

LogOn Baltic Regional reports
27:2007



**ICT SURVEY IN
SAINT PETERSBURG
METROPOLITAN AREA, RUSSIA**

**Yuri Ardatov and
Tomi Solakivi**



Project part-financed by the European Union
(European Regional Development Fund) within
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EXECUTIVE SUMMARY

This report is a part of the LogOn Baltic project funded by the European Union. The purpose of this research, which results are presented in this report, is to produce an estimation of the level of ICT use in companies and organizations in Saint Petersburg and the metropolitan area (part of a Leningrad region).

Within the framework of the research, 112 companies and organizations from 21 branches of economy have been surveyed. The results of the survey have been processed by Turku School of Economics with a self-developed technique. This technique has been used for the evaluation of the results obtained from similar surveys in the participating countries. The analysis of the results obtained in St. Petersburg – as well as comments to these from the author - is presented in the present report as histograms and tables.

Despite of the unconditional interest (clearly represented with the survey results) it is difficult to consider the results as representative for whole territory of St. Petersburg, where more than 100,000 companies operate. In this connection, additional analyses from other sources regarding ICT development in the region have been added to this report.

The results obtained from the survey can be useful for various organizations and commercial companies when estimating the importance of the level of ICT usage in the economy of St. Petersburg and the tendencies of its development.

КРАТКОЕ ИЗЛОЖЕНИЕ

Этот отчет является частью проекта LogOn Baltic, финансируемого Европейским Союзом. Целью исследований, результаты которых отражены в настоящем отчете, являлось проведение оценки уровня использования информационно – коммуникационных технологий компаниями и организациями Санкт-Петербурга и прилегающих к нему территорий Ленинградской области. В большей степени оценка проводилась по бизнес – компаниям, и меньше по некоммерческим и государственным организациям.

В рамках исследования было проведено анкетирование 112 компаний и организаций из 21 отрасли экономики. Результаты анкетирования были обработаны Turku School of Economics по разработанной специалистами этой организации методике, использованной для оценки результатов аналогичного анкетирования всех стран – участников проекта. Результаты анализа представлены в настоящем отчете в виде гистограмм и таблиц, а также комментариев к ним со стороны автора отчета.

Несмотря на безусловный интерес, который представляют результаты анкетирования, их сложно считать представительными, так как на территории Санкт-Петербурга действует более 100 тыс. компаний. В связи с этим был также проведен анализ других источников информации о состоянии развития ИТ в регионе и в отчете приведено обобщение результатов этих исследований тоже.

Результаты данных исследований могут быть полезны для различных организаций и коммерческих компаний при оценках уровня использования ИТ в экономике Санкт-Петербурга и тенденций его развития.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	5
КРАТКОЕ ИЗЛОЖЕНИЕ	6
TABLE OF CONTENTS.....	7
LIST OF FIGURES	8
LIST OF TABLES.....	9
1 INTRODUCTION.....	11
1.1 Project introduction – LogOn Baltic.....	11
1.2 Regional partner introduction	12
1.3 ICT survey introduction	13
2 SURVEY DESIGN.....	15
2.1 Target group and sample	15
2.2 Main themes of the survey	20
3 FINDINGS FROM THE SURVEYS	21
3.1 Use of ICT systems.....	21
3.2 Use of Internet.....	29
3.3 E-commerce/ E-business	33
3.4 General assessment of ICT usage.....	39
4 SUMMARY AND CONCLUSIONS.....	41
5 RECOMMENDATIONS.....	43
6 REFERENCES.....	45

LIST OF FIGURES

Figure 1	Number of respondents according to company size.....	15
Figure 2	Number of respondents according to respondents' position in the company.....	16
Figure 3	Number of respondents according to main industry	17
Figure 4	How many percent of employees have access to E-mail and Internet.....	21
Figure 5	On which areas of business the companies are using ICT..	22
Figure 6	How the ICT administration is handled in the companies....	26
Figure 7	ICT expenses as a percentage of company turnover	26
Figure 8	The type of connection companies have to the Internet.....	31
Figure 9	Different type of features that the company website includes.....	32
Figure 10	The different purposes companies use the Internet to interact with public authorities and government organisations.....	33
Figure 11	Percentage of the 5 largest electronic payment systems in Russia.....	35
Figure 12	Turnover of the 5 largest electronic payment systems in Russia (in billion USD)	36
Figure 13	The type of communication methods the organisations use when communicating with customers and suppliers.....	37
Figure 14	Companies views on the importance of E-commerce.	39
Figure 15	The effect of different barriers on the use of Internet, e- commerce and ICT in general.....	40

LIST OF TABLES

Table 1	The number of firms and organizations in branches of St. Petersburg area	17
Table 2	Number of ICT providers in the St.Petersburg area.....	19
Table 3	The list of leading ICT companies of St. Petersburg.....	20
Table 4	List of information systems most widely used by transport and logistics companies in Russia	25
Table 5	How the ICT costs are expected to develop in the next 3 years.....	27
Table 6	The use of different data security measures	27
Table 7	How the companies monitor and evaluate their ICT costs and performance	28
Table 8	Firms with e-mail and web pages.....	29
Table 9	The type of business processes between the companies and their customers suppliers are handled electronically	38
Table 10	The share of companies business that is handled electronically	38
Table 11	The companies opinion on what the development of the share e-commerce will be in their business operations	38

1 INTRODUCTION

1.1 Project introduction – LogOn Baltic

The LogOn Baltic project was approved within the Baltic Sea Region (BSR) INTERREG III B Neighbourhood Programme, which is sponsored by the European Regional Development Fund (ERDF), as part of the Structural Funds, and co-financed by national project partners.

The purpose of LogOn Baltic is to present solutions to improve the interplay between logistics and Information and Communication Technologies (ICT) competence and spatial planning and strengthening Small and Medium-sized Enterprises (SMEs) competitiveness in the BSR. This is primarily done by the production and dissemination of information for regional development agencies on how to support enterprises in the participating regions in the field of ICT and logistics, thus improving regional development.

The following regions are participating in the project:

- South-West Finland
- Östergötland (Sweden)
- Denmark
- Southern Metropolitan Region of Hamburg (Germany)
- West-Mecklenburg (Germany)
- North-East Poland
- Lithuania
- Latvia
- Estonia
- St. Petersburg (Russia)

LogOn Baltic provides an overview of logistics efficiency and logistics information systems and their exploitation, in order to improve the interaction between SMEs and other public/private actors.

On the one hand, the empirical activities of LogOn Baltic compare the existing logistics services and infrastructure with the logistics needs in the participating regions, making it possible to develop perspectives and action plans for strengthening the logistics competence in the

regions. On the other hand it describes the existing ICT infrastructure and services, revealing up to what extent they meet with the companies' needs for further development. In this way, LogOn Baltic focuses on:

- a. identifying development agencies and evaluating their performance in each region
- b. evaluating the level of logistics and ICT efficiency
- c. suggesting concrete actions for regional and local public sector bodies

Data are gathered in each participating region using four tools: Development Measure Impact Analysis (DEMIA), Logistics survey, ICT survey and Expert Interviews; each of these is presented in a separate report. These results together with secondary data is presented in a regional report, that will describe the state of affairs in the region, with recommendations on what and how the region needs to develop. The regional reports are used as a basis for making an interregional comparison which is reported in an inter-regional report. All reports are available on the project homepage, www.logonbaltic.info.

1.2 Regional partner introduction

The project participants from Russia are:

- Saint - Petersburg Government Committee of Transport-Transit Policy
- North Western Russia Logistics Development and Information Center "ILOT"
- Non profit training and research center of adult education "Protey"

Saint - Petersburg Government Committee of Transport-Transit Policy is an executive body of the Government of St. Petersburg. The committee is engaged in exercising state policy with respect to St. Petersburg transport network development, which is aimed at developing St. Petersburg as an international transport and transit center.

