



Project Report

Project Number: 288279	Project Acronym: PICTURE	Project Title: Policy dialogue in ICT to an Upper level for Reinforced EU-EECA Cooperation
----------------------------------	------------------------------------	--

Instrument: SUPPORT ACTION	Thematic Priority International collaboration
--------------------------------------	---

Title Updated National ICT Sector Report in Russia
--

Start date of project: December, 1st 2011	Duration: 30 months
---	-------------------------------

Organization name of lead contractor for this report: National Association of Research and Educational E-Infrastructures "E-Arena"	Document version: V1.0
--	----------------------------------

Dissemination level (Project co-funded by the European Commission within the Seventh Framework Programme)		
PU	Public	X
PP	Restricted to other programme participants (including the Commission)	
RE	Restricted to a group defined by the consortium (including the Commission)	
CO	Confidential, only for members of the consortium (including the Commission)	

Authors (organizations) : Mr Marat Biktimirov, Mr. Alexander Sher (E-Arena)

Abstract : This document presents the National ICT Sector in Russia. It's an update of an older document created under ISTOK - SOYUZ project.

1. The National ICT Sector and its Governance in Russia

1.1 The National ICT Sector

Among the main actors of “broad” ICT sector in the Russian Federation are:

- Public authorities: bodies and structures of State power that make strategic decisions, form priorities and implement the State policy and regulation in the ICT area,
- Public R&D institutions: Russian Academy of Science, universities, other research institutions implementing ICT R&D,
- Foundations: foundations (mainly public) providing support to R&D and further commercialization of ICT developments,
- Business sector (including consultants): the most successful Russian companies engaged in ICT,
- Associations: the most powerful non-governmental self-regulated associations joining organizations engaged in ICT.

Public authorities

The following major agents of the State power and science sector are directly involved in formation of priorities in the ICT sector (including R&D):

- President of the Russian Federation,
- Government of the Russian Federation,
- RF Ministry of Communications and Mass-Media,
- RF Ministry of Education and Science,
- RF Ministry of Economic Development.

Two former Federal Agencies: Federal Agency for Science and Innovation and Federal Agency for Education have been abolished in 2010; their functions have been passed to the RF Ministry of Education and Science.

See Section 1.2 for more detailed information about selected public authorities and roles played by each of them.

Public R&D institutions

In Russia, R&D in ICT is implemented by predominantly public organisations, among them:

- 72 R&D Institutes (from the total number of about 450) of the Russian Academy of Science (RAS), including 30 institutions of the Department of IT and Computing, 10 institutions of the Department of Mathematical Sciences, 27 institutions of the Department of Physical Sciences, 5 Institutes of the Department of Energy, Engineering, Mechanics and Control Processes;
- 19 R&D Institutes outside the RAS structure (from the total number of about 100);
- over 70 Universities and Higher Educational Institutions (from the total number of about 500).

Russian R&D Institutes and Universities carry out R&D in actually all spectre of ICT areas (see «The plan of basic research of the Russian Academy of Science for the period till 2025»); in a number of areas the quality of research meets the world level¹.

Exhibit 1 includes R&D organisations whose teams take the most active part in the calls of RFBR, FTS&TP 2007-2012, FP6, FP7.

Foundations

In Russia, foundations represent one of the mechanisms for funding R&D and technology commercialisation in the framework of a competition-based project approach.

Among the foundations that support R&D and commercialisation projects in the ICT area, one may mention the State foundations:

- Russian Foundation for Basic Research (RFBR),
- Fund for Assistance to Small Innovative Enterprises (FASIE),
- Russian Investment Fund for Information and Communication Technologies (Rosinfocominvest).

The Russian Foundation for Basic Research (RFBR) issues grants for research projects, events, dissemination of scientific information, etc. Its budget (in 2011 – 6 billion Russian Roubles or about 153 million Euro) is formed mainly out of State funds in the amount of up to 6% of the total amount of federal expenditures on science. According to statistics, RFBR spends about 10% of funds for supporting ICT projects. The mechanism of expert examination of submitted proposals is quite transparent and independent. RFBR organizes regular calls for joint research projects with some countries, including Germany, France, Italy and others.

The Foundation for Assistance to Small Innovative Enterprises (FASIE) offers direct financial aid to small innovative enterprises carrying out projects to develop and produce new high-tech products (covering also necessary R&D costs). The contribution from the Government makes 1.5% of the total federal expenditures on civil science. The financial share of the Fund in the winning projects cannot exceed 50 percent, and the companies have rights to the intellectual property created in the projects. According to statistics, about 6-7% of supported projects lay in ICT area. Also, FASIE supports development of innovation infrastructure.

The Russian Investment Fund for Information and Communication Technologies (Rosinfocominvest) was set up in 2007 for developing Russian IT companies by investing to innovation projects and perspective technologies on a start-up level. The amount of resources received from the federal budget is 1450 million Russian Roubles (40 million Euro). The same amount is planned to be attracted through open subscription for the Fund's stocks².

Business sector

In 2007, the share of IT sector in the Russian GDP was about 1.4%, which is several times less than in EU countries, USA and Japan. However, the Russian IT sector is growing by 20-30% per year. According to different estimates, the sales volume of Russian IT companies in 2007 was from 13 to 25 billion Euro.

