (including federal projects) covering development; implementation and upgrades of IT infrastructure; development and implementation of corporate management information systems - in particular, EPR systems, information, analysis, and decision-making support solutions; document processing systems; electronic archives; government procurement automation solutions, etc.

Professional credentials of Sistematica specialists are attested by certificates and licenses from some of the world's leading hardware manufacturers and software developers.

Landata is a leading distributor of quality networking, telecommunications, and computer hardware and peripherals. Today, Landata maintains a business partner network consisting of 800 computer companies from 89 Russian regions and

six CIS countries. In the computer hardware, peripherals, and networking market, Landata sells the whole range of Aquarius products as well as equipment manufactured by Acer, Allied Telesyn, Avaya, Avocent, Corega, Fluke Networks, Fujitsu Siemens Computers, IBM, MK Electric, Nexans, OKI, Eaton's Powerware Corporation, RIT, and ZyXEL.

OCS, established in 1994, is one of the largest broadband distributors in Russia and a leader in telecommunications and networking hardware distribution. The company operates ten offices in major cities across Russia and employs over 500 staff. OCS is focused on project-oriented distribution and works in cooperation with system integrators and other corporate market suppliers. OCS lists over 2,400 Russian companies among its partners and has distribution agreements with the largest international manufacturers such as 3Com, Avaya, Cisco Systems, D-Link, EMC, Fujitsu Siemens Computers, Hewlett-Packard, Nortel Networks, Philips, SUN Microsystems, Samsung Electronics, VERITAS Software, Xerox, and others. In 2003, the company reported sales of USD 236 million. This represents a 60% increase year on year, and almost a 300% growth in sales compared with its 2000 level.

#### **Business strategy of the national computer corporation**

Alexander Kalinin, First Vice President of NCC, believes that the key competitive advantage of NCC is the company's presence in all of the core segments of the IT market, such as distribution, hardware manufacturing, turn-key solutions, management consulting, and systems integration. The corporation's development strategy is aimed at strengthening the leadership positions of its member companies and further raising their market status through business expansions and improvements in inter-company relations. These efforts should ensure the company a leading position as a multi-profile IT corporation.

The top managers of NCC expect that, in the short-term, the main sources of new contracts will include firstly, major and medium-sized manufacturing enterprises, and secondly, pension funds, insurance companies, medical, and other

social institutions. In 2-3 years, banking institutions may provide another source of major projects as the industry faces a wave of IT system upgrade initiatives.

NCC has an important competitive edge in the corporate sphere, namely, a vast service network enabling the company to provide quick post-sale service (including warranty repairs) almost anywhere in Russia. This ability is particularly important for clients with extensive branch networks, such as federal and regional government bodies, major manufacturing, mining and processing corporations, banks, and telecommunication companies.

The company's top management is concerned with potential threats to the Russian IT market from the entry of major foreign corporations with unlimited financial resources. The appearance of such players could force some Russian IT companies to subcontract projects from larger market participants, seek alliances with such companies, or move into narrow market niches where it would be easier for them to retain their competitive edge.

Experts predict an inevitable consolidation of the Russian information technology market where, according to expert estimates, the share of the ten major companies already exceeds 50% and should likely continue to grow. In this context, the emergence of NCC is seen as one of the first noticeable signs of this future trend.

#### **Top NCC managers comment on their corporate strategy and the Russian IT market**

##### **Igor Galkin, NCC Board Member, Chairman of the Board, Aquarius Group:**

Aquarius, one of the NCC member companies, has traditionally specialized in hardware manufacturing and servicing major corporate clients, such as government agencies and large private and government companies. Corporate user-oriented solutions still represent the bulk of our product range. We believe that our focus on the corporate market is justified since this segment currently accounts for almost 80% of the IT market. The remaining 20% is represented by small businesses and home users, and though this market segment demonstrates extraordinary growth

rates of some 60-80% each year, its market share still remains insignificant.