Northwest Russian Logistics Development and Information Center "ILOT" is a non-profit organisation supporting the regional transport network development. "ILOT" provides services to those involved in solving general problems of regional transport infrastructure development, as well as the ways of cooperation between domestic and foreign market participants.

Non profit training and research center of adult education "Protey" has wide experience in logistics research and personnel training.

1.3 ICT survey introduction

This survey – part of the LogOn Baltic project - is one of the tools for primary data collecting. It aims at reflecting the use of ICT as interface between the private and public sector. It is also intended to describe the existing ICT infrastructure and services in the participating regions, revealing up to what extent they meet with the companies' needs for further development.

The questionnaire consists of five modules. Each region has the opportunity to add one or two questions focusing on specific regional issues. These additional questions were added in an extra module (Module F). The same questionnaire has been used in all regions.

The survey is mainly conducted as a web-based survey, but mail surveys, phone surveys and interviews have also been used as a complement in some regions.

This is by far the largest survey conducted in the Baltic Sea Region in the field of ICT. In this report, data and analysis will be presented for one region only.

The data is also used to make a cross-regional analysis, focusing on differences and similarities between the regions. The cross-regional analysis is presented in a separate report available at the project homepage, www.logonbaltic.info.

2 SURVEY DESIGN

2.1 Target group and sample

The developing small companies, which are searching new market opportunities and market niches for best practices, turned to be the most active respondents. Figure 1 illustrates this fact.

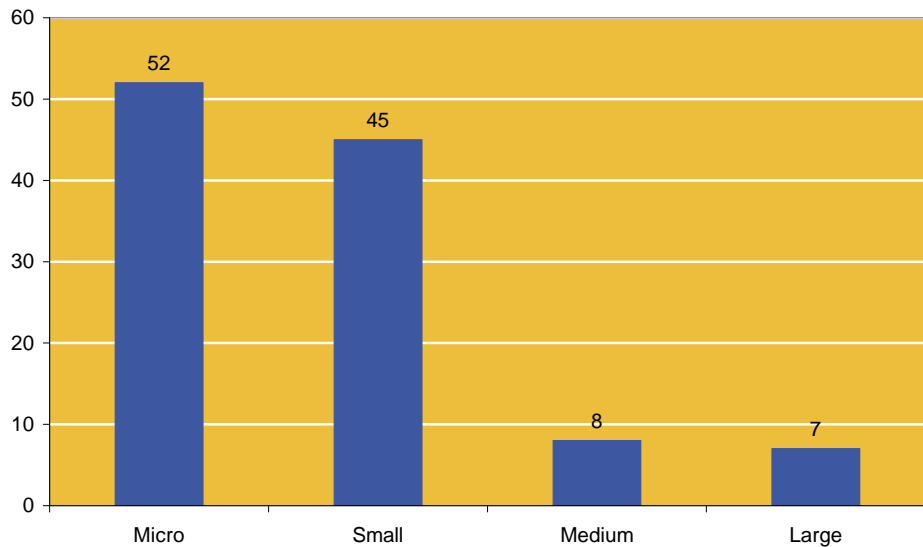


Figure 1 Number of respondents according to company size

The majority of the persons who answered the questionnaires worked as Senior Management representatives in the company. Figure 2 illustrates the fact.

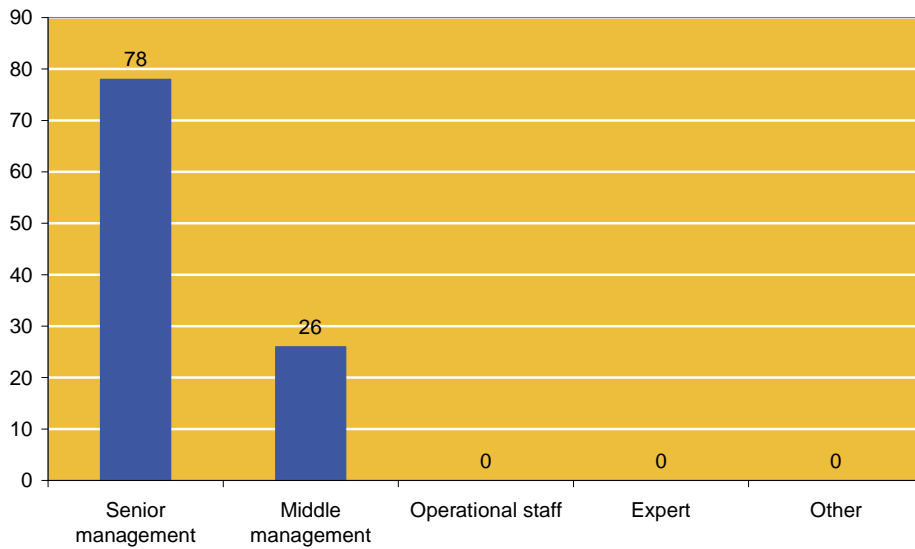


Figure 2 Number of respondents according to respondents' position in the company

Although there was a total of 20 industrial sectors to choose from (when the companies were asked to choose the industry that best described their activities), only three were considered for the purpose of this project; all the others were classified as 'Others'. As shown in Figure 3, the manufacturing companies dominated the economic landscape.

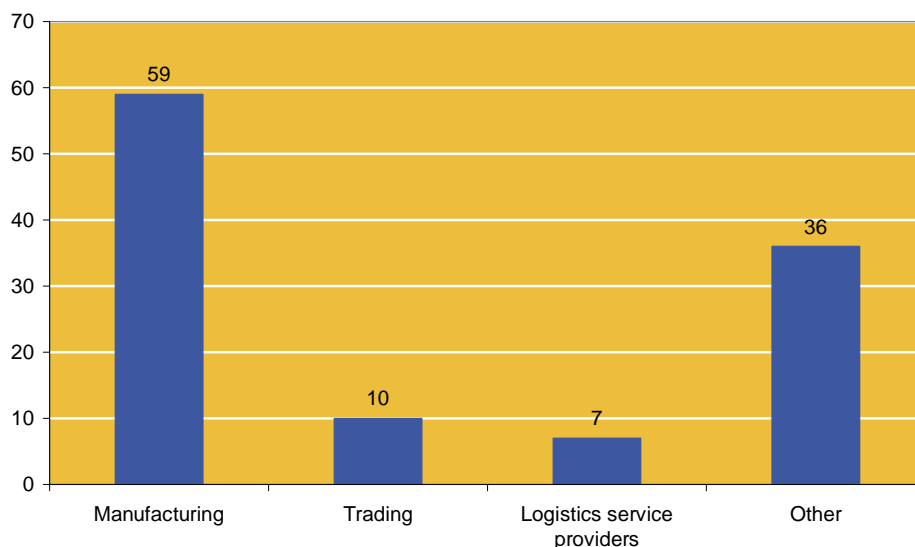


Figure 3 Number of respondents according to main industry

The survey also estimated the total number of companies operating in St. Petersburg market in respect of their activity being attributed to a certain business line.

According to different estimates, approximately 100-130 thousand companies operate in the territory of St. Petersburg and the Leningrad region.

The findings shown in Table 1, which are based on a number of information resources, allow estimating the number of companies and organizations of the St. Petersburg and the Leningrad region involved in a particular economy sector as of the beginning of 2007.