The greatest growth is observed in software and hardware supply in the framework of integration projects and software development. At the Russian software market, there are several big foreign players operating in the

¹ Investigation of Russian ICT R&D priorities, strengths and weaknesses of Russian ICT R&D sector was carried out in the framework of FP6 Istok-Ru project. See Istok-Ru Final Report [2] for more information.

² By March 2012 no external investments have been made

niches of operating systems, databases, ERP. Among them, there are such giants as Microsoft, Oracle, IBM and SAP. Russian companies operate in more narrow niches. For example, Kaspersky Laboratory is specialising in IT security software, Centre of Speech Technologies – in speech recognition, PROMT and ABBYY – in computer-aided translation, transforming writing, speech and visual images into standard formats, «ElecCard» – in digital TV, «Prognoz» - in analysis of regional economics. An exception is «1C» company that operates actively at a wider market of ERP systems for small and medium enterprises.

Software export (software development outsourcing services), by the data of RUSSOFT Association, was estimated in 2007 as about 1.5 bln. Euro (in 2006 – 1 bln. Euro). According to the data provided by the consulting company NeoIT (www.neoit.com), Russia is ranked third in software export (for comparison, India – 14.5 bln. Euro, China – 1.8 bln. Euro).

The database of RUSSOFT Association comprises over 1200 IT companies (including Russian representative offices and R&D centres of big foreign corporations); the most famous among them are: 1C, Aquarius, Cognitive Technologies, DPI, ELST, Hewlett-Packard, IBM, Intel, iTeco, Kraftway Computers, Microsoft, Oracle, R-Style, TopS, Vercell, Xerox, ASK, ACSIT, White Wind, DialogNauka, IVK, Interface, Kaspersky Laboratory, Lanit, Marvel, NAMIP, Pirit, et cetera.

Some Russian companies are already visible at the global IT outsourcing market. The International Association of Outsourcing Professionals (www.outsourcingprofessional.org) has developed *The Global Outsourcing 100* (www.globaloutsourcing100.com) and its sub-lists as essential reference guides for companies seeking new and expanded relationships with the best companies in the industry. Six companies, which are Russian ones or have development centers in Russia – Auriga, DataArt, EPAM Systems, IBA, Luxoft and Mera – have been included into 2008 ranking. As compared to the last years rating, the Russian representation has increased by 1.5 times. Auriga, IBA and Mera were included into the list for the first time. DataArt, EPAM Systems, Luxoft and StarSoft were included into the Global Outsourcing 2007.

Among competitive advantages of Russian software companies are: ability of Russian companies to tackle nonstandard tasks essential for troubleshooting, product development and managing high-end complex projects, and also Russia's large pool of high-skilled professionals with mathematic and science backgrounds capable of solving complex and math-intensive problems. The main factor hampering the Russian IT sector's development, according to companies, is the shortage of human resources that becomes even worse in view of the fast growth of IT sector and insufficient productivity of the Russian educational system.

Associations

In Russia, there are about 30 associations (including regional ones) of organisations engaged in ICT. The most powerful of them are the following:

RUSSOFT Association is a nation-wide association of the most technically competent software developing companies from Russia, Belarus and Ukraine. Today it unites more than 80 companies with more than 7000 highly skilled programmers and software engineers with advanced graduate level degrees in Computer Science. RUSSOFT implements lots of marketing and PR activities, maintains the largest database of software developing companies in Russia and serves as the most reliable source of information for the entire business community.

Information & Computer Technologies Industry Association (APKIT) includes major domestic and global companies specialising in software, computer and equipment production, as well as the leading domestic distribution companies, system integrators, producers and developers. APKIT members comprise up to 70% of many market segments. The Association unites more than 200 companies. It concentrates the efforts of individual companies into consolidated opinion of the IT branch through negotiations with public authorities. The Association defends the interests of the IT branch and favours the expansion of the market.

Russian e-Development Partnership (PRIOR) is a volunteer association of organizations and individuals putting together their efforts and resources in order to provide mutual informational, technological, consulting, financial, organizational, and other types of support to reach common goals. The current members of PRIOR are 275 organizations from 30 regions of Russia, 12 foreign/ international IT companies and organizations. **PRIOR's major goal** is “to facilitate dynamic and comprehensive development of an information society and to build the knowledge-based economy in Russia”.

Exhibit 1: Selected key organisations within the national ICT Sector

Type of organisation	Name of organisation (in English)	Website (where available)
Government and legislative bodies		
	The President of the Russian Federation	http://www.kremlin.ru
	The Government of the Russian Federation	http://www.government.ru
	RF Ministry of Communications and Mass-Media	http://www.minsvyaz.ru
	RF Ministry of Education and Science	http://www.mon.gov.ru
	RF Security Council	http://www.scrf.gov.ru
	RF Ministry of Economic Development	http://www.economy.gov.ru
Associations of IT organisations and entrepreneurship promotion		
	RUSSOFT Association	http://www.russoft.org
	Information & Computer Technologies Industry Association (APKIT)	http://www.apkit.ru
	Russian e-Development Partnership (PRIOR)	http://prior.russia-gateway.ru
Business sector		
	Microsoft	www.microsoft.com
	Intel	www.intel.com
	Oracle	www.oracle.com
	Kaspersky Laboratory	www.kaspersky.com , www.kaspersky.ru
	ABBYY	www.abbyy.com , www.abbyy.ru
	PROMT	www.promt.com , www.promt.ru
	1C	www.1c.ru
	Kraftway Computers	www.kraftway.ru
	DataArt	www.dataart.com , www.dataart.ru
	EPAM Systems	www.epam.com , www.epam-group.ru
	Luxoft	www.luxoft.com , www.luxoft.ru
Knowledge institutes (R&D and education bodies)		
	Russian Academy of Science	http://ras.ru
	Institute of Control Sciences of the Russian Academy of Sciences, Moscow	http://www.ipu.ru
	Saint-Petersburg Institute of Informatics and Automation of RAS	http://www.spiiras.nw.ru
	Ioffe Physical-Technical Institute of RAS	http://www.ioffe.ru
	Institute for System Programming of the Russian Academy of Sciences	http://panda.ispras.ru
	RAS Institute of Radio Engineering and Electronics, Moscow	http://www.cplire.ru