Key competitive advantages of serious Russian hardware manufacturers over their Western peers are significantly lower prices and much better services at comparable quality levels. We offer a three-year warranty on our computers, which is more than most Western manufacturers. Sometime back in 1990s, customers turned from their biases against Russian-made computers, and moreover the derogatory term "red assembly" has long become history. This results from both real improvements in the quality of Russian PCs and from the PR efforts of Russian manufacturers.

**Alexander Kalinin, NCC First Vice-President, Corporate Governance**

*Which segments of the Russian IT market are going to develop at the fastest pace?*

Today, the highest growth rates are observed in such segments as services (system integration and consulting services), retail sales, and offshore software development. This trend will continue in the short-term. I believe that offshore software development will outrun other segments in terms of growth, since this market segment depends only on the qualification of its personnel and the level of technology.

*You've mentioned that the gap between Russian and foreign IT companies is explained by a lack of major IT service contracts in Russia as compared with the size of projects implemented in the West. Do the largest Russian companies need lesser volumes of IT services than their Western peers?*

The largest Russian companies have very big IT budgets, but these budgets mainly cover a series of contracts rather than one project and involve various structures within the company, such as the head office, separate regional entities, etc. As a rule, such projects are structured into different stages over several years.

Secondly, in the West, the cost of equipment accounts for a relatively minor portion of such projects, where IT services are their most expensive part. However, in Russia, people have not yet developed a habit of paying for services.

*Is there an explanation for this?*

Russia is a country of engineers, and every company wants to develop its networks and software in house.

*Do you mean to say that in this country, unlike in the West, many IT services are performed internally rather than outsourced?*

Exactly. Everywhere else in the world, IT projects are basically outsourced, and outsourced for a hefty fee. Here, salaries earned by engineers are generally low, and this in turn determines the level of service fees.

*Can we expect outsourcing to increase as the market develops?*

Since average salaries of engineering personnel are going up and businesses are expanding, the volume of IT outsourcing is sure to increase, and the fees for such services will rise as well. This trend will be a market driver.

*You've mentioned your concern over entry of companies with unlimited financial resources into the Russian IT market. Is your business restricted by the availability of financial resources?*

Yes, it is. Major clients do not like to pay in advance. We need financing to be able to offer our clients easy terms of payment for equipment and services – a 6 month or 12 month delay – until they begin to generate profits from their investments into these technologies. This approach encourages companies to upgrade their infrastructure and implement new IT solutions. We can obtain loans at relatively good terms, but still our borrowing costs are much higher than those incurred by Western companies.

*Sooner or later, large Western companies will come into Russia – actually, it may happen quite soon – and they will then be followed by the IT giants with unlimited financial capacities. What will happen then to Russian IT companies?*

I see several alternatives. For example, Russian companies may create joint ventures with foreign corporations. It is also quite possible that Russian systems integrators will simply subcontract work from Western companies that win the major projects. Some of them will shift to smaller market niches. But only the

largest ones will be able to adapt to the new market situation and capitalize on their competitive edge.

*Are you interested in export opportunities?*

From my point of view, CIS markets may be of interest, especially Ukraine and Kazakhstan. Today, we have problems with customs regulations, since the export of IT products involves a very complicated documentation process. But if these customs barriers are removed, Russian IT companies are more likely to dominate CIS markets than the other way around.

*Is your Shuya factory an assembly facility?*

It is not a primitive assembly shop; it is a full scale production facility. We test the quality of input components, work in strict compliance with process technologies, and test the assembled computers in thermal testing chambers. Production is not limited to the mere processor

of components; it includes technology and quality management into the production as well.

At present, there are only two plants in Russia that manufacture computer hardware – our Shuya facility and Kvant in Zelenograd.

*What is your company's policy with respect to computer hardware distribution?*

We see distribution as a strategic business line, just as hardware manufacturing and system integration are, and we are actively developing this business area.

*Have you considered an IPO as a means of raising long-term financing?*

All companies are thinking about an IPO, but none of the Russian IT firms has made this move yet. We consider this issue on a regular basis and discuss it, but we believe that it would be impractical at the moment. We are waiting for a favourable market situation.