Table 1 The number of firms and organizations in branches of St. Petersburg area

ID	Branch	Number	%
1	Construction, the building goods	10 600	10.4%
2	Medicine, cosmetology, health	7 070	6.9%
3	Culture, leisure, feed	6 730	6.6%
4	Clothes, footwear, accessories	5 560	5.4%
5	Food products, drinks, tobacco products	5 370	5.3%
6	Automobiles	5 240	5.1%

ID	Branch	Number	%
7	House and office goods	5 060	4.9%
8	Interior, furniture	3 940	3.9%
9	Education, training	3 890	3.8%
10	Telecommunications	3 380	3.3%
11	Banks, finance, insurance	3 270	3.2%
12	The state structures	3 060	3.0%
13	Transport	3 010	2.9%
14	Advertising, polygraphy	2 500	2.4%
15	Metals and metal working	2 360	2.3%
16	Household services	2 320	2.3%
17	Social sphere	2 280	2.2%
18	Tourism, rest	2 130	2.1%
19	The branch equipment, materials	1 960	1.9%
20	Legal services	1 950	1.9%
21	Sports, productive leisure	1 690	1.7%
22	The real estate services	1 650	1.6%
23	Electrification, electronics, telemechanics	1 510	1.5%
24	Housing and communal services	1 510	1.5%
25	Information - publishing services	1 400	1.4%
26	Computers, IT, office equipment	1 330	1.3%
27	Safety, security service	1 250	1.2%
28	Trading, warehouse, customs equipment and services	1 230	1.2%
29	Animals goods and services	1 090	1.1%
30	Public organizations	980	1.0%
31	Science, researches	890	0.9%
32	Ritual services, religion	840	0.8%
33	Hotels	800	0.8%
34	The personnel, consulting	750	0.7%
35	Garden, wood, an agriculture	740	0.7%
36	Examination, licensing, the control	730	0.7%
37	Fuel, petrochemistry	660	0.6%
38	Ecology, sanitary	490	0.5%
39	Celebrations services	410	0.4%
40	The children's goods	390	0.4%
41	Salvage and rescue services	220	0.2%
	TOTAL:	102 240	100.0%

The statistics demonstrate the economy sectors with the largest number of companies. Following are the top 7 economic sectors:

- Construction, the building goods
- Medicine, cosmetology, health
- Culture, leisure, feed
- Clothes, footwear, accessories
- Food products, drinks, tobacco products
- Automobiles
- House and office goods

The research also estimated an approximate number of ICT companies operating on St. Petersburg market. Table 2 illustrates the results of the research.

Table 2 Number of ICT providers in the St.Petersburg area

ICT branch	Num	%
Internet: technologies, development	26	2.0%
Information electronic systems	37	2.0%
Computer games	4	0.3%
Computers: hardware	251	19.0%
Computers portable	47	3.6%
Computers: accessories	20	1.5%
Computers: diagnostics, service	156	11.8%
Computers: accessories, peripheral equipment	163	12.3%
Computers: software	301	22.8%
Computers: consumable supplies	22	1.7%
Computers: networks, network products and systems	68	5.1%
Computers: system integration	50	3.8%
Office equipment	46	3.5%
Office equipment: service	132	10.0%
Total:	1 323	

The tables show that the number of ICT companies account for 1.3% of the total number of companies in St. Petersburg.

Table 3 lists the leading ICT companies of St. Petersburg.

Table 3 The list of leading ICT companies of St. Petersburg

Company name	Sphere of activity	Turnover, mil EUR	Staff	WEB
Nienschanz	Integration	123	411	www.nnz.ru
BCC	Integration	105	720	www.bcc.ru
RAMEC-BC	Manufacture	86	295	www.ramec.ru
OLLY Group	Integration	44	114	www.olly.ru
Bercut	Software	26	360	www.bercut.com
Audit-new technologies	IT - consulting	22	137	www.audit-nt.ru
StarSoft Development Labs	Software	14	550	www.starsoftlabs.ru
Polikom Pro	Integration	12	110	www.polikom.ru
АскоН	Software	11	443	www.ascon.ru
Reksoft	Software	9	300	www.reksoft.ru

2.2 Main themes of the survey

The ICT Survey consists of five mandatory modules (A – E), and an optional module for region-specific questions. The main themes of the survey are:

- General contact- and background information of the companies
- Use of ICT in the companies within the regions
- Use of the Internet in the companies within the regions
- E-commerce / E-business
- General assessment of the use of ICT in the regions
- Region-specific issues [optional module]

The ICT Survey is intended for the whole population of regional companies.

3 FINDINGS FROM THE SURVEYS

3.1 Use of ICT systems

The actual level of companies' use of ICT systems gives a hint on the development of ICT in the region. One of the indicators for ICT development used for this project is the estimation of the number of companies with access to the Internet (Figure 4).

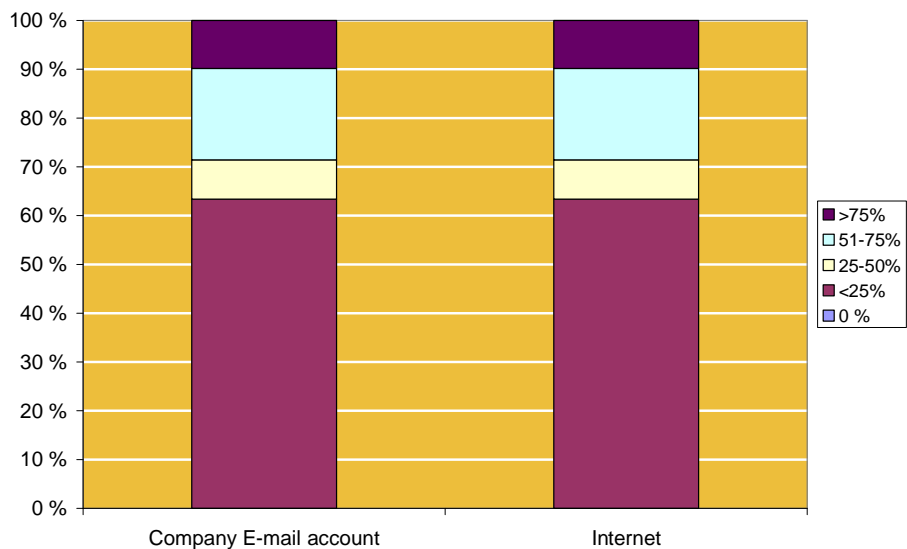


Figure 4 How many percent of employees have access to E-mail and Internet

The survey shows that all of the companies have access to the Internet to one degree.

Besides, the companies which are connected to the Internet have e-mail. The larger the number of the personnel involved in production operations and manual work, the smaller the number of those with connection to the Internet. The larger the number of intellectual

workers in the company, the larger the number of staff members having access to the Internet.

Another indicator that may help measure the use of ICT systems in the companies is the level of ICT usage for their different activities. Figure 5 illustrates the current use of ICT systems in selected business areas. This figure also reflects the business areas where the companies are planning to invest. Sectors where supply does not meet demand are also shown in this figure.

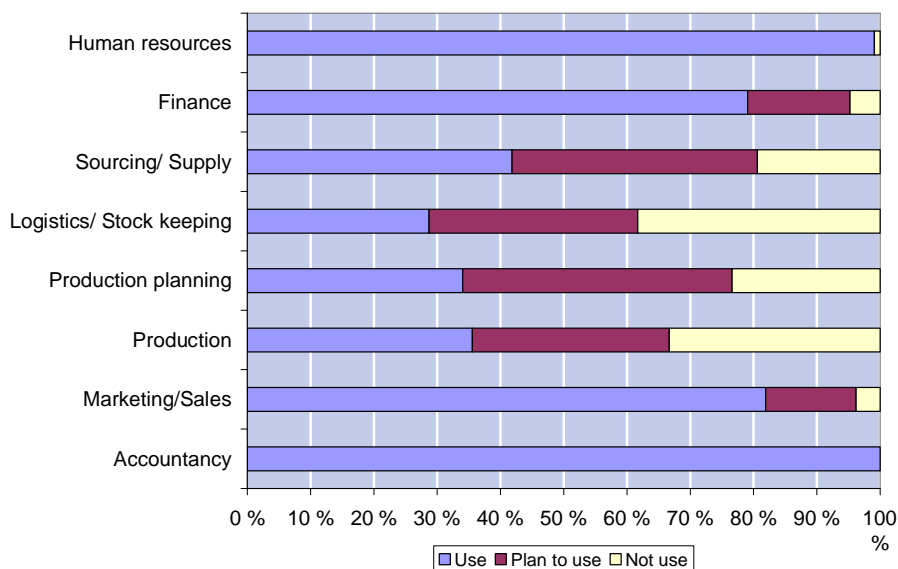


Figure 5 On which areas of business the companies are using ICT

At present, practically all companies performing business activities in St. Petersburg use ICT systems. The first reason is that the system of taxation in Russia is rather complicated. The preparation of tax reports seems to be impossible without special ICT systems regarding peculiarities of any company's financial activity. Sometimes companies utilize external experts to perform financial accounting and to prepare reports for the taxation bodies. This is often made in the interest of lowering costs of small businesses.