Type of organisation	Name of organisation (in English)	Website (where available)
	RAS Institute of Programme Systems, Pereslavl-Zalessky, Yaroslavl reg.	http://www.botik.ru/PSI
	Moscow State University named after M.V.Lomonosov	http://www.msu.ru
	Moscow State Technical University named after N.E. Bauman	http://www.bmstu.ru
	Moscow Physical-Technical Institute (State University)	http://www.mipt.ru
	Saint-Petersburg State University of Information Technologies, Mechanics and Optics	http://www.ifmo.ru
	Saint-Petersburg State University	http://www.spbu.ru
	Saint-Petersburg State Electro technical University (LETI)	http://www.eltech.ru
Foundations		
	Russian Foundation for Basic Research (RFBR)	http://www.rfbr.ru
	Fund for Assistance to Small Innovative Enterprises (FASIE)	http://fasie.ru
	Russian Investment Fund for Information and Communication Technologies (Rosinfocominvest)	http://www.rosinfocominvest.ru

1.2 The ICT Governance System

Russian ICT governance system includes:

- Authorities and public bodies involved into developing and implementing the State ICT strategy and policy, selection of ICT development priorities,
- ICT-related legislation, main documents that fix the selected priorities, strategic goals and objectives, as well as activities to achieve them,
- Methods and tools used for implementing the ICT policy.

Russia still has no assigned organisation (public authority) for coordinating the development and implementation of the State ICT policy. In practice, the responsibility for various ICT-related tasks is distributed over several Ministries, Federal Agencies and some other authorities (their list with a brief description of functions in the ICT area is given below).

Authorities and public bodies

Listed above (Section 1.1) are the main State authorities involved in selection of strategic priorities of ICT development, determination of R&D priorities and implementation of the State policy in ICT sector. At present, the mechanism for coordinating their activities is still not clear. The lack of systemic policy (including coordination) is the greatest weaknesses of the Russian ICT sector.

RF President approves the most important documents determining the directions of the RF scientific and technological policy, among which one should mention, first of all, the «List of priorities in development of science, technologies and engineering in the Russian Federation» and the «List of critical technologies of the Russian Federation»³. These documents are explicitly or indirectly cited by most strategic, programming or regulative documents, including the ones determining the directions of public R&D funding and commercialization of technological results. Moreover, in practice, support from the President becomes one of the key factors for promoting this or that initiative or programme; for example, the programme of establishing IT-technoparks⁴ and Special Economic Zones. The President authorizes the Government to develop action programmes (including Federal Target Programmes) aimed at achievement of goals formulated in the strategic documents.

RF Government organises development and implementation of Federal Target Programmes. The major ICT-related programmes are «Research and development in the priority areas of the Russian S&T development for 2007 – 2013" (further on: FTS&TP 2007-2013) and «Information Society State Programme of the Russian Federation (2011-2020)». In 2007, in the framework of FTS&TP 2007-2013, over 60 ICT R&D projects received support in the total amount about 300 mln. Rb (about 8.5 mln Euro) and 6 integrated projects in the total amount of 940 mln. Rb (about 27 mln. Euro). In 2007, the Government contracted development of the «Complex programme of scientific and technological development and technological modernisation of the economy of the Russian Federation for the period till 2015»⁵ that formulates the main trends, prospective technology areas and development problems of priority areas, ICT sector in particular. This programme has been discussed with representatives of scientific and business communities.

RF Ministry of Communication and Mass-Media⁶ (RF Ministry of Communication) is the State Coordinator of the «Information Society State Programme of the Russian Federation (2011-2020)» and the programme for establishing IT-technoparks (the work was started in 2006). RF Ministry of Communication developed the **Concept for developing** information technologies market in the Russian Federation (2004), Strategy for developing information society in Russia (2007). In 2006-2007, it also conducted, for the first time in Russia, the study «Long-range technological forecast: Russian IT Foresight» (time horizon – till 2020). RF Ministry of Communication **coordinates development of EU-RF** cooperation in ICT area.

RF Ministry of Education and Science is the State Contractor and Coordinator of the FTP "Research and development in the priority areas of the Russian S&T development for 2007 – 2013". RF Ministry of Education and Science developed the «Strategy for science and innovation development in the Russian Federation for the period till 2015» (2006). In 2007, RF Ministry of Education and Science headed the study focused at the long-range forecast of Russia's scientific and technological development till 2025 (S&T Foresight)⁷.

RF Ministry of Economic Development⁸ (RF MED) is one of State contractors and developers of the «Information Society State Programme of the Russian Federation (2011-2020)», it also implements the **programme for establishment of Special Economic Zones (production and innovation ones)**; among their residents, a considerable share of IT companies is expected.