To some extent this complicated reporting procedure has a positive effect, as it forces companies to buy ICT systems and hire employees who can use them. The decision to outsource is also made, but not very often.

Accounting information systems under the trade mark "1C" are most widely used in this class of systems. These accounting systems are

developed in Russia and are used by more than 700,000 Russian enterprises (<http://www.1c.ru/eng/>).

Use of special-purpose information systems for the companies' internal operation (ERP - Enterprise Resource Planning), as well as information systems to be used in work with clients (CRM - Customer Relationship Management) is a characteristic feature of only large-scale and medium enterprises. Small businesses make use of some minor functions of CRM-systems on their WEB-sites.

Presently large Cash & Carry retail chains with powerful information systems are operating in St. Petersburg. These are some chains, among others:

- "Metro" - www.metro-cc.ru
- "Lenta" - www.lenta.com
- "O'K" - www.okmarket.ru
- "Auchan" - www.auchan.ru
- "Perekrestok" - www.perekrestok.ru
- "Pyaterochka" - www.e5.ru
- "Eldorado" - www.eldoradoshop.ru,

These retail chains have highly developed logistics facilities and use foreign information systems such as ERP, CRM and others systems.

Medium and small enterprises, as a rule, use the information systems developed specially for their business processes by external Russian developers. This is possible, since the cost for developing small information systems in Russia is still low at the present.

Yearly exhibitions on "Information Systems", which are organized by the "RESTEC" group (www.restec.ru) in St. Petersburg in spring, present the most developed information systems.

As a rule, these exhibitions introduce information systems in the following sectors:

- Business management, ERP-systems
- Production control technologies
- Branch-wise solutions for enterprises
- Financial planning, accounting
- Documentation management
- Database, CRM-solutions
- Supply Chain Management
- WEB-contents system control
- Personnel management technologies
- IT-consulting
- Information systems auditing

This list illustrates priority-oriented sectors where companies show interest in the development of information systems.

Legal information service systems have gained popularity in the organizations of St. Petersburg and Russia. They present information on current legislation in Russia. The most developed systems in this class has been “Consultant-Plus”, with more than 200,000 users in Russia (www.consultant.ru), “Garant” – with about 100,000 users (www.garant.ru), as well as “KODEKS” – with more than 30,000 users (www.kodeks.ru).

Several research companies in Russia conduct special-purpose analytical researches of information systems markets. They contain hundreds of pages and are obtainable from these companies. One of the helpful resources which offer information of this kind is www.marketing.rbc.ru. This research company, for example, places reports on the following themes – among others - which may appear helpful for the readers of the present ICT survey:

- Analytical report of Warehouse Management Systems (WMS) used in Russia
- Analytical report of corporate information systems used in construction industry of Russia
- Analytical report of EDI systems of Russia market
- Analytical report of budgeting information systems of Russia
- Analytical report of ERP systems of Russia food industry
- Analytical report of personal resource management systems in Russia

State authorities are major customers of information systems. In St. Petersburg, the information regarding all orders from authorities (for public tenders) is available on the website www.gz-spb.ru. Foreign companies may as well participate in a tender.

Within the framework of this research it is impossible to carry out a detailed analysis of all of the information systems used in the different economic sectors in Russia. Considering that the basic object of LogOn Baltic is the analysis of logistics development, we present the list of information systems most widely used by transport and logistics companies:

Table 4 List of information systems most widely used by transport and logistics companies in Russia

CoreIMS	http://www.coreims.com
FOLIO Logistics-Warehouse	http://folio.ru
1C Logistics, Warehouse management	http://v8.1c.ru/solutions/1c-logistica.htm http://www.axelot.ru/prod/ http://www.o-fin.ru/index.php?id=306 http://www.o-fin.ru/index.php?id=280 http://www.nova-it.ru/index.php?Content%20=42&Data%20=010111
1C – ASTOR: WMS	http://www.1c-astor.ru/ru/cat_prod/WMS/
1C:Aspect 7.7	http://www.1c.ru/rus/products/1c/aspect/aspect.htm
Manhattan WMS	http://www.korusconsulting.ru/services/wms/
System# 1 WMS	http://www.adalius.ru/
Solvo WMS	http://www.solvo.ru
Radio Beacon WMS Logistics Vision Suite	http://www.ant-tech.ru
Navison	http://www.elforsoft.ru/it-systems/navision/wms http://www.impactsoft.ru/
BUHTA: Warehouse	http://www.buhta.ru
Avarda	http://www.ansoft.ru
EXceed™ WMS	http://www.exceed-wms.ru/ru/
COS.WMS МФТИ	http://www.cos.ru/
AZ.WMS R-suite.wms, M-suite.wms	http://softwms.ru
AWACS WMS	http://www.avalonvision.ru
WarehouseExpert	http://www.servplus.ru/storeauto/
SV:Warehause	http://www.bc-group.ru/soft/software/svstorage.shtml
Advantics.WM	http://www.impactsoft.ru
LEAD WMS 3PL	http://logistix.msk.ru
PROXIMA-WAREHOUSE	http://www.itscan.ru/proxima.htm
R-Keeper StoreHouse	http://www.pilot.ru
SEVKO (1C)	http://www.sevco.ru/logistika.asp

According to the results of the survey, the majority of companies in St. Petersburg choose to set up an independent IT-department, notwithstanding that there may be only 1 or 2 members of staff (Figure 6). This illustrates the fact that outsourcing in St. Petersburg is poorly developed and is expensive for companies.

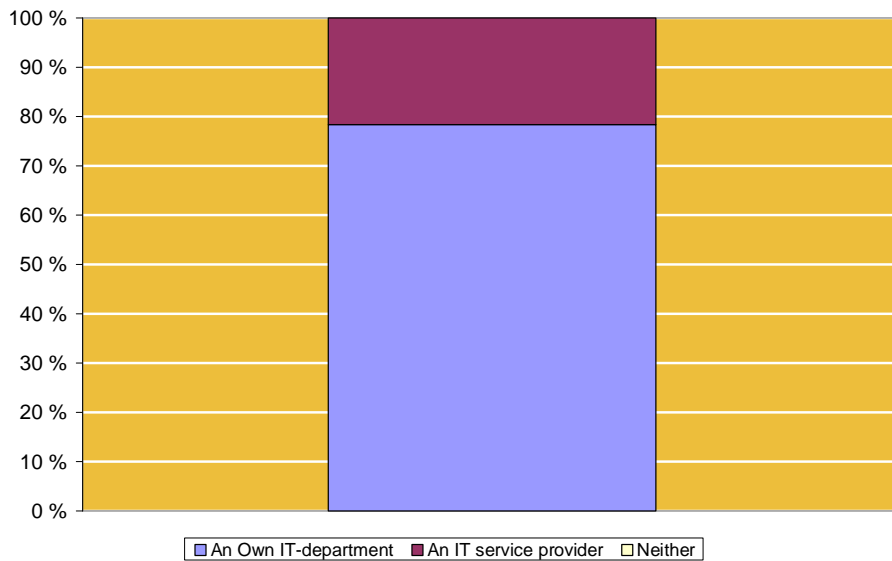


Figure 6 How the ICT administration is handled in the companies

Results obtained in Figure 7 reveal that the majority of the respondents estimate their ICT expenses of their companies within 2% of the company turnover.

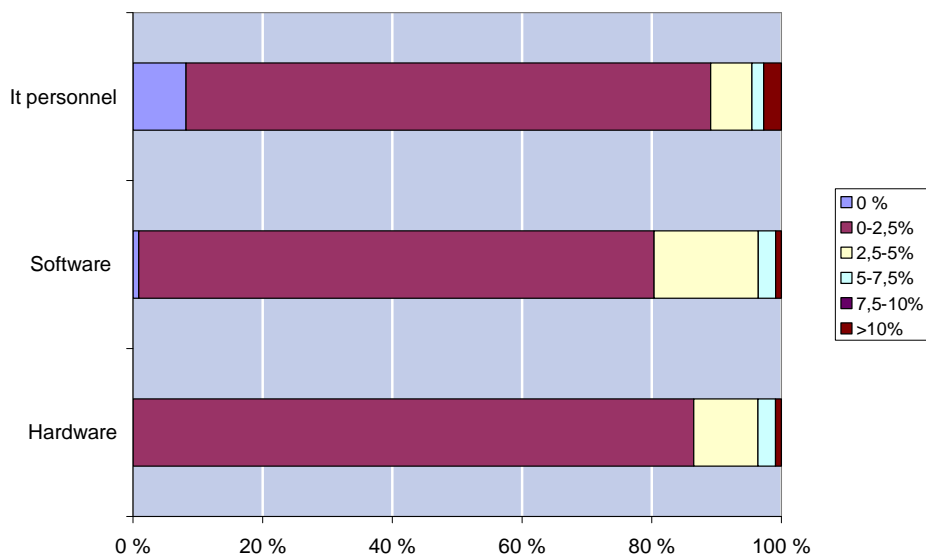


Figure 7 ICT expenses as a percentage of company turnover

At the same time, almost all of the surveyed companies are ready to invest in the ICT sector, which is shown in Table 5.

Table 5 How the ICT costs are expected to develop in the next 3 years

	Decrease	Remain constant	Increase
Hardware	0	12	99
Software	0	9	102
IT personnel	0	29	81

Findings in Table 6 reveal that the majority of the responding companies are concerned about antivirus protection of their systems. These results adequately reflect the users' public attitude to computer security. Both domestic and foreign antivirus programmes, which are affordable and used widely, are available on the market.

Table 6 The use of different data security measures

	Available	Regularly used/ updated
Password access control	109	101
Virus protection applications	108	109
Computer firewall applications	109	90
Employee education on data security	104	83
Own documented data security program	26	23

Respondents were also asked how they monitor and estimate their ICT expenses.

The results from Table 7 show that many of the interrogated companies still do not carry out a serious analysis of the ICT costs. Such position is characteristic for SMEs, which represent a big part of the respondents. It shows that ICT costs are not that determining for the business of most of the small- and medium-sized companies.

Table 7 How the companies monitor and evaluate their ICT costs and performance

	Disagree	Neither disagree nor agree	Agree
We regularly monitor and evaluate our IT costs and performance internally	1	2	103
We regularly monitor and evaluate our IT costs and performance with selected suppliers and/or customers	26	2	1
We regularly benchmark IT performance metrics against our competitors	25	1	2

Regarding monitoring and evaluation of ICT expenses by companies and organizations in St. Petersburg, following conclusions can be drawn:

Firstly, a big number of companies in St. Petersburg use ICT systems. One of the reasons is the taxation bodies' strict regulations with respect to accounting. Outsourcing in accounting is present on the market, but most of the companies choose to employ their own accountants or set up accounting departments. Another issue to be mentioned is the high level of skilled workforce in this sector in St. Petersburg and the availability of this workforce on the market, which turns their services affordable for the companies.

Secondly, information systems are not widely used in the companies' principal activities as they are rather expensive. As a rule, companies need special-purpose information systems which are adapted to their activity or designed with regard to their objectives. General-purpose systems are expensive for companies at the present time. Their localization and development demand big expenses which the companies are not prepared to bear. Highly profitable enterprises using ERP, CRM and other information systems are present on the market, but their share is insignificant.

Thirdly, due to the city's economic growth the major part of companies is planning to increase their share of expenses on information systems to perform business activity in the future. Thus, the time of such systems' supply market dynamic development is yet to come. Market demand for low-tech products is still very high, but it is clear that this will end soon, competition will grow, and there will be great demand for high technology production.

3.2 Use of Internet

Practically all of the companies in the region use the Internet for their work; for managing e-mail, browsing the web, as well as posting information about their goods and services. The wider use of broadband access increases the efficient use of the information resources.

At the same time, the level of Internet usage varies greatly. The majority of the companies (especially small businesses) involved in retail trade do not even have corporate e-mail. When needed, they use their personnel's private e-mails. Other companies have their IT departments. For example, a research was made on whether 5,000 respondent companies involved in different economy sectors of St. Petersburg have e-mail addresses and Web-pages. Table 8, below, illustrates the results.

Table 8 Firms with e-mail and web pages

#	Sector	Total Co.	e-mail	WEB shown	WEB is acts	e-mail %	WEB %
1	Motor industry						
	Centers of service	480	77	38	28	16.0%	5.8%
	Cargo automobiles sale	66	38	25	21	57.6%	31.8%
2	Retail trade						
	Shops of food networks	436	1	1	1	0.2%	0.2%
	Retail shops of food	2041	3	1	1	0.1%	0.0%
3	Wholesales – meat	176	59	19	19	33.5%	10.8%
4	Construction						
	Construction of buildings	368	122	46	37	33.2%	10.1%
	Construction of coteles	169	87	53	47	51.5%	27.8%
5	Tourism and rest						
	Tourism and rest abroad	395	244	135	114	61.8%	28.9%
6	Transport companies						
	Autotransportation of cargo	618	305	88	69	49.4%	11.2%
	Rail transportation of cargo	170	83	31	25	48.8%	14.7%
	Airtransportation of cargo	60	43	13	13	71.7%	21.7%
	Sea cargo transportation	149	86	33	31	57.7%	20.8%
		5128	1148	483	406	22.4%	7.9%

The results show that the level of Internet usage differs in companies involved in different economy sectors.

According to current marketing concepts, every company must have its own web page on the Internet. But the results show that the level of companies' Internet usage is low.

The reasons for this low level of Internet usage are various. First of all they can be explained by the situation on the market, by the low level of competition, as well as by general codes of business conduct, which, in its turn, is also determined by the level of competition. There are not any engineering problems with respect to telecommunications development and access to the Internet in St. Petersburg. Telecommunications development level in the region is sufficient to conduct effective business activities with all companies of the city.

Findings within the present research show that a little more than 10% of the respondents use modems (Figure 8) to connect to the Internet. The others use broadband connection. Indeed, the level of telecommunications development in St. Petersburg is high.

There is a well-developed fiber-optic cabling network in the city, which allows opening nets for integrated distributed information systems and Broadband Internet access.

Access to CDMA2000 (IMT-2000) 1xEV-DO (operator "SkyLink") has become available at the customer level in St. Petersburg with cost-effective transmission and speed up to 2.4 Mbps. Other 3G cellular telephone networks are expanding quickly, allowing high speed Internet access to cellular telephone users. In 2007 the use of RF bandwidth 1935-1950 MHz, 2010-2015 MHz, 2125-2140 MHz will be licensed with standards IMT-2000/UMTS, commencement of services being provided within 2 years at the date of issuing the licence. Some cellular telephone operators have developed experimental zones with this kind of communication in St. Petersburg and within the years 2008-2009 the nets of these standards will be used in St. Petersburg and its suburbs.