³ One may add here the «Basics of the policy of the Russian Federation in S&T development till 2010 and further on» and «Doctrine of information security».

⁴ State Programme «Establishment of high-tech technoparks in the Russian Federation».

⁵ A draft of this document can be found at the web-site of the RF Ministry of Education and Science <http://www.mon.gov.ru/work/nti/dok/>.

⁶ Before 12 May 2008 – RF Ministry of Information Technologies and Communication.

⁷ The results of this work have been represented on December, 2008. Full text of Forecast is available on web-site of RF Ministry of Education and Science <http://mon.gov.ru/work/nti/dok/str/08.12.18-prog.ntr.pdf>

⁸ Before 12 May 2008 – RF Ministry of Economic Development and Trade.

Main strategic documents in the ICT area

Russia still has no basic strategic document defining directions of ICT development and State ICT-related policy in general. Nevertheless, there are several documents that determine, directly or indirectly, priority ICT R&D directions, development of information technology market, introduction of information technologies in the State-managed industries, introduction of «E-Government» technology and others, namely:

1. **Strategy of development of an information society in Russia** (Developed by the Ministry of Information and Communications of the Russian Federation. Approved in February 2008). This document is a basis for developing and specifying conceptual, programme and other documents that define aims and objectives of public authorities and the principles and mechanisms of their communication with the civil community in the area of creating the information society in Russia. The document formulates the main objectives of the State ICT policy. At a special meeting of the RF State Council on the Strategy implementation (17.07.2008, Petrozavodsk), President D.A.Medvedev formulated the priority tasks to be achieved in the framework of the Strategy implementation. Among them: to accelerate introduction of the «E-Government» technology, interdepartmental electronic document management, State and municipal on-line procurements, to set up a system for accounting the public funded R&D works, to improve the computer skills of State and municipal officials and the population, to provide an all-round broad-band Internet access for citizens.
2. **Concept for development of the information technologies market in the Russian Federation** (Designed by Ministry of Information and Communications of the Russian Federation, Approved by the Government of Russian Federation on 18.11.2004). The document defines the programme of IT development in Russia and probable competitive advantages of Russia at the global IT market, prospective development directions, identifies the growth factors and existing barriers. Within this Concept, the industry of information technologies (IT) is understood as a complex of three segments: provision of services related to the use of information technologies (including the services on implementing the company business processes); development of software; production and sales of IT-equipment (personal computers, web-sites, remote terminal units etc). The document identifies 4 main directions of the public support to the IT industry development and formulates specific supporting activities.
3. **Strategy of development of science and innovations in the Russian Federation for the period till 2015** (Designed by request of the Government of the Russian Federation. Approved by the Interdepartmental Commission on science and innovation policy, 15.02.2006). The document indicates the strategic objectives: creation of a competitive R&D sector and favourable conditions for its extended reproduction, setting up of an efficient National Innovation System, development of institutions for use and legal protection of R&D results, economic modernization based on technological innovations.
4. **The basics of the policy of the Russian Federation in the development of science and technology till 2010 and further on** (Approved by the President of the Russian Federation (No. Pr-576 of 30.03.2006). The document defines the major directions of the State policy in development of science and technologies (further on: State policy), the aims and objectives, and the means of their implementation, as well as a system of economic and other measures for encouraging scientific and research activities.
5. **List of priority directions for development of a science, technologies and engineering in the Russian Federation** (Approved by the President of the Russian Federation, Decree No. 843 of 21.05.2006).
6. **List of critical technologies of the Russian Federation** (Approved by the President of the Russian Federation, No. 842 of 21.05.2006).
7. **Plan of basic research at the Russian Academy of Science for the period till 2025** (Designed by the Russian Academy of Sciences).
8. **Doctrine of information security of the Russian Federation** (Approved by the RF President on 9 Sept 2000. N Pr-1895).

9. **Integrated Programme for RTD development and technology modernisation in the economy of the Russian Federation till 2015 (Developed under commission of the RF President of 13.07.2006. № Pr-1184 and the RF Government of 28.07.2006 № MF-P7-3582. Published in 2007).**

ICT-related legislation

At present, development of the Russian ICT-related legislation is underway. This process, till recently, was mainly spontaneous; it was not based on a unified systemic approach, a common conceptual platform. No common legal conception base was formulated to define the inevitable technical terms for ICT-related legislative documents. In practice, technical terms were transformed into legal ones, without associating to the existing legal taxonomy. Thus, every new legislative project may contain new terms, resulting in an increased confusion in further interpretation of the legislation. Sometimes, a law is tied to specific features of a specific technology, and the arising new alternative decisions turn to be out of law (an example – the law about the electronic digital signature in the initial edition).

As a result, there are already many legal acts that often contradict each other, thus multiplying barriers for entrepreneurial activity.

According to the RF MED estimates, in 2004, the loss of the Russian ICT market from the barriers and limitations created by the existing legislation made about 7% of its volume (the data from the presentation of Ts.V. Tserenov, the Head of the Department of Corporate Management and New Economy, RF MED, at the conference "TeleTrend: Development of competition in the telecommunication industry of Russia" on 16 February 2004).

In 2003, under a guidance from RF MED and State University «Higher School of Economics», in the framework of the FTP «Electronic Russia», a «Concept for legal regulation of applications of information and communication technologies in the Russian Federation» was drafted. The Concept has been discussed with stakeholders and professional community; it was focused at solving the main problem of the Russian ICT-related legislation: lack of systemic approach.