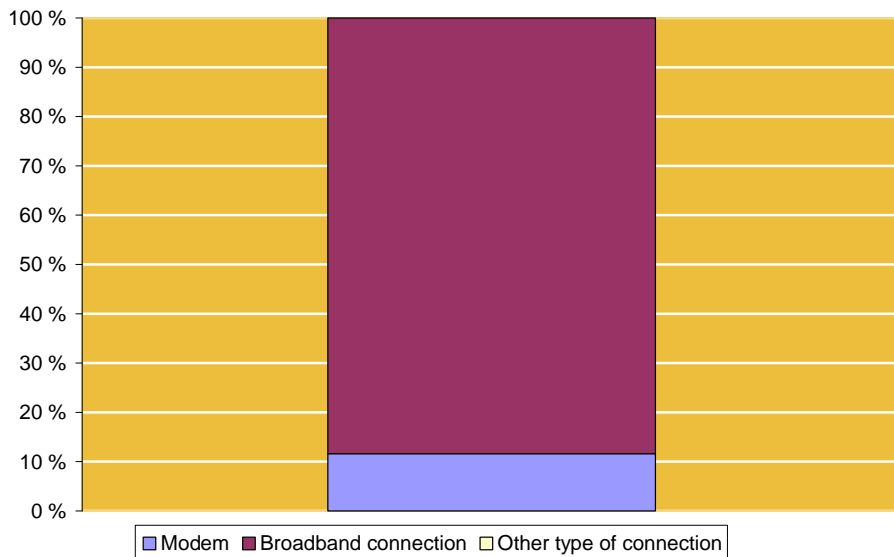


Figure 8 The type of connection companies have to the Internet

At the same time, notwithstanding the Internet use high potential, the percentage of companies' appearance via the Internet through web pages is very low for some sectors of the economy. The table above demonstrates this.

The survey shows that 79 companies out of 112 opened their own websites, but this figure does not reflect the actual level of companies' appearance via the Internet, as the majority of those who showed interest in the survey and responded were mostly the companies which have already experienced numerous advantages of Internet marketing.

As a rule, companies in St. Petersburg utilize external experts to develop their websites. Such websites usually feature information about the companies' activities and products/services. Very rarely the companies have well-developed servers with a database for catalogues and other purposes. The main reason is that the development and service of these systems is very expensive. The findings of the survey (Figure 9) illustrate this.

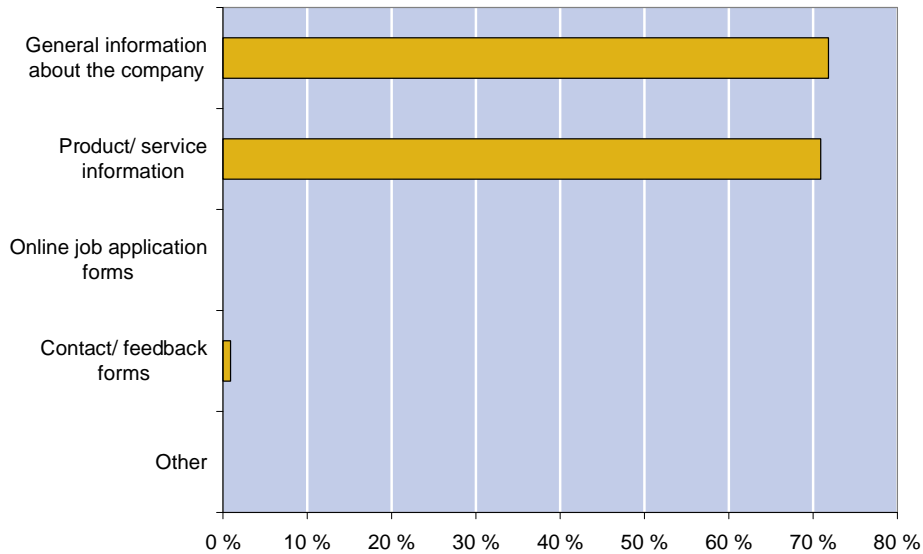


Figure 9 Different type of features that the company website includes

The survey also revealed that companies use the information which is posted on the websites of state authorities (Figure 10). In some cases companies can download some documents. There is not any interactive communication here. Really, websites of St. Petersburg authorities do not allow interactive communication with citizens and companies.

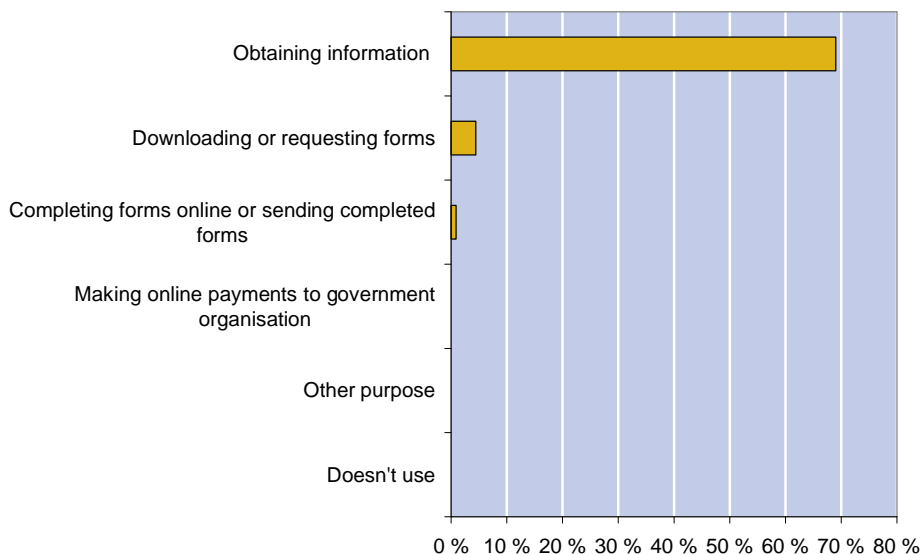


Figure 10 The different purposes companies use the Internet to interact with public authorities and government organisations

The survey showed that the respondents do not use electronic documentation management systems to communicate with customs authorities. At the same time, companies involved in import/export operations use computer network while performing operations with customs authorities, which are actively developing this kind of services.

In summary, companies in St. Petersburg have well-developed telecommunications systems to connect to the Internet. In this respect the majority of the companies have equal opportunities; they use e-mail and search information on the Internet. At the same time, the interest in organizing, supporting and servicing the companies' websites in some economy sectors is still very low. This may be explained by a low level of competition in these sectors. But the competition level is growing, and a larger number of companies become aware of the development of marketing over the web.

3.3 E-commerce/ E-business

E-business is present in St. Petersburg. The majority of employees use chip cards, which allow to effect payments via the Internet. However, this way of ordering and paying for products has not yet gained popularity. Presently it is mostly young people who choose it.

The most popular type of operation is performed by using electronic catalogues and ordering products to be delivered. In this case, the payment of products is effected after the product's delivery.

The actual – and complicated - tax system does not allow using corporate credit cards while performing mutual settlements with suppliers.

At the same time there are special-purpose chip cards, which allow a company to perform operations with customs authorities, which accelerates the procedure of paying customs duties.

Payment tools are essential features of E-commerce. The major payment systems used in Russia are:

- Credit cards VISA and MASTERCARD
- Electronic money WebMoney (www.webmoney.ru)
- Electronic money Yandex Money (www.money.yandex.ru)
- Mobile banking
- Direct debit
- Stored-value card
- Automated teller machines

Worth of mentioning is that networked cash issuing terminals are being presently placed in shopping centers and other locations of the city. This enables citizens to easily pay for some services some companies render, such as the Internet, mobile phones, space television and others. Besides, these terminals allow individuals to deposit money in their bank accounts, including operations with debit cards. This makes pay-in transactions easier as this allows customers to do their banking outside the premises of the bank; besides, it facilitates credit card use, including those in e-commerce.

3,000 chip cards and cash issuing terminals had been placed in St. Petersburg by the beginning of 2007. This terminal network is growing fast. The majority of the networked terminals operate via powerful processing centers which are characterized below.

An essential feature of the E-commerce system, which is being developed by IT companies, is interactability with the processing center, which accepts electronic payment with either credit cards or other electronic devices. There are some large processing centers in Russia providing these services. The major ones are:

- “CYBERPLAT” system (www.cyberplat.ru). This is the most developed system for effecting electronic payment. In 2006 its electronic payments turnover amounted to 2.6 billion USD. It handles 49.3 thousand terminals (via the Internet and others). The system is capable of processing 75-100 transactions per

second in average. Its maximum performance is up to 400 transactions per second.