Later, the requirements to the development of Russian ICT-related legislation were formulated in the «Strategy of development of an information society in Russia», approved in 2008.

In spite of the Government's efforts, the problem of inconsistency and lacking a systemic approach is still present in the Russian ICT legislation. Partly, this situation is caused by the absence of strong lobbies from the business, since Russia still has no large ICT companies of global level, and lobbying from professional associations seems insufficient. Moreover, the object of legal regulation - ICT activities – requires that the lawmakers take into account the particularities of business organisation related to application of information technologies and Internet. Notably, it concerns the technical aspects of the electronic data exchange, specific corporate taxonomy and terms, etc.

The legal relationships in the ICT area are regulated by the RF Civil Code, Section 4 (regulation of the rights for intellectual results and individualisation arrangements), and also by the following Federal laws:

1. «On information, information technologies and protection of information» (№ 149-FZ of 27 July 2006). This law is supposed to become the «fundamental» one for ICT industries.
2. «On communication» (№ 126-FZ of 7 July 2003 , № 186-FZ of 23.12.2003).
3. «On the electronic signature» (№ 63-FZ of 6 April 2011, the latest edition - 1 July 2011).
4. «On personal data» (N 152-FZ of 27 July 2006, the latest edition – 25 July 2011 N 261-FZ).
5. «On electronic trade»
6. «On provision of access to the information about the operation of State authorities and local public authorities» (№ 8-FZ of 9 February 2009, latest edition – 11 July 2011 N 200-FZ).

7. «On technical regulation» (N 184-FZ of 27 December 2002, latest edition – 6 December 2011).
8. «On the science and the State science and technical policy» (№ 127-FZ of 23 August 1996, the latest edition - 6 November 2011).
9. «On commercial secrets» (№ 98-FZ of 29 July 2004, the latest edition - 11 July 2011);
10. «On security» (№ 390-FZ of 28 December 2010).

Also, certain parts of a number of other laws regulate application of ICT in specific industries, for example, in the financial sector, banking, foreign trade, etc.

Federal Target Programmes related to the ICT development

Federal Target Programmes (FTPs) are a major instrument for implementation of the State policy in Russia. Target Programmes represent one of the most important means of implementing the structural policy of the State, active influence over its social and economic development; they are focused at implementation of large-scale, critical investment and R&D projects aimed at solving systemic problems within the authority of the federal executive bodies.

The following FTPs are related to ICT:

1. FTP «Information Society (2011-2020)». The total budget is 88 bln Rb, equivalent to 2.2 bln Euro (average exchange ratio: 1 Euro = 39 Rb). **State Coordinator** - Ministry of Communication and Mass-Media.
2. FTP “Research and Development in Priority Development Directions of the Russian Technology Complex 2007-2013». The total budget is 172 bln Rb, equivalent to 4.4 bln Euro (average exchange ratio: 1 Euro = 39 Rb). **State Coordinator** - Ministry of Education and Science.
3. FTP «Maintaining, Development and use of the system GLONASS (2012-2020)». The total budget is 330.5 bln Rb, equivalent to 8.5 bln Euro (average exchange ratio: 1 Euro = 39 Rb). **State Coordinator** – Federal Space Agency.
4. FTP “Development of the electronic component base and radioelectronics” 2008-2015. The total budget is 179 bln Rb, equivalent to 4.6 bln Euro (average exchange ratio: 1 Euro = 39 Rb). **State Coordinator** - Ministry of Industry and Trade.
5. FTP “National technology base” 2010-2016. The total budget is 73 bln Rb, equivalent to 1.8 bln Euro (average exchange ratio: 1 Euro = 39 Rb). **State Coordinator** – Ministry of Industry and Trade.
6. FTP “Federal Space Programme of Russia (2006-2015)”. The total budget is 834.1 bln Rb, equivalent to 21.4 bln Euro (average exchange ratio: 1 Euro = 39 Rb). **State Coordinator** – Federal Space Agency.
7. FTP “Development of Tele and Radio Broadcasting in Russian Federation (2009-2015)”. The total budget is 122.4 bln Rb, equivalent to 3.1 bln Euro (average exchange ratio: 1 Euro = 39 Rb). **State Coordinator** – Ministry of Communication and Mass-Media.

FTP “Nuclear Energy Technologies of New Generation (2010-2020)”. The total budget is 131.4 bln Rb, equivalent to 3.3 bln Euro (average exchange ratio: 1 Euro = 39 Rb). **State Coordinator** – State Atomic Energy Corporation ROSATOM.

2. National Policy Objectives and Trends

2.1 Objectives and Targets of National ICT Policy

At present the goals and objectives of the Russian State ICT-related policy are not formulated clearly enough and dissipated over several strategic documents. The following documents are dedicated directly to the general ICT development or to its specific areas: “Strategy of development of an information society in Russia”, “Concept of the development of the market of information technologies in the Russian Federation”, “Doctrine of information security of the Russian Federation”.

Priority areas of ICT R&D are not formulated in the above-listed documents, but they are, to some extent, contained in the strategic documents that define the national policy in regard to the general R&D development. Among them: “Strategy of science and innovation development in the Russian Federation for the period till 2015”, “The basics of the policy of the Russian Federation in the development of science and technology till 2010 and further on”, “Plan of basic research in the Russian Academy of Science for the period till 2025”, “List of priority directions for development of science, technologies and engineering in the Russian Federation”, “List of critical technologies of the Russian Federation”.

At 21.05.2009 President D.A.Medvedev established a Presidential Commission on Modernisation and Technological Development of Russia's Economy. The Commission was created to promote the sustainable technological development of Russia's economy and to improve public administration by promoting modernisation programmes in priority economic spheres.

At the first meeting of the Commission D.A.Medvedev said⁹: “Today we'll be focusing on the key priorities, the most important ones, the areas of so-called technological breakthrough, which in my opinion should be under direct presidential control.... The first area involves energy efficiency and conservation, including the development of new fuels. Second is nuclear technology. Third is space technology, primarily related to telecommunications, including of course GLONASS [Global Navigation Satellite System] and the development programme for ground infrastructure. Fourth is medical technology, especially diagnostic equipment and drugs. And fifth is strategic information technology, including the creation of supercomputers and software development. For each of these areas we must prepare a distinct plan as well as set up the relevant working groups... Of course for the above-mentioned projects we need new tools, and we need to make effective use of those tools that we have already created at the regulatory level, the ones we have approved but are still only operating at half-speed, or sometimes at 5 percent of capacity. I mean instruments such as venture capital funds, special economic zones and technology parks. In addition, of course targeted support for research and educational programmes, improving technical standards, using systems of public procurement, and co-financing projects designed to modernise the economy remain important”.

It should be noted, that at least two of declared above priority areas (third and fifth) are connected with the Russian ICT sector.

The “Strategy for development of information society in Russia” (see Section 1.2 for more details) determines the following main goals and objectives of the national ICT policy:

⁹ For more details see official web-site of the President of RF

(http://www.kremlin.ru/eng/speeches/2009/06/18/2019_type82913_218096.shtml)

- establishment of up-to-date information and telecommunication infrastructure, provision of high-quality services based on it and ensuring a good level of public access to information and technologies;
- improvement of education, health care, social protection on the basis of development and use of information and telecommunication technologies;
- improvement of the State guarantees system concerning the Constitutional human rights in the information area;
- development of the economy of the Russian Federation on the basis of information and telecommunication technologies;
- improvement of the efficiency of the State and local governance, co-operation of the civil society and business with public authorities, quality and timeliness of public services;
- development of science, technology and engineering, training of skilled specialists in the area of information and telecommunication technologies;
- preservation of cultures of the multinational population of the Russian Federation, enhancement of public ethical and patriotic values, development of a system for cultural and humanity education (preservation of cultural and humanity wealth and provision of people's access to them);
- opposition to the threat of using information and telecommunication technologies for damaging the of Russian national interests.

As declared in the "Concept for development of the information technologies market in the Russian Federation", the federal support for development of the Russian information technologies industry should be provided in four basic areas:

- ✓ legislation improvement;
- ✓ Domestic market development;
- ✓ Export development;
- ✓ Institutional development.

The Concept contains lists of measures aimed at implementation of the national policy in each of the above-mentioned areas.

These 2 documents set some important target indicators and deadlines. These indicators are given in the Exhibit 10.

Exhibit 2: National ICT policy objectives

Objective	Quantitative target (if set)	To be achieved by (year)
The place of the Russian Federation in the world ratings of development of the information society	Not less than 20	2015
The place of the Russian Federation in the world ratings of the level of accessibility of the national ICT infrastructure for users of information sphere	Not less than 10	2015
The growth of investments in the use of information and telecommunication technologies in the national economy	2.5 times as compared with 2007	2015
Usage of broad-band lines per 100 persons of population through all technologies	35 lines (by 2010 – 15 lines)	2015
Availability of personal computers, including the ones connected to the Internet	75% of households	2015

Objective	Quantitative target (if set)	To be achieved by (year)
The share of R&D in the area of information and telecommunication technologies in the total amount of R&D funded from all sources	30% (not less than 15% by 2010)	2015
The share of public services available to the population with use of ICT	100%	2015
The share of electronic document turnover among public authorities in the total volume of document turnover	70%	2015
The share of public orders for supply of goods, implementation of works and provision of services for federal and municipal needs with use of e-procurement sites in the total amount of placed orders	100%	2015
The share of archive stocks, including audio and video archives, transferred to the digital form	20%	2015
The share of digital library stocks in the total amount of stocks	50%	2015
The share of digital catalogues in the total number of museum and library catalogues	100%	2015
The share of domestic goods and services in the total volume of home market of information and telecommunication technologies	over 50%	2015

2.2 Recent National Policy Trends

In Russia, one of main tools for implementation of the State policy for various sectors is represented by Federal Target Programmes (FTPs). Target Programmes are focused on implementation of large-scale, critical investment and R&D projects aimed at solving systemic problems within the authority of the federal executive bodies.