- “OSMP” system (www.osmp.ru). Transactions with prepaid cards and others. About 48,000 terminals altogether, with 30,000 terminals being automated teller machines. Capable of processing 170 transactions per second.
- WebMoney system (www.webmoney.ru)
- “e-port” system (www.e-port.ru)
- ELECSNET system www.elecsnet.ru
- ASSIST system (www.assist.ru)

These systems allow service ordering, and e-shop designers connect their web-systems and terminals to provide services for credit cards and prepaid cards owners, as well as other chip cards owners.

Following chart (Figure 11) indicates the percentage of the 5 largest electronic payment systems in Russia.

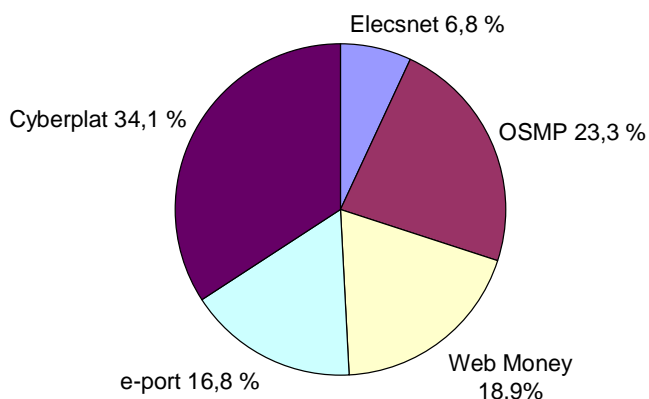


Figure 11 Percentage of the 5 largest electronic payment systems in Russia

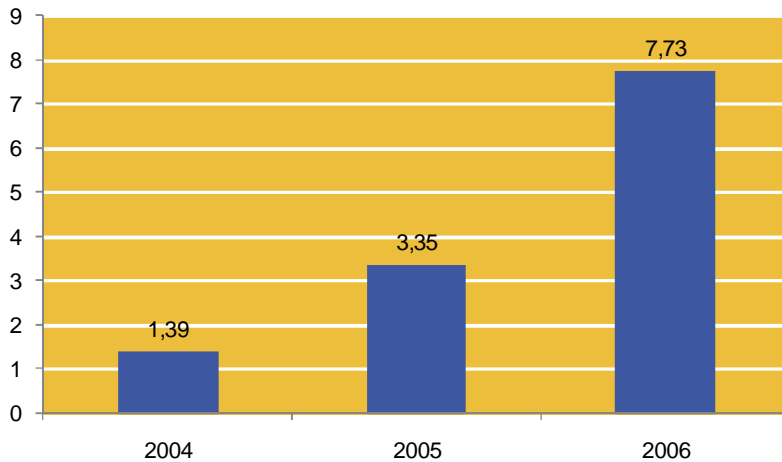


Figure 12 Turnover of the 5 largest electronic payment systems in Russia (in billion USD)

Thus, Russia has an engineering infrastructure which allows processing electronic and other payments transactions for e-commerce systems and financial indicators' growth rates of these systems are rather high. This explains the high demand of e-commerce systems on the Russian market.

Regarding the project survey, the companies answered that the prevailing methods of communicating with customers are personal visits, telephone/fax and e-mail. Some companies use the regular post as the quality of service is improving. Figure 13 illustrates the results of the survey.

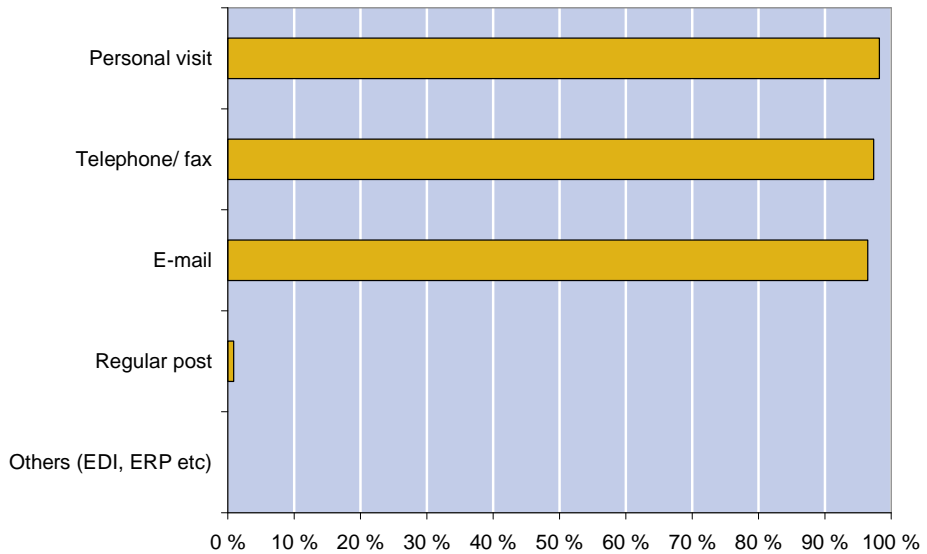


Figure 13 The type of communication methods the organisations use when communicating with customers and suppliers

The use of Electronic Data Interchange (EDI) when communicating with authorities or within the company is either low or absent at all. Presently, EDI systems are being introduced for transactions with tax bodies. There are specialized interfaces for interacting with customs authorities and the railways. The process is developing and such servers are sure to be developed in the future.

The use of high powered general ERP is still expensive for the majority of companies and they make use only of special-purposed information systems, which are developed for particular companies and allow partial automation of particular operations.

Tables 9 to 11 present the results of the survey which illustrate that a big number of companies are planning to integrate electronic systems in their future work with customers and suppliers.

Table 9 The type of business processes between the companies and their customers suppliers are handled electronically

	Customers		Suppliers	
	Now	In 3 Years	Now	In 3 Years
Order placement for products/ services	51	88	45	72
Order tracking/ service status available online	3	18	3	18
Payment possibilities	3	61	7	57
After sales support	1	25	2	20

Table 10 The share of companies business that is handled electronically

	0 %	1-19%	20-39%	40-59%	60-79%	80-100%	Total
Customers	97	10	3	0	0	0	110
Suppliers	99	6	2	1	0	0	108

Table 11 The companies opinion on what the development of the share e-commerce will be in their business operations

	Decrease	Remain the same	Increase
Customers	3	13	94
Suppliers	1	19	84

Most of the surveyed companies answered the question about the importance of e-commerce positively (Figure 14). Those companies which gave a negative answer to the same question are involved in sectors whose products cannot be regarded as proper for e-commerce.

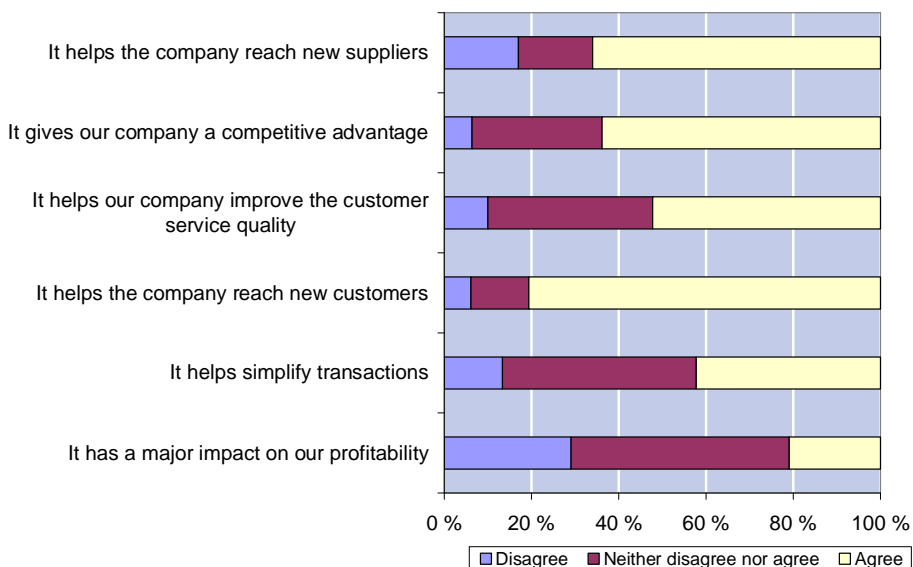


Figure 14 Companies views on the importance of E-commerce.