The following FTPs are related to the ICT area:

1. FTP «Information Society (2011-2020)». The total budget is 88 bln Rb, equivalent to 2.2 bln Euro (average exchange ratio: 1 Euro = 39 Rb). The **State Coordinator** - Ministry of Communication and Mass-Media. FTP «Information Society (2011-2020)» is one of the main tools for implementing the tasks set in the major strategic documents for ICT sector: «Strategy of development of an information society in Russia» and «Concept for development of the information technologies market in the Russian Federation».
2. FTP «Research and Development in Priority Development Directions of the Russian Technology Complex 2007-2013». The total budget is 172 bln Rb, equivalent to 4.4 bln Euro (average exchange ratio: 1 Euro = 39 Rb). The **State Coordinator** - Ministry of Education and Science. This FTP is one of the main and systemic tools that supports R&D and technology commercialisation in Russia. Blocks «Generation of knowledge» and «Technology development» include subsections (activities) corresponding to the priority direction «Information and Telecommunication Systems». The Programme with a similar name was underway in 2001-2006.
3. FTP «Maintaining, Development and use of the system GLONASS (2012-2020)». The total budget is 330.5 bln Rb, equivalent to 8.5 bln Euro (average exchange ratio: 1 Euro = 39 Rb). **State Coordinator** – Federal Space Agency.
4. FTP «Development of the electronic component base and radioelectronics» 2008-2015. . The total budget is 179 bln Rb, equivalent to 4.6 bln Euro (average exchange ratio: 1 Euro = 39 Rb). **State Coordinator** - Ministry of Industry and Trade.
5. FTP «National technology base» 2010-2016. The total budget is 73 bln Rb, equivalent to 1.8 bln Euro (average exchange ratio: 1 Euro = 39 Rb). **State Coordinator** – Ministry of Industry and Trade.

6. FTP “Federal Space Programme of Russia (2006-2015)”. The total budget is 834.1 bln Rb, equivalent to 21.4 bln Euro (average exchange ratio: 1 Euro = 39 Rb). **State Coordinator** – Federal Space Agency.
7. FTP “Development of Tele and Radio Broadcasting in Russian Federation (2009-2015). The total budget is 122.4 bln Rb, equivalent to 3.1 bln Euro (average exchange ratio: 1 Euro = 39 Rb). **State Coordinator** – Ministry of Communication and Mass-Media.
8. FTP “Nuclear Energy Technologies of New Generation (2010-2020)”. The total budget is 131.4 bln Rb, equivalent to 3.3 bln Euro (average exchange ratio: 1 Euro = 39 Rb). **State Coordinator** – State Atomic Energy Corporation ROSATOM.

Another ICT-related State programme is the “Creation of technoparks in the area of high technologies in the Russian Federation”, which has no formal FTP status. The **State Coordinator** - Ministry of Communication and Mass-Media. Starting from 2007, the **total amount of investment from different level public budgets into establishment of 13 Technoparks will make 26.3 bln Rb (750 mln. Euro). Five of them have included ICT projects in the number of priorities:**

- A two-site Technopark in Moscow region is planned to receive 6 bln Rb. The Technopark will produce software, develop petrochemical and pharmaceutical technologies.
- 20.5 bln Rb will be invested into establishment of a Technopark in St. Petersburg. The Technopark will operate in the information technologies sector and develop TV systems, communication networks and data transmission.
- The creation of Technopark in Novosibirsk region is already finished. The further development of it will be made through the investment of more than 7 bln Rb. Priority areas of its activity are information technologies, instrument-making and biotechnologies.
- It is planned to invest 3.1 bln Rb in a Technopark in Nizhny Novgorod region. Here, they will develop information and communication technologies, chemical, bio- and medical technologies.
- Government will allocate 2.9 bln Rb to the development of a Technopark in Tatarstan. The Technopark will develop information, petrochemical and biotechnologies.

Most important actors of targeted support to R&D and commercialisation projects in the priority sectors are the following State foundations:

- Russian Foundation for Basic Research (RFBR),
- Fund for Assistance to Small Innovative Enterprises (FASIE),
- Russian Investment Fund for Information and Communication Technologies (Rosinfocominvest)¹⁰.

The Russian Foundation for Basic Research (RFBR) issues grants for research projects, events, dissemination of scientific information, etc. Its budget (in 2011 – 6 billion Russian Roubles or about 153 million Euro) is formed mainly out of State funds in the amount of up to 6% of the total amount of federal expenditures on science. According to statistics, RFBR spends about 10% of funds for supporting ICT projects. The mechanism of expert examination of submitted proposals is more or less transparent and independent. RFBR organizes regular calls for joint research projects with some countries, including Germany, France, Italy and others.

The Foundation for Assistance to Small Innovative Enterprises (FASIE) offers direct financial aid to small innovative enterprises carrying out projects to develop and produce new high-tech products (covering also necessary R&D costs). The contribution from the Government makes 1.5% of the total federal expenditures on

¹⁰ The Foundation’s capital was formed in the end 2007, funding of projects is planned to be started in 2008.

civil science. The financial share of the Fund in the winning projects cannot exceed 50 percent, and the companies have rights to the intellectual property created in the projects. According to statistics, about 6-7% of supported projects lay in ICT area. Also, FASIE supports development of innovation infrastructure.

The Russian Investment Fund for Information and Communication Technologies (Rosinfocominvest) was set up in 2007 for developing Russian IT companies by investing to innovation projects and perspective technologies on start-up level. The amount of resources received from the federal budget is 1450 million Russian Roubles (about 37 million Euro). The same amount is planned to be attracted through open subscription for the Fund's stocks.

Exhibit 3: ICT Policy Measures

Title	Organisation responsible
"Information Society" State Programme of the Russian Federation (2011-2020)	Ministry of Communication and Mass-Media.
State program "Creation of technoparks in the area of high technologies in the Russian Federation"	Ministry of Communication and Mass-Media.
FTP "Research and Development in Priority Development Directions of the Russian Technology Complex 2007-2013».	Ministry of Education and Science
FTP "Development of the electronic component base and radioelectronics" 2008-2015.	Ministry of Industry and Trade
FTP «Maintaining, Development and use of the system GLONASS (2012-2020)»	Federal Space Agency
FTP "National technology base" 2010-2016.	Ministry of Industry and Trade
FTP "Federal Space Programme of Russia (2006-2015)"	Federal Space Agency
FTP "Development of Tele and Radio Broadcasting in Russian Federation (2009-2015)"	Ministry of Communication and Mass-Media
FTP "Nuclear Energy Technologies of New Generation (2010-2020)"	State Atomic Energy Corporation ROSATOM
Several programs of Russian Foundation for Basic Research	Russian Foundation for Basic Research
Development of Russian IT companies on start-up level	Russian Investment Fund for Information and Communication Technologies (Rosinfocominvest)

Annex 1: Overview of ICT Policy Documents

Main policy documents concerning ICT policy adopted/published since 2003

Title of document (in English)	Date (of approval, publication, etc.)	Organisation responsible (Ministry, etc.)	Legal status (Law, Government Decision, strategy (white) paper, action plan, etc.)
Strategy of development of information society in Russia	2008	Designed by Ministry of Information and Communications of the Russian Federation.	Strategy, Government Decision
Concept for development of the information technologies market in the Russian Federation	2004	Designed by Ministry of Information and Communications of the Russian Federation	Strategy
List of priority directions for development of a science, technologies and engineering in the Russian Federation	2006	Approved by the President of RF	Government Decision
List of critical technologies of the Russian Federation	2006	Approved by the President of RF	Government Decision
Plan of basic research of the Russian Academy of Science for the period till 2025	2005	Designed by the Russian Academy of Science	-
Federal target program "Electronic Russia (2002 - 2010)"	2001 (corrected in 2006, finished)	Ministry of Information and Communications	Federal target program, Government Decision
"Information Society" State Programme of the Russian Federation (2011-2020)	2010	Ministry of Information and Communications	Federal target program, Government Decision
Federal target program "Research and development in the priority areas of the Russian science and technology development for 2007 - 2013 "	2006 (latest correction in 2011)	Ministry of Education and Science	Federal target program, Government Decision
The basics of the policy of the Russian Federation in the development of science and technology till 2010 and further on	2006	Approved by the President of RF	Strategy, Government Decision
State program "Creation of technoparks in the area of high technologies in the Russian Federation"	2006	Ministry of Information and Communications	State program, Government Decision

Annex 2: Overview of ICT Policy Measures

Policy Measure Fiche: overview

IPM Fiche Number	Title of measure	Overview
1	“Information Society” State Programme of the Russian Federation (2011-2020)	The total budget is 88 bln Rb, equivalent to 2.2 bln Euro (average exchange ratio: 1 Euro = 39 Rb). State Coordinator - Ministry of Communication and Mass-Media. “Information Society” State Programme of the Russian Federation (2011-2020) is one of the main tools for implementing the tasks set in the major strategic documents for ICT sector: «Strategy of development of an information society in Russia» and «Concept for development of the information technologies market in the Russian Federation».
2	FTP “Research and Development in Priority Development Directions of the Russian Technology Complex 2007-2013»	The total budget is 172 bln Rb, equivalent to 4.4 bln Euro (average exchange ratio: 1 Euro = 39 Rb). State Coordinator - Ministry of Education and Science. This FTP is one of major and systemic tool for support of R&D and commercialization of technologies in Russia. Blocks «Generation of knowledge» and «Technology development» include subsections (activities) corresponding to the priority direction “Information and Telecommunication Systems”.
3	State program “Creation of technoparks in the area of high technologies in the Russian Federation”	Starting from 2007 the total amount of investment from different level public budgets into establishment of seven Technoparks will make 26.3 bln Rb (750 mln. Euro).
4	The Russian Foundation for Basic Research (RFBR)	Issues grants for research projects, events, dissemination of scientific information, etc. Its budget (in 2011 – 6 billion Russian Roubles or about 153 million Euro) is formed mainly out of State funds in the amount of up to 6% of the total amount of federal expenditures on science. According to statistics, RFBR spends about 10% of funds for supporting ICT projects. The mechanism of expert examination of submitted proposals is more or less transparent and independent. RFBR organizes regular calls for joint research projects with some countries, including Germany, France, Italy and others.
5	The Russian Investment Fund for Information and Communication Technologies (Rosinfocominvest)	Fund was set up in 2007 for developing Russian IT companies by investing to innovation projects and perspective technologies on start-up level. The amount of resources received from the federal budget is 1450 million Russian Roubles (40 million Euro). The same amount is planned to be attracted through open subscription for the Fund’s stocks.

Annex 3: Sources of further information

Websites of key ICT organizations

Type of organisation	Name	Website
State authorities	RF Ministry of Communications and Mass-Media	http://www.minsvyaz.ru
State authorities	RF Ministry of Education and Science	http://www.mon.gov.ru
State authorities	RF Ministry of Economic Development	http://www.economy.gov.ru
Association	RUSSOFT Association	http://www.russoft.org
Association	Information & Computer Technologies Industry Association (APKIT)	http://www.apkit.ru
Public R&D sector	Russian Academy of Science	http://www.ras.ru
Foundation	Russian Foundation for Basic Research (RFBR)	http://www.rfbr.ru/rffi/eng/about
Foundation	Russian Investment Fund for Information and Communication Technologies (Rosinfocominvest)	http://www.rosinfocominvest.ru