In summary, e-commerce is continuously developing in Russia. The processing centers' turnover and their high growth rate indicate that the demand for these services is growing. The companies' e-commerce activities have not found legal grounds yet. Records of these transactions have not yet been developed in taxation system. But these processes are being developed.

3.4 General assessment of ICT usage

In general the companies' ICT usage rates in St. Petersburg are high. Russian companies are developing a number of information systems. Market dealers offer localized versions of ERP and CRM systems, which are most popular abroad. Telecommunication network is well-developed; there are a large number of educational establishments training IT specialists and managers who are fully aware of the importance of competitive edges of ICT. All this promotes the environment with ICT being a powerful business instrument.

At the same time, high consuming capacity of the domestic market does not allow to reach high level of competitiveness in a number of sectors, which, in turn, slows down integrating advanced ICT in these sectors.

Within the framework of this survey, the companies were asked to assess different obstacles to the use of the Internet, e-commerce and ICT in general. The results show that there are still a large number of problems to be solved in St. Petersburg and in Russia (Figure 15). These are evident problems and some of them can be explained by competitiveness and economy level and they can only be solved by fostering economy growth promoting factors.

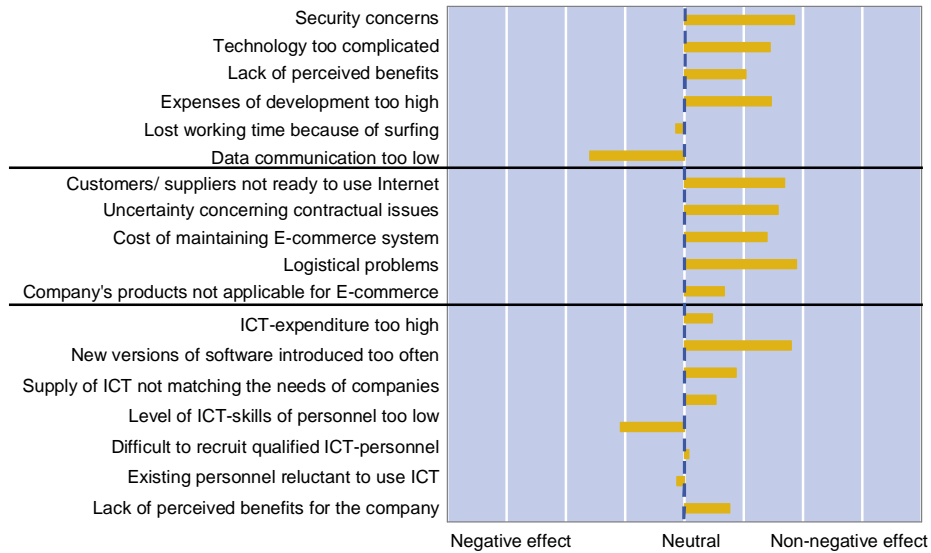


Figure 15 The effect of different barriers on the use of Internet, e-commerce and ICT in general.

4 SUMMARY AND CONCLUSIONS

St. Petersburg is a megalopolis with a population of 5 million people and more than 100,000 companies operating business activities in its territory. There are more than 1,300 ICT companies. Several educational establishments train specialists qualified to perform jobs in the ICT sector. Students' teams top the lists of the world winners in programmers' competitions. This is one of the factors that can prove the high level of ICT training.

The city and its suburbs have developed telecommunication systems with broadband network, allowing connection to companies' infrastructure units and access to the Internet.

High speed radio access to the Internet (up to 2.4 Mbps) for mobile phone users via "SkyLink" operators has been provided in the city, and 3G network will be available within the next 1-2 years

Thus, St. Petersburg is a region with a well-developed telecommunication network which is capable to satisfy any demand of any company located there.

The majority of the companies use the Internet in their business activities.

Notwithstanding friendly environment for ICT development, the level of ICT usage is not high, with the exception of information accounting systems, which are used by almost all companies.

A large number of companies do not make wide use of e-marketing their products and services via the Internet. Less than 30% of the companies open websites, though in some sectors this rate is higher.

The reason for the low use of WEB-marketing lies in the present market situation of goods and services.

First of all, the demand for a large number of products and services is high, so the companies do not need any advertising. Notwithstanding that products and services markets are developing and competition is growing, it has not reached the point yet, when the Internet advertising becomes a very important means of marketing for local companies. This process is likely to accelerate beginning 2008 - the year of Russia's accession to the World Trade Organization (WTO), and, as a result of that, international trade liberalization and competition growth.

Large companies use information systems in their business activities (ERP). These are mostly foreign information systems, set and localized by local dealers to particular companies' needs.

Middle-sized enterprises use cheaper systems designed by Russian IT companies. Besides, box systems are used to a lesser extent than special-purpose programmes, designed for a particular company. This allows a flexible approach to the users' particular requirements to this kind of systems.

Small-sized enterprises do not use information systems in their business activities. They mostly use accounting support systems which allow performing reporting activities with tax authorities.

Some large-, middle- and small-sized enterprises make extensive use of web solutions in their business. In some cases these are web-catalogues with orders receiving, in more developed companies these are full-fledged CRM-systems.

Most of the companies in St. Petersburg - including those without their own information systems - make extensive use of Internet resources in their business activities. In particular, this includes searching for best cargo delivery solutions. Presently, the amount of information resources which allow full-fledged web-support is restricted.

It should be noted that there are some well-developed web portals which allow freight owners to post information about required shipping operations and cargo carriers to demonstrate their performance capabilities. Some of such systems provide support, inviting tenders for shipping operations, which allows freight owners to lower costs of cargo delivery. Unfortunately, these systems do not support interfaces in foreign languages.

5 RECOMMENDATIONS

To companies who are going to develop business in St. Petersburg

The city has well-developed telecommunication networks, so development of connection channels of any capacity can be easily provided. The cost of telecommunication services is in compliance with that of European countries, and with some services it is even lower.

When conducting business, the organization of accounting systems must conform to tax bodies' regulations. There are information "box" systems which provide this accounting system. They support interfaces only in Russian language. The majority of accountants in Russia are capable of working with these systems.

The situation in the organization is a key factor in making a decision regarding the use of ERP and CRM systems. There are quite a large number of IT companies rendering foreign systems adaptation services or developing new information systems on the basis of the techniques available in different business activities.

There are processing centers in Russia which allow performing e-payments in compliance with the Russian legislation. This promotes the development of e-commerce systems allowing legal entities to perform e-payments in national currency, as well as developing appropriate e-business systems. There is a developed payment system to perform e-payments.

To IT companies entering their products into the market

There are some developers on the labor market capable of performing system localization to Russian interfaces in St. Petersburg. There are also dealers to promote the product.

A thorough study of business processes at the enterprises of the sector where the product is going to be introduced should be made before entering the product into the market, as there are some peculiarities in doing business in Russia, which are different from foreign countries.

Regarding the high demand for all kinds of products and services including services in the transport and the logistics sectors, it is necessary to point out the importance of support by introducing

Russian-speaking interfaces. The development of such interfaces for foreign information systems, interested in getting orders from Russia, is an integral part of success.

To foreign freight owners planning shipping operations across Russia

It is necessary to mention that in Russia there are powerful information platforms which allow carrying out auctions of orders for transportations. This allows freight owners to get advantageous offers which cut down shipping expenses. Such interfaces are available only in Russian language, so the personnel involved in this activity must know Russian.

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